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MEMORY RETENTION CONTEST
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MAGAZINE

Editorial

Let us be Awake to Our Duty

We should remain awake to our duties since it is the performance of our duties that makes the social life run smoothly and promotes the best interests of all its members. As a matter of fact, some divinity surrounds duty. Performance of duty is equated with worship. "Work is Worship' is the central principle of all scriptures of the world. Even Bhagwat Gita says 'action is thy duty, reward is not thy concern'. All religions of the world lay stress on the performance of our duties. We owe duty to ourselves to keep ourselves fit physically, mentally and spiritually. We owe duty to our family, the nation, society and all our fellow beings to do our bit for what God sent us to the earth. English poet William Wordsworth correctly calls duty *"Stern daughter of the voice of God"*. He describes it as "a light to guide, a rod to check the erring, and reprove." It frees the individual from 'vain temptations' and calms "the weary strife of frail humanity." There will be anarchy in society if people shirk or shun duty. It is because of this fact that all great people laid stress on the performance of duties. Western philosophers like Immanuel Kant and Hegel in Germany, T.H. Green in England and a host of other philosophers of the Idealist School of Philosophy also gave primacy to duties over rights. Let us take care of our duties, rights will take care of themselves. Gandhiji also was of the same view. Rights automatically accrue from the performance of our duties. It is utter selfishness to claim rights without performing duties. We have to pursue the path of duty for the good of all, our family, our nation and the entire humanity at large, and not for our own good only. When we keep the interest of all in mind, our own interest is automatically taken care of. Whatever we do should be pleasant not only to ourselves, but to all. This certainly is the golden principle of social life of which we are an integral part. We will, therefore, do well if we are always awake to our duty. Duty must be performed devoutly, diligently and dedicatedly.

"Duty is that which is due to Humanity, to our fellowmen, neighbours, family and especially that which we owe to all those who are poorer and more helpless than we are ourselves."

—H. P. Blavatsky

Man is said to be a unique being on this earth. He is also known as saviour, light bringer, wise, compassionate, loving, understanding when he is said to be divine or having qualities of divine nature. There have been so many on this earth who tried to live up to the qualities which prove the divine nature of man. But after their departure from this world, much of what they said got distorted and destroyed, and unfortunately, we find many animals men on the earth— there is violence, hatred, killings, greed, lust for power and pleasure in every part of the world. Man endowed with such great capacity is now misusing the same for undesirable ends. Let us—specially those, who are preparing and are pledged for service as civilians and are public servants—ponder what our duty should be.

It is indubitably true that honesty to one's ownself and to other fellow-men, has taken men much far. So the least you can do is–always keep a piece of your awareness on yourself.

In this age of glittering adventures–including adventures into space, a suffocating immorality envelops the world, which is more threatening than the rising carbon-dioxide and temperature levels. There is pollution all around, including the pollution of the human psyche itself. The goal, therefore, to set before the society is not preyas (the pleasant), but of shreyas (the good and the noble)—the fulfilment of the inherent potential for goodness and wisdom in consciousness. So, as a matter of fact, the 'shreyas' is the challenge before our young men and women, the beaming civilians of tomorrow, who will have to discharge their duty to the society with their full capacity and with maximum capability. In short, your duty is to try to leave your place better than you find it. To do so, you will have to bring out the best in you *i.e.*, your divine nature, with which you have been endowed by Nature or the Almighty.

How to carry out one's duty when there are big stakes ? There are occasions when duty seems to be having masters and the duty has to choose one of them. It has been truly said that the path of duty is like the razor's edge.

Examples are many when the person concerned made great sacrifices while choosing to proceed on the path of duty. A recent example may be of interest to our young readers. An Indian young man went to Japan for higher studies in technology. There he fell in love with the stenographer of the office. Ultimately they agreed to marry, of course, with their parents' consent. The marriage had to be performed in Japan. So the young man made a programme to fetch his parents from Bharat. He expressed the desire that his fiance should see him off at the airport. The girl expressed diffidence as it would mean negation of her duties. The young man surprisingly said—Can't you leave duty for about an hour for the sake of my love ? The girl said O.K. and reached the airport on time. When the plane was just to leave, she handed over an envelope to her lover. The boy was stunned, as the letter read—

"To day, for the sake of love, you want me to leave duty for an hour, I do not know what you would expect of me in future in the name of love ? We Japanese are very sensitive to our sense of duty. I am sorry to say that I will not be able to marry you. Good bye....."

There are two sides of a thing—the preyas (the pleasant) and the shreyas (the good). Duty always bids you to choose the shreyas. Dutiful persons never tumble on the path of the good, and choose the path of righteousness. Had it not been so, innumerable persons, old and young, rich and poor, should not have renounced their hearths and homes, some of them affluent and luxurious and full of power and pelf, and instead should have laid down everything, their valuable lives included, for the sake of freedom of the motherland. Duty is a hard task master, but it means nothing but good of the obedient one.

And let us add to know our duty towards our fellow beings. Let us remember all the time—

I slept and dreamt, life was beauty.
I woke up and found life was duty.

MAGAZINE ARIO

Nation This Month



- *German Chancellor Angela Merkel's India Visit*
- *16th ASEAN-India Summit in Bangkok : A Vibrant Asean is in India's Interest, Says Modi*
- *India, Uzbekistan Sign Three Defence Deals*
- *3rd RCEP Summit : India Refuses to Join Regional Trade Pact for Now*
- *Supreme Judgement of the Supreme Court : Apex Court Resolves Centuries Old Ayodhya Dispute*
- *11th BRICS Summit 2019 in Brazil : PM Modi Holds Bilateral Talks with Russia, China and other Members of the Group*
- *Office of Chief Justice of India (CJI) Falls Under Ambit of RTI : Supreme Court*
- *ISRO Puts India's Cartosat-3, Plus 13 Nano Satellites Into Orbit*
- *Indian Ocean in India-UK Defence Focus*
- *Defence Minister Rajnath Singh in Bangkok, Thailand; Attends ADMM-Plus Meeting*

German Chancellor Angela Merkel's India Visit

Key Highlights

- German Chancellor Angela Merkel visits India on November 1, 2019.
- Inter-govt. consultations.
- India, Germany sign 5 joint declarations.
- They also sign 17 pacts in fields like space, ayurveda, yoga.

German Chancellor Angela Merkel visited India on November 1, 2019. Prime Minister Narendra Modi on November 1 had wide-ranging talks with the German Chancellor. He said that India and Germany have resolved to intensify bilateral and multilateral cooperation **to deal with threats of terrorism and extremism.**

After the two leaders co-chaired the **fifth Inter-Governmental Consultations,** 17 agreements were signed between India and Germany in the fields of agriculture, maritime technology, ayurveda and yoga among others.



PM Narendra Modi and Germany chancellor Angela Merkel witness the exchange of agreements between foreign minister S. Jaishankar and his German counterpart Halko Mass in New Delhi on November 1, 2019.

"We have vowed to build 'new India' by 2022 and expertise of technological, economic power-houses like Germany will be useful for it," PM Modi said in his press statement after the meeting. "We have resolved to intensify bilateral and multilateral cooperation to deal with terrorism and extremism," he added.

India and Germany will continue cooperation to expedite reforms in UN Security Council, Modi said.

He said that India has invited Germany to take advantage of opportunities in defence production in the defence corridors in UP and Tamil Nadu.

"We have decided to tap cooperation possibilities in e-mobility, smart cities, cleaning of rivers and environmental protection," Modi said.

Agreements

Merkel said agreements signed between Germany and India prove that ties are marching ahead in the areas of new and advanced technology. Areas of 5G and artificial intelligence are a challenge and it is important to work on them together, she said.

"We will be happy to engage in big infrastructure projects which India is envisaging," Markel said.

Agreements have also been signed to promote, establish and expand scientific and technological research cooperation, academic collaboration in ayurveda, yoga and meditation, a ministry of external affairs statement said.

An MoU has also been signed in the field of occupational diseases, rehabilitation and vocational training of insured persons and workers with disabilities, it said.

Other agreements signed between the two countries include collaboration in agricultural, technical and professional training, cooperation between the National Museum, the National Gallery of Modern Art, the Indian Museum, Kolkata, the Prussian Cultural Heritage Foundation and the Stiftung

MAGAZINE LINE

Humboldt Forum in Berliner Schloss and between All India Football Federation (AIFF) and Deutscher FuBball-Bund e.V (DFB), the statement said.

Terrorism

The two leaders in their meeting stressed the importance of a combined effort by all countries to fight global terrorism and to send out a consistent message that terrorism in all its forms and manifestations was unacceptable to the international community.

Emphasising that terrorism was a global scourge, the leaders expressed strong concern on global threat of terrorism and their resolve to jointly combat it. "They called upon all countries to work towards rooting out terrorist safe havens and infrastructure, disrupting terrorist networks and financing channels and halting cross border movement of terrorists," a joint statement said.

Kashmir an Internal Matter

In statements prior to the visit, the German foreign policy establishment had stuck to the line that developments in J&K related to Article 370 were an internal matter of India.

16th ASEAN-India Summit in Bangkok : A Vibrant Asean is in India's Interest, Says Modi

Key Highlights

- ASEAN-India summit was held in Bangkok, Thailand on November 3, 2019.
- More connectivity with Asean key to strengthen ties, says Modi.
- Modi urges for cooperation in maritime security, blue economy, calls India most attractive economy.
- Meets Indonesian President Joko and Thai PM Prayut.

The 16th ASEAN-India summit was held in Bangkok, Thailand on November 3, 2019. Prime Minister Narendra Modi represented India at the summit.

"India's Act East policy is an important part of our Indo-Pacific vision and the Asean lies at the core of it. Integrated and vibrant Asean is in the interest of India," PM Narendra Modi told Asean leaders at the Asean-India summit on November 3, 2019. On his second visit in Bangkok, Modi caught up with two of India's important partners in southeast Asia—Indonesian President Joko Widodo and Thai PM Prayut Chan-o-Cha.



Prime Minister Narendra Modi with leaders of other Asean countries at the 16th Asean-India Summit in Bangkok on November 3, 2019.

In his conversation with Widodo, Modi said India was committed to work with Indonesia to strengthen ties in the areas of defence, security, connectivity, trade and investment, an official MEA readout said. The PM had a forward looking discussion on enhancing bilateral trade and highlighted the need for greater market access for Indian commodities including pharmaceutical, automotive and agricultural products, it added. Pushing for greater market access, Modi also invited Indonesian companies to invest in India.

Asean Backs India's Rising Role in Indo-Pacific Region

In a significant indication of India's rising profile, the 10-nation Asean on November 3, 2019 clearly appreciated New Delhi's growing role in the Indo-Pacific region as the two sides, with a combined GDP of $ 5 trillion, vowed to further broadbase strategic ties and deal with major challenges like menance of terrorism collectively.

In his address at the annual India-Asean summit, PM Narendra Modi talked about the mutual coordination between India's vision of the Indo-Pacific and Asean Outlook for the strategically key region which has been witnessing growing Chinese assertiveness. He also talked about cross border terrorism, spread of violent extremism and the situation in the South China Sea, and underlined the need for greater cooperation between India and the Asean to unitedly confront major challenges facing the region.

With Indonesia spear-heading the Indo-Pacific outlook by Asean, Modi and Widodo reiterated their commitment to work together for peace, security and prosperity in the Indo-Pacific region. To Asean leaders, Modi said, "Asean is and always will be the heart of our Act East policy. Integrated, organised and economically developing Asean is in India's basic interest. We are committed to further strengthening our partnership through stronger surface, maritime and air-connectivity and digital link. A $ 1 billion line of credit will be useful for physical and digital connectivity."

"I welcome the recent decision to review the Asean-India FTA. This will not only make our economic relations stronger but our trade will also be balanced. We also want to strengthen our partnership in the areas of maritime security, blue economy and humanitarian aid," Modi said.

On Modi's meeting with the Thai PM, the MEA said, "Noting the enhanced engagement in defence and security fields, both sides agreed to explore opportunities for cooperation in defence industries sector. Welcoming 20% growth in bilateral trade last year, the leaders decided to task trade officials to discuss ways and means to enhance trade and investment."

In his opening address at the India-Asean summit in Bangkok, Modi said there was a convergence of views between India and Asean for cooperation in the Indo-Pacific region.

He called for enhanced connectivity between Asean and India to boost ties and said that a strong and prosperous South-east Asian block was in New Delhi's interest.

"Enhancing connectivity between Asean and India is important for overall growth of ties, the Prime Minister said."

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Ideal Investment Destination

Earlier in the day, he portrayed India as an ideal investment destination and told the global community that it was the best time to invest in the country given the significant work his government has done in the field of taxation.

Referring to taxation, the Prime Minister said it was an area where India had done significant work.

"I am happy that India is one of the most people-friendly tax regimes. We are committed to further improving it even more. In today's India, the contribution of the hard working taxpayer is cherished."

Noting that his assertions made India one of the world's most attractive economies, Modi said, "For investment and easy business, come to India. To innovate and starting up, come to India. To experience some of the best tourist sites and warm hospitality of people, come to India. India awaits you with open arms."

Modi pointed out that India had received $ 286 billion FDI in the last five years which was "almost half of the total FDI in India in the last 20 years."

Referring to the Act East Policy of the government, Modi said his government was paying special attention to enhance connectivity with the region.

India, Uzbekistan Sign Three Defence Deals

MoUs seek to enhance cooperation in military, medicine, education and training.

India and Uzbekistan on November 3, 2019 signed three memorandums of understanding (MoUs) to enhance cooperation in military, medicine and military education during the visit of Defence Minister Rajnath Singh.

This was the first visit by an Indian Defence Minister to Uzbekistan in about 15 years, a Defence Ministry statement said.

Line of Credit

Mr. Rajnath Singh held bilateral consultation with his Uzbekistan counterpart, Major General Bakhodir Nizamovich Kurbanov, after which they jointly presided over the curtain raiser of the first India-Uzbekistan Joint Exercise, 'Dustlik 2019'.

"India has offered a concessional line of credit of $ 40 million for procurement of goods and services by Uzbekistan from India. The direct exchanges related to training, capacity building and education between the armed forces on both sides have also witnessed a significant upswing," the statement said.



Uzbek honour : Defence Minister Rajnath Singh inspecting a guard of honour in Tashkent on November 2, 2019.

High-level Meetings

The bilateral exercise will be conducted from November 4 to 13 at Chirchiq Training Area near Taskhent and will be focused on counter-terrorism, in which "the two countries share a common concern."

There have been a series of high-level visits and exchanges after the visit of the then Defence Minister of Uzbekistan to India in September 2018.

"This enhanced level of engagement is reflected in the first meeting of the **Joint Working Group on Defence Cooperation** in February 2019, visit of the Defence Secretary of India in March 2019 and the first defence-industry Workshop organized in Tashkent in September 2019," the statement pointed out.

Apart from the MoU on military medicine, two institution-to-institution MoUs on training and capacity building between institutes of higher military learning of the two countries were also signed.

"The MoU is a byproduct of interactions emanating from the MoU on military education signed between the two countries in October 2018," the statement said.

The two Ministers also witnessed the first-ever exchange over a video-link between the College of Defence Management in Secunderabad and the Armed Forces Academy of Uzbekistan in Tashkent, it added.

Mr. Rajnath Singh was in Taskent to attend Council of Heads of Governments (CHGs) of the Shanghai Cooperation Organisation (SCO) as the special envoy of Prime Minister Narendra Modi. It is in this meeting that he held talks with his Uzbek counterpart.

MAGAZINE KING

3rd RCEP Summit : India Refuses to Join Regional Trade Pact for Now

Key Highlights

- The 3rd RCEP summit was held on November 4, 2019 in Bangkok, Thailand.
- India refuses to join the regional trade bloc, saying it is neither fair nor balanced; it does not address our concerns, outstanding issues.
- Behind govt.'s reluctance : opposition from dairy, India Inc, Congress Party and RSS.
- Could join RCEP if demands are met, says commerce minister Piyush Goyal.

The 3rd Regional Comprehensive Economic Partnership (RCEP) summit was held on November 4, 2019 in Bangkok, Thailand. RCEP is an umbrella trade agreement involving 16 countries—10 of ASEAN plus China, Japan, South Korea, Australia, New Zealand and India. It promises to be the biggest free-trade zone in the world.



PM Narendra Modi with other leaders at the 3rd RCEP Summit in Bangkok, November 4, 2019.

These countries are home to 3·6 billion people, or nearly half the world's population and account for around one third of global gross domestic product.

India Opts Out of the Agreement

India on November 4 opted out of the RCEP agreement with Prime Minister Narendra Modi putting his foot down and saying the country's concerns, especially those linked to Chinese goods flooding the Indian market, were not addressed.

"Our farmers, traders, professionals and industries have stakes in such decision. Equally important are workers and consumers, who make India a huge market and the third biggest economy in terms of purchasing power parity. When I measure the RCEP agreement with respect to the interests of all Indians, I do not get a positive answer. **Therefore, neither the talisman of Gandhiji nor my own conscience permit me to join RCEP.**" Modi said at the RCEP Summit in Thailand, seven years after negotiations started for formation of what could have been the world's largest trading bloc.

Consequences of India's 'No'

India's 'no' means that the bloc will not become a reality—an outcome that will not just annoy China, whose ire was evident in the accusation in state-controlled media about India making last-minute demands, but also other members of the proposed trade grouping who have been eyeing the Indian market. This is the second time since 2014 that the government has taken a tough stand on global trade issues. Soon after taking charge, the Modi administration had threatened to walk out of the WTO's Bali package, which could have impacted the country's food procurement programme.



Source : Ministry of Commerce and Industry.

Concerns not Addressed

This time, the main concern was the threat of imports from China flooding the market. Indian negotiators said the terms on offer did not address its worry despite it being flagged repeatedly. Besides, there were elements in the trade package which could have impacted the government's economic policy. For instance, RCEP would have forced the government to reduce import duties on several goods, including mobile phones, to 2014 levels, impacting the 'Make in India' programme.

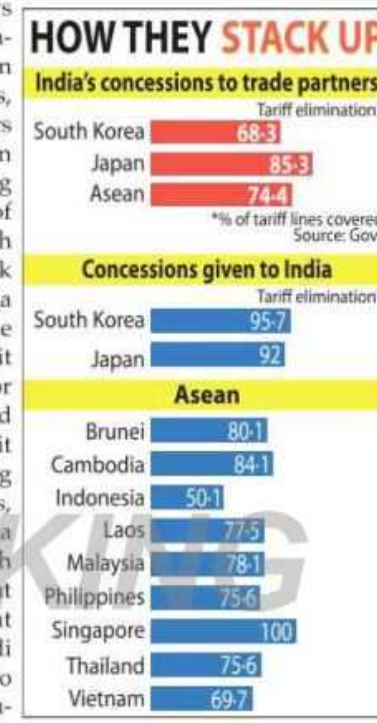
"Today, when we look around, we see during seven years of RCEP negotiations, many things, including the global economic and trade scenarios, have changed. We cannot overlook these changes. The present form or the RCEP agreement does not fully reflect the basic spirit and the agreed guiding principles of RCEP," Modi said.

There were also fears that the weak rules could have allowed Chinese goods to be routed via Vietnam or Thailand, while there was little to ensure that Beijing didn't erect non-tariff barriers to block the entry of Indian medicines or rice.

Joint Statement

In their joint statement, the regional leaders acknowledged India's concerns but kept the door open, 'All RCEP participating countries will work together to resolve these outstanding issues in a mutually satisfactory way. India's final decision will depend on satisfactory resolution of these issue," the statement said.

RCEP has always been an area of concern for Indian industry and farmers, and policymakers were reluctant to join negotiations during UPA-2. But as part of the Manmohan Singh government's 'Look East' policy, India decided to join the talks, hoping that it would take years for the deal to be thrashed out. In the process, it ended up annoying several countries, such as South Korea and Thailand, which wanted the agreement finalised without India as the Modi government too seemed to be pursuing a similar policy.



Could Join if Demands are Met

The decision not to join the Regional Comprehensive Economic Partnership (RCEP) is final for now, but if the other countries agree to India's demands, then negotiation and talks are possible in the future, Commerce Minister Piyush Goyal said.

Ready to Address Concerns : China

It is heartening to note, however, that China has said the door is not closed on India's participation in the Regional Comprehensive Economic Partnership free trade deal and it is ready to address New Delhi's concerns. "China is willing to continue to negotiate and resolve the problems..." Foreign Ministry spokesperson Geng Shuang said on November 5, 2019.

India, Russia to Conduct Joint Military Drills

India will for the first time host a joint tri-service military exercise with Russia from December 10 to 19, defence sources said on November 9, 2019. The ten-day bilateral joint services exercise 'Indra-2019' will witness company-sized mechanised contingents, fighter and transport aircraft as well as ships of the two armies, air forces and navies. "It would involve eight tactical episodes involving the ground forces of both countries," said Indian Army sources.

MAGAZINE KING

Supreme Judgement of the Supreme Court : Apex Court Resolves Centuries Old Ayodhya Dispute

Key Highlights

- Supreme Court allows temple at the disputed site.
- The SC's verdict is unanimous. 5-judge bench rules 2-77 acre disputed land in Ayodhya goes to Hindus.
- Sunni Waqf Board to get five-acre plot in Ayodhya after Babri Masjid structure demolished in 1992.
- Centre to set up within three months scheme for setting up a trust for constructing Ram Temple.

The Supreme Court ruled on November 9, 2019 in favour of a Ram temple on a disputed 2·77 acre plot in Ayodhya in a move cheered by hundreds of millions of people across the country although some Muslim parties questioned the verdict and said they may seek a review of the order passed by a five-judge Constitution bench headed by Chief Justice of India (CJI) Ranjan Gogoi.

SC Referred to Books in Sanskrit, Urdu, Persian, French

The SC referred to books on subjects as diverse as history, culture, archaeology and religion in languages as varied as Sanskrit, Hindi, Urdu, Persian, Turkish, French and English in its judgement on the politically and religiously sensitive Ayodhya land dispute.

The bench said that the faith of Hindu that Lord Ram was born at the site was undisputed, and he is symbolically the owner of the land.

The court asked the central government to set up, within three months, a trust that will oversee the construction of the temple.

"Whether it is devotion to Ram or Rahim, now is the time for everybody to strengthen devotion to India," Prime Minister Narendra Modi said in a tweet.

The dispute over the site of Babri Masjid, a three-domed mosque built by or at the behest of Moghul emperor Babur, dates back centuries with Hindus contending that the invading Muslim armies had razed an existing Ram temple to erect the mosque. However, it turned into a legal dispute in 1885 when a mahant went to court seeking permission to build canopy outside the mosque. The plea was dismissed. In December 1949, unidentified miscreants spirited an idol of Lord Ram into the mosque. The structure was destroyed by a large mob of kar sevaks on December 6, 1992.

The court's ruling comes 136 years after the first case in the Ram Janmabhoomi-Babri Masjid issue was filed, and nine years after the Allahabad high court delivered a judgement that each of the three main parties, the Sunni Waqf Board, the Nirmohi Akhara and Ram Lalla Virajman get an equal portion of the disputed land measuring 2·77 acres. The court based its decision largely on the title claims to the disputed land, choosing to look beyond the ASI report on the matter, but sticking to its previously stated intent of viewing a case that the parties and much of India saw as a faith-based one through the strict legal lens of ownership and possession.

5-Judge Bench

Chief Justice Ranjan Gogoi



Justice Gogoi joined the Bar in 1978. He was appointed the permanent judge at the Gauhati High Court in 2001. He was transferred to the Punjab and Haryana HC in 2010 and appointed as its Chief Justice the next year. Gogoi was elevated to Supreme Court in 2012. In October 2018, he was appointed the Chief Justice of India.

Justice Sharad Arvind Bobde



Justice Bobde enrolled in the Bar Council of Maharashtra in 1978. He was sworn in as the Chief Justice of the Madhya Pradesh High Court in 2012 and was elevated to the Supreme Court in 2013. Bobde is now the Chief Justice of India, taking charge on November 18, 2019 following Justice Gogoi's retirement on November 17, 2919. His retirement is due in April 2021.

Jusitice Ashok Bhushan



Justice Bhushan enrolled as an Advocate with the Bar Council of Uttar Pradesh in 1979. Thereafter, he practiced on civil and original side at the Allahabad HC till his elevation to the Bench. He was elevated as the permanent judge of Allahabad HC in 2001 and sworn in as the judge of the Kerala HC in 2014. He was elevated to the Supreme Court in 2016.

Justice S. Abdul Nazeer



Justice Nazeer got enrolled as an Advocate in 1983. He practised at the Karnataka High Court and was appointed as an Additional Judge of the Karnataka High Court in 2003. The next year, he was appointed as a Permanent Judge at the Karnataka HC. He was elevated as a Judge of the Supreme Court in 2017.

Justice DY Chandrachud



Justice Chandrachud, who was appointed as a judge of the Supreme Court in 2016, was the Chief Justice of the Allahabad High Court in 2013. He was appointed as the Additional Solicitor General in 1998. He has practised law at the Supreme Court and the Bombay HC. He obtained his LLM and Doctorate in Juridical Sciences from Harvard Law School, US.

As such, it found Ram Lalla Virajman (the personification of the Hindu god), whom it identified as a jurisitic person, and who was represented by Trilok Nath.

The demolition of the structure of the mosque triggered nation-wide Hindu-Muslim riots, more so in north India and Mumbai, which left many hundreds dead. Subsequently, Muslim extremists angered by the demolition and the riots, carried out a series of bombings in Mumbai on March 12, 1993, which left hundreds dead.

"The Constitution must ensure that a wrong committed must be remedied. Justice would not prevail if the Court were to overlook the entitlement of the Muslims

MAGAZINE

ASI Archaeologists : "Happy that Court took Impartial View of Issue"

Archaeologist Budhan Rashmi Mani, who initially led a 14-member Archaeological Survey of India (ASI) team that surveyed the disputed site in Ayodhya in 2003, expressed happiness over the Supreme Court's judgement, that paved the way for the temple construction there, on November 9, 2019.

He said that the court has taken an impartial view of the longstanding issue.

Mani said that he almost did not go for "the biggest assignment of his career" in 2003 when he was asked to lead the team at the site to study what was underneath the Babri Masjid. "I was not too keen as I had suffered a brain stroke," said Mani.

Controversies marred Mani's assignment and the Allahabad high court replaced him midway as the ASI team head.

"The court wanted me to continue digging, but I had chalked out a procedure and dug up till 45 metres within. I felt there was no need to dig further," said Mani, who continued to be part of the team despite his replacement.

Mani said that they found Northern Black Polish wares, sculptures, and 50 pillar bases. "We took back the historical period of the structure 900 years to 1600 BC," he said.

Mani was in 2016 named as the National Museum's Director General (DG) following his retirement. His stint ended in August this year.

Mani dismissed criticism that he was awarded for his work post-retirement. "I retired as the additional ASI DG... people less qualified than me and even people from outside were given the DG's post overlooking me. I suffered due to my association with the Aydohya case," said Mani.

Another former ASI archaeologist K.K. Mohammed, who was the first to claim that the site had a Hindu temple below the Babri masjid, too, welcomed the judgement.

"I cannot think of a better way this could have panned out. I was under a lot of strain for saying that a temple structure existed underneath. This (court verdict) makes me happy that what I was saying all along was not untrue, " said Mohammed.

who have been deprived of the structure of the mosque through means which should not have been employed in a secular nation committed to the rule of law," the judgement said.

To remedy that wrong the court asked the government to allot a five-acre plot to the Sunni Waqf Board for building a new mosque at a 'prominent' place in the holy town in Uttar Pradesh.

The Hindustan Times Comment : Finally, a Closure on Ayodhya

Hindus and Muslims could aim for a new equilibrium now

A legal dispute dating back to the late 19th century, a question of faith going back even longer, and a political issue that has shaped Indian politics for three decades were all addressed by the Supreme (SC), when it ruled on the Ram Janmabhoomi-Babri Masjid issue.

The court ruled in favour of a temple at Ayodhya, where many people believe Hindu God Ram was born, but also sought to address what it describes as a wrong committed against Muslims (especially during the 1992 demolition of a mosque that stood at the disputed site) by giving the Sunni Waqf Board five acres elsewhere in Ayodhya for a mosque.

Hindus as well as Muslim Leaders, Scholars Hail Verdict

Most naturally Hindus across the country and most of the political parties including the Congress hailed the verdict. What is most significant is the fact that leaving aside certain Muslim leaders and clerics, most of the Muslim leaders and scholars hailed the verdict. Former professor of Islamic studies at South Mumbai's St. Xavier's College, Dr. Zeenat Shaukat Ali, termed the Ayodhya verdict "meticulous and scientifically thought out", "It is a perfect and balanced judgement," he said.

Former Chief Election Commissioner T.N. Seshan Passes Away

Former Chief Election Commissioner T.N. Seshan, who ruthlessly enforced the model code of conduct and led the game-changing electoral reforms in the 1990s, died in Chennai on November 10, 2019. He was 87.



T.N. Seshan

Known for his no-nonsense attitude, Seshan was credited with ushering in major electoral reforms during his tenure as the 10th Chief Election Commissioner (CEC) between December 12, 1990 and December 11, 1996. Seshan, it was said, used to wield a big stick while enforcing the model code of conduct to rein in muscle and money power during elections.

Born in Thirunellai, Palakkad district of Kerala, he was awarded the Ramon Magsaysay Award in 1996. In acceptance speech of the prestigious award, Seshan had said, "I deemed this award as a tribute to the process of democracy throughout the free world, to the wisdom of millions of India's electorate not always necessarily formally educated, to the millions of voters who have overcome disabilities of economic status, social disability, poverty, and prejudice to walk into the ballot booth and use that marking stamp to decidedly say who they want to rule over them.

A 1955-batch Indian Administrative Service Officer, he held various key posts in the government including that of the defence secretary and the coveted position of cabinet secretary. But he gained popularity only after he took over as the Chief Election Commissioner in 1990.

PM Narendra Modi, in his condolence message, said Seshan was an outstanding civil servant who served the country with utmost dligence and integrity. His efforts towards electoral reforms have made our democracy stronger and more participative Pained by his demise. On Shanti," the Prime Minister wrote on twitter.

The Hindustan Times, in its editorial, dated November 12, 2019 wrote that his life had two lessons : The EC must push reforms; institutions must be autonomous.

11th BRICS Summit 2019 in Brazil : PM Modi Holds Bilateral Talks with Russia, China and other Members of the Group

The 11th BRICS Summit was held in Brasilia, the capital of Brazil in the second week of November, 2019 (13-14 November). Prime Minister Narendra Modi, who visited Brazil to attend the summit, met Russian President Vladimir Putin, Chinese President Xi Jinping and Brazilian President Jain Bolsonaro in the capital Brasilia and discussed various issues.

The BRICS Summit 2019 theme was **'Economic Growth for an Innovative Future'.** The five BRICS nations account for almost 50 per cent of the world's economic growth. The BRICS bloc comprises five major emerging economies including Brazil, Russia, India, China and South Africa.

While addressing the BRICS Business Forum, PM Narendra Modi stated that the BRICS nations have accelerated economic growth despite global recession and have enabled millions to come out of poverty and achieved breakthroughs in technology and innovation.



Prime Minister Narendra Modi delivers his address at Leaders Dialogue in the 11th BRICS summit in Brasilia on November 14, 2019.

PM Modi suggested the identification of at least five areas for joint ventures between the BRICS nations before the next BRICS summit. He also invited suggestions from the BRICS leaders to further reduce the trading cost between the BRICS nations.

The Prime Minister reiterated that **India is one of the world's most open and investment friendly nations** due to business-friendly reforms, political stability and predictable policy.

PM Modi holds bilateral talks with leaders of Brazil, Russia and China.

PM Modi—Jair Bolsonaro Talks

PM Modi met Brazilian President Jair Bolsonaro on the sidelines of the 11th BRICS summit on November 13, 2019. The Brazilian President accepted Modi's invitation to be the Chief guest at India's Republic Day on January 26, 2020.

During their talks, the two leaders agreed to comprehensively enhance the strategic partnership between the two nations. PM Modi outlined areas for potential investment from Brazil including areas such as agriculture equipment, biofuels, post-harvest technologies and animal husbandry. The two leaders also discussed other areas of cooperation such as defence and space sector. Jair Bolsonaro informed PM Modi that he would be accompanied by a large business delegation during his visit to India in January. Further, the Indian Prime Minister welcomed the Brazilian President's decision to grant visa-free travel to Indian citizens.

PM Modi—Xi Jinping Talks

PM Modi held bilateral discussions with Chinese President Xi Jinping on November 13, 2019, on the sidelines of the 11th BRICS summit.

The Chinese President expressed his deep appreciation to PM Modi for the warm welcome he received during the 2nd Informal Summit between India and China at Mamallapuram in Chennai.

Xi Jinping invited PM Modi to China for the third informal summit between the two nations in 2020. The two leaders further agreed on the importance of maintaining close dialogue on matters such as trade and investment. The two leaders further reviewed the ongoing preparation for the celebration of the 70th anniversary of the establishment of diplomatic relations between India and China in 2020.

The leaders also reiterated the importance of maintaining peace and security in border areas and exchanged views on many issues including RCEP, WTO and BRICS.

PM Modi–Vladimir Putin Talks

Prime Minister Narendra Modi met Russian President Vladimir Putin at Brasilia on November 13, 2019 ahead of BRICS summit 2019. This was the fourth meeting of the two leaders in 2019.

During the talks, the two leaders reviewed the progress made in the bilateral relationship between the two nations, since PM Modi's visit to Vladivostok in September, 2019.

The two leaders noted that the USD 25 billion bilateral trade target by 2025 has already been achieved. They further decided to hold the 1st bilateral regional forum between Russian provinces and the Indian States in 2020 to do away with the trade barriers at the regional level.

They further noted the progress made in oil and natural gas import. Russian President Putin highlighted the potential of the **Arctic region** in natural gas and invited India to invest in the region.

The leaders reviewed the progress made in the infrastructure sector, especially railways including raising the speed of the Nagpur-Secunderabad sector railway line. The leaders further noted cooperation between India in **Defence sector and Civil Nuclear Energy.** They also noted that the two nations share a common position on several international issues and agreed to continue close consultations.

PM Modi accepted the Russian President's invitation to participate in Russia's Victory Day celebrations in 2020.

What is BRICS ?

BRICS is currently a group of five major emerging economies. Initially, the bloc included only four nations and was termed as BRICS, as South Africa became a member of the bloc only in 2010.

BRICS nations make up almost 42 per cent of the world's population, 23 per cent of the global GDP and about 17 per cent of the world trade. The group also accounts for an almost 50 per cent of world economic growth and 26·6 per cent of the world area.

All BRICS nations are members of the G20 group. The BRICS summit has been hosted alternatively every year since 2009. The 10th BRICS Summit was hosted by South Africa in January 2018.

11th BRICS Summit

The BRICS Summit 2019 was the 11th edition of the annual summits. Brazil's capital city Brasilia was the host of the 11th BRICS summit.

The BRICS summit focussed on strengthening cooperation in the fields of science, technology, innovation and the digital economy.

The annual summit also aims to advance cooperation in the fight against transational crime, especially orga-

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nised crime, terrorism, money laundering, drug trafficking and encouragement to the rapprochement between the New Development Bank (NDP) and the BRICS Business Council.

PM Modi tweeted : "The BRICS Summit in Brazil has been a very productive one. We had fruitful dialogues on cementing ties in trade, innovation, technology and culture. The focus on futuristc subjects will surely lead to deeper cooperation that will benefit the people on our respective nations."

This was the sixth time Modi participated in the BRICS summit, his first being at Fortaleza, also in Brazil in 2014. Modi also met **South African** President **Cyril Ramaphosa** on November 14, 2019 and discussed a wide range of subjects.

Other Takeaways

- **PM Modi pitched for boosting intra-BRICS trade to $ 500 billion.**
- BRICS nations to deny safe haven to economic offenders.
- Terrorism caused $ 1 trillion loss to world economy : PM Modi says at BRICS summit.
- Terrorism biggest threat to humanity, says, PM Modi at BRICS leaders' meeting.
- Modi woos BRICS business leaders, says India world's most open, investment friendly country.

Office of Chief Justice of India (CJI) Falls Under Ambit of RTI : Supreme Court

Key Highlights

- CJI not above law. Judicial independence and accountability go hand-in-hand, says Chief Justice Ranjan Gogoi.
- Right to privacy must be balanced with transparency.
- But RTI can't be used as a tool of surveillance.
- The office of CJI is public authority.

The Supreme Court on November 13, 2019 held that the office of the Chief Justice of India is a public authority and falls **within the ambit of the Right to Information Act.**

- A five-judge Constitution bench headed by Chief Justice Ranjan Gogoi upheld the 2010 Delhi High Court verdict and dismissed three appeals filed by Secretary General of the Supreme Court and the Central Public Information Officer of the apex court.
- Cautioning that RTI cannot be used as a tool of surveillance, the top court in its judgement held that judicial independence was to be kept in mind while dealing with transparency.
- The bench, also comprising Justices N.V. Ramana, D.Y. Chandrachud, Deepak Gupta and Sanjiv Kumar, said that only the names of judges recommended by the collegium for appointment can be disclosed, not the reasons.

'Right to Privacy must be Balanced with Transparency'

- Cautioning that RTI cannot be used as a tool of surveillance, the five-judge SC bench in its judgement held that judicial independence has to be kept in mind while dealing with transparency.
- While the CJI and Justices Deepak Gupta and Sanjiv Khanna penned one judgement, Justices Ramana and Chandrachud wrote separate verdicts.
- It said that the Right to Privacy is an important aspect and it has to be balanced with transparency while deciding to give out information from the office of the Chief Justice.
- Justice Chandrachud in his judgement said the judiciary cannot function in total insulation as judges enjoy constitutional post and discharge public duty.

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- It said that the Right to Privacy is an important aspect and it has to be balanced with transparency while deciding to give out information from the office of the Chief Justice.
- Justice Chandrachud, who wrote a separate judgement, said that the judiciary cannot function in total insulation as judges enjoy constitutional posts and discharge public duty.
- Justice Sanjiv Khanna said independence of Judiciary and transparency go hand in hand.
- Justice Ramana, who concurred with Justice Khanna, said there should be balancing formula for right to privacy and right to transparency and independence of judiciary should be protected from breach.

Move Initiated by RTI Activist S.C. Agrawal

The bench had dismissed a plea of the Supreme Court that contended bringing the CJI's office within the RTI Act would 'hamper' judicial independence.

Justice Sen retired as the judge of the apex court, while Justice Murlidhar is a sitting judge of the high court.

The move to bring the office of the CJI under the transparency law was initiated by RTI activist S.C. Agrawal.

His lawyer Prashant Bhushan had submitted in the top court that though the apex court should not have been judging its own cause, it is hearing the appeals due to 'doctrine of necessity'.

The lawyer had described the reluctance of the judiciary in parting information under the Right to Information Act as 'unfortunate' and 'disturbing', asking : "Do judges inhabit different universe ?"

He had submitted that the apex court has always stood for transparency in functioning of other organs of state, but it develops cold feet when its own issues require attention.

Referring to the RTI provisions, Bhushan had said they also deal with exemptions and information that cannot be given to applicants, but the public interest should always 'outweigh' personal interests if the person concerned is holding or about to hold a public office.

Dealing with 'judicial independence', he said the National Judicial Accountability Commission Act was struck down for protecting the judiciary against interference from the executive, but this did not mean that judiciary is free from 'public scrutiny'.

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- The high court on January 10, 2010 had held that the CJI office comes within the ambit of the RTI law, saying judicial independence was not a judge's privilege, but a responsibility cast upon him.
- The 88-page judgement was seen as a personal set-back to the then CJI, K.G. Balakrishnan, who has been opposed to the disclosure of information relating to judges under the RTI Act. The high court verdict was delivered by a three-judge bench comprising Chief Justice A.P. Shah (since retired) and Justices Vikramjit Sen and S. Muralidhar.

ISRO Puts India's Cartosat-3, Plus 13 Nano Satellites into Orbit

India's space agency places the sharpest eye in the sky using PSLV C-47.

The 'Sharpest eye in the sky' India's **Cartosat-3,** and 13 other nano satellites belonging to two companies in the US lifted off successfully from the Satish Dhawan Space Centre SHAR, Sriharikota at 9-28 a.m. on November 27, 2019, offering only a very brief glimpse of the PSLV C-47 before vanishing into the low-hanging clouds.

The **Cartosat-3** is a high resolution imaging satellite that will help large-scale urban planning, infrastructure development, and coastal land use, among others.

Military Use

The satellite is also likely to have a military use since it provides the highest-ever spatial resolution of about a foot.

The Cartosat-3 was separated about 18 minutes after lift-off and the customer satellites were injected into their orbits one by one and the mission was completed 27 minutes after launch.

Touching New Heights

A look at the milestones reached by ISRO with this launch.

- 74th launch vehicle mission from SDSC SHAR
- 49th flight of PSLV
- 21st flight of PSLV in the 'XL' configuration (with six solid strap-on motors)
- 9th satellite of Cartosat series
- 5th launch by ISRO in 2019



Blazing a trail : PSLV C-47 lifting off from the Sriharikota spaceport on November 27, 2019.

What's in store : 13 planned up to March 6 launch vehicle missions and 7 satellite missions.

"This is India's highest resolution civilian satellite and most advanced earth observation satellite built by the ISRO so far. The Cartosat and all the 13 other satellites were placed in a precise orbit, "ISRO chairman K. Sivan said from Mission Control after the successful exercise.

9th Satellite

The Cartosat-3 is the 9th satellite of the Cartosat series and ISRO's fifth launch this year. One of its cameras offers a ground resolution of 25 cm, while the best ground resolution till now was 31 cm offered by WorldView-3, a satellite owned by U.S. company Maxar.

The commercial satellites carried on board in the mission were launched under a commercial arrangement with NewSpace India Ltd. (NSIL), the commercial arm of the ISRO.

Mission Director S.R. Biju said the launch was unique since the PSLV was navigated for the first time using the indigenous Vikram processor designed by the ISRO and fabricated within the country, "We have our hands full. We have 13 missions up to March—six launch vehicle missions and seven satellite missions," Mr. Sivan said.

Indian Ocean in India-UK Defence Focus

The Indian Ocean is emerging as a focus area for defence cooperation between India and the UK, with the two sides planning sophistical naval exercises and London deploying an officer to a key Indian surveillance facility.

The aircraft career HMS Queen Elizabeth, the largest warship built for the Royal Navy and capable of carrying 70 aircraft, will operate in the Indian Ocean region on her maiden voyage after entering service in 2020.

Security and Freedom of Navigation

- The move reflects the importance attached to security and freedom of navigation in the region.

  "HMS 5 Defender, Royal Navy destroyer, visited Goa… and the 2021 version of the bilateral naval exercise Konkan 21 could be the most complex and sophisticated so far," British high commissioner Dominic Asquith said on November 15, 2019.

Queen Elizabeth will operate in the Indian Ocean region on her maiden voyage after entering service in 2020.

- The UK is also placing a liaison officer at the Indian Navy's Information Fusion Centre in Gurugram, a facility for friendly nations to exchange non-sensitive information on merchant shipping in the region.

  The centre integrates India's coastal radar systems to generate a real-time picture of waters around the 7,500 km coastline, and France too has deployed an officer at the facility.

Next Edition of Milan

- Besides, the UK is helping with the planning of the next edition of Milan, a multilateral biennial naval exercise held in the Andaman and Nicobar Islands, Asquith said.

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- Sixteen countries, including Australia, Malaysia, Singapore and Tanzania, had participated in the last edition of Milan in 2018. The Konkan exercise, hosted in rotation by the two countries, was institutionalised in 2004 and has helped enhance inter-operability between the two navies.

  Cooperation in the Indian Ocean had figured in interactions during a visit to India last month by Admiral Tim Fraser, the UK's vice chief of defence staff.

  Cooperation in the Indian Ocean also fits the interests of the two sides in protecting merchant shipping and fishery resources and ensuring freedom of navigation, people familiar with developments said.

Defence Minister Rajnath Singh in Bangkok, Thailand; Attends ADMM-Plus Meeting

Defence Minister Rajnath Singh arrived in Bangkok on November 16, 2019 to attend ASEAN Defence Ministers' Meeting-Plus (ADMM-Plus) and the opening ceremony of Defence and Security Exhibition. He attended the meeting along with 17 other Defence Ministers of ADMM-Plus countries.

- On the sidelines of ADMM-Plus on November 17, 2019 Rajanth Singh held bilateral meetings with US Secretary of Defence Mark Esper, Deputy Prime Minister of Thailand, General Prawit Wongsuwan, Defence Minister of Japan Taro Kono, Defence Minister of Australia Linda Reynolds and Defence Minister of New Zealand Ron Mark. Mr. Singh reviewed the entire gamut of bilateral defence relations with the respective leaders and discussed ways to further improve the ties.
- Expressing happiness on the growing relationship between India and the USA, Mr. Singh conveyed that the bilateral cooperation between the two sides has grown across a wide range of sectors including Defence and Security, Economy, Energy, Counter Terrorism and people-to-people ties.



Rajnath Sight participates in the 6th ADMM-Plus in Thailand.

- On November 18, 2019 Mr. Singh said that India's defence exports grew nearly six times over the past two years. Addressing a conference in Bangkok, Mr. Singh said the government of India is committed to working towards achieving a US $ 26 billion Defence Industry by 2025. "The draft production policy 2018 had set a target of US $ 5 billion in defence exports by 2025. While the target is ambitious, it is encouraging to know that India's defence exports grew nearly 6 times over the past two years," Mr. Singh said.

  "As far as India is concerned we consider ASEAN important for our 'Act East' policy. Undoubtedly this ASEAN meeting is more important for India than for any other country," he added.
- Mr. Singh attended the 6th ASEAN Defence Ministers Meeting-Plus (ADMM-Plus) on November 18, 2019.

The ADMM-Plus

The ADMM-Plus is for ASEAN and its **eight Dialogue Partners** including India. It aims to strengthen the security and defence cooperation for peace, stability, and development in the region. Defence Ministers of 17 countries of the ADMM-Plus group participated in the 6th meeting. The current Chairman of ADMM-Plus was H.E. Gen. Prawit Wongsuwon, Deputy Prime Minister/ Minister of Defence, Kingdom of Thailand.

India Rising Seminar

- In an address at a seminar on **'India Rising'** Mr. Rajnath Singh said the Modi government was committed to making the country a major hub of defence manufacturing and transform it into a $ 26 billion industry in the next ten years.



World This Month



- 22nd ASEAN-China Summit in Bangkok : China 'Ready to Work with' ASEAN on S China Sea Row
- Iran Violates N Deal Again on 40th Anniversary of US Embassy Takeover
- US Formally Quits Paris Climate Accord
- US Navy Prepares Allies in the Gulf to 'Protect Navigation'
- President Macron Visits China : China, France Defend Paris Climate Pact
- Politics in Middle East : Yemen Govt., Rebels Ink Saudi-brokered Power Agreement
- US-Iran Stand-off : US Calls for 'Serious Steps' Against Iran
- NASA Unveils Its First Electric Airplane Mauritius Elects Incumbent as PM Again
- Spain's General Elections : Socialists Fail to Net Majority, Anti-Separatist Vox Doubles Tally
- Turmoil in Bolivia : Senator Declares Herself President
- Presidential Polls in Sri Lanka : Gotabaya Rajapaksa Storms to Victory
- Israel, Palestine Imbroglio : US Says Israeli Settlements in the Palestinian Territories Are Not Illegal
- Pakistan Test-fires Nuclear Capable Missile Shaheen-I
- China Has the Most Diplomatic Posts in the World : Study

22nd ASEAN-China Summit in Bangkok : China 'Ready to Work with' ASEAN on S China Sea Row

The ASEAN-China summit, like the Asean-India summit, was held on November 3, 2019 in Bangkok, Thailand. At the summit Beijing said that it is 'ready to work' with Southeast Asian nations on a code of conduct in the flashpoint South China Sea, where it is accused of building up military installations and bullying fellow claimants.

China claims most of the resource rich waterway, major global shipping route that has long been a source of tension in the region. For years, the 10-member Association of South East Asian Nations (ASEAN) has been locked in talks for a code of conduct for the sea, where China is accused of deploying warships, arming outposts and ramming fishing vessels.



Leaders at the ASEAN-China Summit with Chinese Premier Li Keqiang on the sidelines of ASEAN Summit in Bangkok.

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The agreement, set to be finished in 2021, will lay out conduct guidelines for the sea along with conflict resolution parameters.

China's premier Li Keqiang said the first reading of the document—a chance for all members to comment on the draft terms was "a very important landmark."

"We stand ready to work with ASEAN countries building on the existing foundation and the basis to strive for new progress" on the guidelines, he said.

He added that China wanted to "maintain and uphold long-term peace and stability in the South China Sea". The Philippines—which has sparred with China in the Sea—said that Beijing is committed to the code, despite its broad claims to the waterway. "It recognises the fact that if it doesn't agree to a code of conduct then there will be turmoil in the region," presidential spokesman Salvador Panelo told reporters in Bangkok on the sidelines of ASEAN.

The Philippines in 2016 filed a case with a UN-backed tribunal, which ultimately rejected Beijing's assertions in the Sea.

Tensions in the waterway have flared in recent weeks between China and Vietnam.

Iran Violates N Deal Again on 40th Anniversary of US Embassy Takeover

Doubles centrifuges, announces a new prototype centrifuge that is 50 times faster than allowed by deal.

Iran announced on November 4, 2019 its latest violations of the nuclear deal with world powers, saying that it now operates three as many advanced centrifuges banned by the 2015 accord and is working on a prototype that is 50 times faster than those allowed by the deal.

- The announcement came as the country marks the 40th anniversary of the 1979 US embassy takeover that started a 444-day hostage crisis. By starting up these advanced centrifuges, Iran further cuts into the one year that experts estimate Tehran would need to have enough material for building a nuclear weapon—if it chose to pursue one.
- The comments by Ali Akbar Salehi, the head of the Atomic Energy Organisation of Iran, came ahead of an expected announcement by Tehran of the new ways it would break the accord.
- Already, Iran has broken through its stockpile and enrichment limitations, trying to pressure Europe to offer it a new deal, more than a year since President Donald Trump unilaterally withdrew America from the accord.
- Speaking to state TV, Salehi said Tehran is now operating 60 IR-6 advanced centrifuges—twice as many as before. Such a centrifuge, an IR-6, can produce enriched uranium many times as fast as the first generation IR-Is allowed under the accord.
- The nuclear deal limited Iran to using only 5,060 first-generation IR-1 centrifuges to enrich uranium by rapidly spinning uranium hexafluoride gas.
- Salehi also announced that scientists were working on a prototype he called the IR-9, which worked 50-times faster than the IR-1. Meanwhile, demonstrators gathered in front of the former US embassy in downtown Tehran on November 4, 2019 as state television aired footage from other cities across the country marking the anniversary.
- "Thanks to God, today the revolution's seedlings have evolved into a fruitful and huge tree that its shadow has covered the entire Middle East," said General Abdolrahim Mousavi, the commander of the Iranian army.
- However, this year's commemoration of the embassy seizure comes as Iran's regional allies in Iraq and Lebanon face widespread protests. The Iranian Consulate in Karbala, Iraq, a holy city for Shiites, saw a mob attack it overnight. Three protesters were killed during the attack and 19 were wounded, along with seven policemen, Iraqi officials said.
- Trump retweeted posts by Saudi-linked media showing the chaos outside the Consulate. The violence comes after the hardline Keyhan newspaper in Iran reiterated a call for demonstrators to seize US and Saudi diplomatic posts in Iraq in response to the unrest.
- The collapse of the nuclear deal coincided with a tense summer of mysterious attacks on oil tankers and Saudi oil facilities that the US blamed on Iran. Tehran denied the allegation, though it did seize oil tankers and shoot down a US military surveillance drone.

Iran's Threat

- Iran has threatened in the past to push enrichment back up to 20%. That would worry nuclear non-proliferation experts because 20% is a short technical step away from reaching weapons-grade levels of 90%. It also has said it could ban inspectors from the United Nations' nuclear watchdog, the International Atomic Energy Agency.
- The Vienna-based IAEA did not immediately respond to a request for comment on Iran's announcement. The IAEA previously said Iran planned to build two cascades, one with 164 IR-2M centrifuges and another with 164 IR-5 centrifuges. A cascade is a group of centrifuges working together to more quickly enrich uranium.

US Formally Quits Paris Climate Accord

America's decision to formally pull out of the Paris Climate Accord triggers worldwide regret and concern.

The US has formally notified the United Nation that it is withdrawing from the Paris Climate accord, triggering expressions of concern and regret from other major powers on November 5, 2019.

US President Donald Trump went ahead with the pull out despite mounting evidence of the reality and impact of climate change, with September the fourth month in a row with record-breaking temperatures.

Washington presented its withdrawal letter to the UN on the first possible date under the accord negotiated by Trump's predecessor Barack Obama, making the world's largest economy the sole outlier from the agreement.

The US will be officially out on November 4, 2020, one day after the presidential election.

Trumph's rationale

Announcing the move, US secretary of state Mike Pompeo reiterated Trump's rationale in 2017 that the accord would disadvantage US businesses.

"It was America that would suffer the straitjacket," Pompeo told Fox Business. "It would be quintessentially unfair to the American people and to the American workers."

Pompeo said in a statement that the US would advocate a "realistic and pragmatic model" that included renewable energy but preserved a role for fossil fuels.

French reaction

French President Emmanuel Macron, who unsuccessfully tried to persuade Trump to stay in the accord named for his nation's capital, lamented the decision.

"We regret this and it makes the Franco-Chinese partnership on climate and biodiversity even more necessary," the French presidency said as Macron visited China, the world's largest emitter of the greenhouse gases blamed for climate change.

VASANT KIMG

Chinese reaction

Beijing expressed 'regret' over Washington's decision ahead of the planned signing of a joint document on climate by President Xi Jinping and Macron. "We hope the US can take more responsibility, and do more to contribute a driving force to the multilateral cooperation process, instead of adding negative energy," said Chinese foreign ministry spokesman Geng Shuang.

Russian reaction

Russia warned that the US withdrawal undermined the Paris accord.

"Without the largest economy in the world, it's very, very hard to talk about any kind of climate agreement," President Vladimir Putin's spokesman Dmitry Peskov said.

US Woos Asia with Plan to Rival China's 'Belt and Road Initiative'

Commerce secretary Wilbur Ross said the US will invest and trade more in Asia at it rolls out an American plan to support 'sustainable' projects in Asia as a counterpoint to China's multi-billion-dollar 'Belt and Road' infrastructure initiative.

Ross was leading a high-powered trade mission in Asia and along with national security adviser Robert O'Brien attended meetings at a regional summit that wrapped up November 4, 2019 on the outskirts of Thailand's capital.

Like O'Brien, he sought to dispel suspicions that President Donald Trump's administration is disengaging with the region, a sentiment that deepened when Trump sent his adviser to the annual summit, skipping it for a second straight year in order to campaign. "We have no intention of vacating our military or geopolitical position," Ross told reporters in a conference call.

He said many people had misinterpreted Trump's 2017 US decision to pull out of a regional trade deal, the Trans-Pacific Partnership, as a sign of waning interest.

"We are here permanently, and we will be continuing to invest more here, and we will be continuing to have more bilateral trade, and I'm spending much more time in the region," Ross said.

To illustrate that commitment, US officials launched the Trump administration's **'Blue Dot Network'** at a high-powered business conference attended by 1,000 people, including more than 200 American business executives.

14th East Asia Summit in November, 2019

The 14th East Asia Summit (EAS) was held in Bangkok, Thailand on November 4, 2019. The meeting was chaired by H.E. General Prayut Chan-o-Cha, Prime Minister of the kingdom of Thailand and attended by the Heads of State/ Government of ASEAN member states, Australia, the People's Republic of China, the Republic of India, Japan, New Zealand, the Republic of Korea (ROK), the Russian Federation and the United States of America, and other representatives. The Secretary General of ASEAN was also in attendance. India was represented by Prime Minister Narendra Modi.

US Navy Prepares Allies in the Gulf to 'Protect Navigation'

The US is training Gulf allies to 'protect navigation' in the region's troubled waterways, as it seeks to build an alliance to contain Iran.

The IMX

Washington's three week International Maritime Exercise (IMX) which started on October 21, came after a number of commercial vessels were attacked in the Gulf from May, ratcheting up regional tensions. Washington blamed the incidents on Iran, which has denied any involvement.

- On November 5, 2019, the US invited international media to see part of the IMX, the second-largest maritime exercise of its kind.

The size of IMX

- The manoeuvres involved 5,000 personnel, 40 vessels and 17 aircrafts from 50 countries deployed to the strategic waterway that separates Iran from the pro-US Arab Gulf monarchies.

"This is the first time we are taking part in the IMX," the head of a Saudi naval de-mining team, Ali Bin Shreidi, told AFP aboard the **Cardigan Bay**, a British Royal Fleet Auxillary landing ship 65 km off Bahrain's coast. He was taking part in order "to increase capabilities and share our expertise in fighting mines, in order to protect navigation", he said.



An AH-1Z Viper takes off aboard the assault ship USS Boxer as it transits the Strait of Hormuz, off Oman.

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- In June, the US Navy alleged that a mine resembling Iranian weaponry was used in an attack on the Japanese-owned Kokuka Courageous tanker, targeted as it passed through the Gulf of Oman.
- "Then in July, the IRGC seized a British-flaged oil tanker, holding it for more than two months.

"One of the biggest reasons for us being out here is to build international relations," said US Navy lieutenant Jonathan Phares who was among 300 personnel from the US, France and the Gulf on the Cardigan Bay.

President Macron Visits China : China, France Defend Paris Climate Pact

The Paris Climate accord is 'irreversible', Chinese President Xi Jinping and his French counterpart Emmanuel Macron said in Beijing on November 6, 2019 after the US notified the United Nations of its intention to leave the deal.

Firm support

Xi and Macron's decision to put up a united front came in the backdrop of several leading powers expressing concern over US President Trump's decision to withdraw from the accord amid growing international concern on climate change. In a **joint statement,** the two leaders affirmed, "their firm support for the Paris accord

which they consider as an irreversible process and a compass for strong action on climate.

Speaking at the Great Hall of the People, Macron said he "deplores the choices made by others" without naming any country or leader, "But I want to look at them as marginal choices," Macron said.



French President Emmanuel Macron (right) reviews an honour guard with Chinese President Xi Jinping in Beijing on November 6, 2019.

With the European Union, China, and Russia backing the pact, said Macron, "the isolated choice of one or another is not enough to change the course of the world. It only leads to marginalisation."

Xi urged the international community to "jointly protect our homeland planet earth", saying "we are against the attempt to place national interest above the common interests of humanity.

Animals Give Birth Early Due to Warming

Researchers have found some of the first evidence that global warming is causing wild animals to give birth earlier in the year, a discovery that sheds more light on the impact of the climate crisis on wildlife.

The researchers, including those from the University of Edinburgh in the UK and the Australian National University, said that population of the red deer present in the Isle of Rum in Scotland are undergoing genetic changes that have led to a rapid shift in the birth dates of offspring in recent years.

Politics in Middle East : Yemen Govt., Rebels Ink Saudi-brokered Power Agreement

Yemen's Saudi-backed government and southern separatists signed an agreement on November 5, 2019 to end a power struggle in the south of Yemen that Saudi Arabia's crown prince hailed as a step towards a wider political solution to end the multifaceted conflict.



Crown Prince of Abu Dhabi Sheikh Mohammed bin Zayed al-Nahyan walks with Yemen President Abedrabbo Mansour Hadi as they attend a peace-signing ceremony between the Saudi-backed Yemeni govt. and the southern separatists in Riyadh on November 5, 2019.

The stand-off had opened a new front in the more than four-year-old war and fractured a Saudi-led coalition battling the Houthi movement that ousted the government of Abd-Rabbu Mansour Hadi from the capital, Saana, in the north in late 2014.

Broader talks

Saudi Arabia's envoy to Yemen said that the pact, reached after more than a month of indirect talks in the Kingdom, would see the separatist **Southern Transitional Council (STC)** join a new cabinet along with other southerners and all armed forces would be placed under government control. "This agreement will open, God willing, broader talks between Yemeni parties to reach a political solution and end the war," Crown Prince Mohammed bin Salman said in a televised signing ceremony in Riyadh.

Trump's reaction

US President Donald Trump praised the agreement on Twitter. "A very good start ! Please all work hard to get a final deal."

US-Iran Stand-off : US Calls for 'Serious Steps' Against Iran

The US on November 7, 2019 called for 'serious steps' to be taken after Iran resumed uranium enrichment at its underground Fordo plant in a new step back from its commitments under a 2015 nuclear deal.

"Iran's expansion of proliferation-sensitive activities raises concerns that Iran is positioning itself to have the option of a rapid nuclear breakout," US secretary of state Mike Pompeo said in a statement. "It is now time for all nations to reject this regime's nuclear extortion and take serious steps to increase pressure."

Meanwhile, Tehran acknowledged blocking an official from the IAEA from visiting its nuclear site at Natanz earlier, the first known case of a United Nations inspector being blocked amid heightened tensions over its atomic program.

These latest steps put additional pressure on Europe to offer Iran a way to sell its crude oil abroad despite the US sanctions imposed on the country since President Donald Trump withdrew America from the nuclear deal over a year ago.

NASA Unveils Its First Electric Airplane

NASA, most prominent for its many Florida-launched exploits into space, showcased an early version of its first all-electric experimental aircraft, the X-57 'Maxwell,' on November 8, 2019 at its lesser known aeronautics lab in the California desert.

Adapted from a Italian-made Tecnam P2006T twin-engine propeller plane, the X-57 has been under development since 2015 and remains at least year away from its first test flight in the skies over Edward Air Force Base.



The X-57 Maxwell, at NASA's Armstrong Flight Research Center at Edwards Air Force Base, California.

But after attaching the two largest of 14 electric motors that will ultimately propel the plane—powered by specially designed lithium ion batteries—NASA deemed the Maxwell ready for its first public preview.

NASA also showed off a newly built simulator that allows engineers, and pilots, to get the feel of what it will be like to manoeuvre the finished version of the X-57 in flight.

Mauritius Elects Incumbent as PM Again

Mauritius' ruling Militant Socialist Movement (MSM) won more than half of the seats in Parliament, securing incumbent PM Pravind Kumar Jugnauth a five-year term, the final election results showed on November 8, 2019.

November 7's vote was dominated by calls for fairer distribution of wealth on the prosperous Indian Ocean island of 1·3 million people. MSM won 38 of the 62 seats up for grabs while its rivals, the Labour Party and the Mauritian Militant Movement, garnered 13 and 9 seats respectively, the election commission said.

Jugnauth, 47, became PM in 2017 when his father stepped down from the post.

Japan Celebrates Enthronement



Japanese Emperor Naruhito and Empress Masako rode through central Tokyo on November 10, 2019 in a motorcade to mark this year's imperial succession as well-wishers waved national flags. Emperor Naruhito, 59, acceded to the throne in May after his father, Akihito, became the first monarch to abdicate in two centuries.

Spain's General Elections : Socialists Fail to Net Majority, Anti-Separatist Vox Doubles Tally

Vox Popular : Far-right rises in Spain.

With its hardline against Catalan separatism, immigration and feminism, far-right party **VOX** was the big winner of Spain's repeat general election on November 10, 2019 surging into third place.

- The party won 52 seats—more than doubling the 24 it took during its Parliament debut in the most significant showing by a far-right faction since Spain's return to democracy following dictator Francisco Franco's death in 1975.



Santiago Abascal (centre), the VOX candidate, at the party HQ in Madrid

- Vox, meaning 'voice' in Latin, was launched in 2014 by **Santiago Abascal** and several other disgruntled members of the hardline fringe of the rightwing conservative **Popular Party (PP).** At the time, Abascal blasted then PP premier Mariano Rajoy for not repealing measures passed by a previous Socialist government such as same-sex marriage legislation or the law of historical memory seeking to recognise those who suffered under Franco's dictatorship.
- And in October 2019, Abascal denounced the Socialist regime for exhuming Franco's remains from a grandiose mausoleum and moving them to a more discreet site, calling it the 'profanation' of a grave.
- Vox struggled to gain traction at first, attracting only a smattering of voters but in December 2018 it burst on the scene, winning 10% of the vote in a regional election in Andalusia, Spain's most populous region. The party then joined forces with PP and business-friendly Ciudadanos to oust Socialists from power in the southern region where they had ruled since 1982.
- In his victory speech, Abascal said VOX's rise was the "most meteoric in Spanish democracy". Analysts say it was the hard line on Catalan separatism that drove its success.
- The poll, called to end the political deadlock, only deepened uncertainty about the future of EU's fifth-largest economy and raised the spectre of yet another ballot—the fifth in five years—next year, and weeks or months of political jockeying now lie ahead. Incumbent PM Pedro Sanchez's Socialists captured the most seats, with 120, far short of a majority in the 350-seat chamber.

Turmoil in Bolivia : Senator Declares Herself President

A senator proclaimed herself Bolivia's interim President on November 12, 2019 in an effort to fill the power vacuum left by the abrupt resignation of Evo Morales, who immediately condemned the move as a 'sneaky coup'.

Law-makers had been summoned to formalise the resignation and confirm deputy senate speaker Jeanine Anez, 52, as interim President. Instead, Anez declared herself interim President when the session failed to reach a quorum of law-makers, many staying away amid protests by Morales supporters.

The Constitutional Court later endorsed the appointment.



'I am your President' : Bolivia's deputy senate speaker Jeanine Anez.

"We want to call new elections as soon as possible," Anez said in a speech to Congress, with only Morales opponents present.

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"It's a commitment we have made to the country and of course, we will fulfill it," she said. Anez said earlier she was confident that enough senators would reach the senate to form a quorum—19 of the 36 were needed to do so.

Tweeting from exile in Mexico, Morales condemned what he called "the sneakiest, most nefarious coup in history."

Morales called Anez "a coupmongering rightwing senator" and said she had "declared herself... interim President without a legislative quorum."

BRICS Summit : Putin Extends Invitation to Trump to Attend May 9 Military Parade in Red Square : It would be a Right Step on His Part, Says Putin : BRICS Joint Declaration

Russian leader's move to invite US counterpart on May 9 sparks buzz at BRICS Brasilia summit. BRICS members slam protectionism in the joint declaration.



Come, Let's Talk : Vladimir Putin (right) has invited Donald Trump to Moscow to attend a parade.

Russian President Vladimir Putin said it would be a 'right step' if US counterpart Donald Trump accepts his invitation to attend the upcoming May 9 military parade in Red Square **commemorating the 75th anniversary of the end of World War 2.**

"They presence of the leader of a country which made a major contribution to the fight against Nazism at a ceremony marking the end of World War 2, even amid a pre-election campaign, would be a right step," Putin told reporters in Brasilia on November 14, 2019 on the sidelines of a summit of BRICS leaders from Russia, India, China, Brazil and South Africa.

The Russian leader warned that the overthrow of Bolivia's socialist president, Evo Morales, and the chaos that it has sparked reminded him of events in Libya following the ouster of Muammar Qaddafi in 2011.

"There's no functioning government, there's no direct foreign intervention, but the country is on the verge of chaos," he said describing the events as "a worrying signal" for the wider Latin American region.

BRICS Nations Take a Swipe at US Policy

Five of the biggest emerging economies railed against protectionism as they vowed to overcome 'significant challenges' facing multilateralism, in a swipe at US tariffs and unilateral action.

Joint Declaration

The Joint Declaration by the BRICS countries came on the second day of the annual gathering which Brazilian host President Jair Bolsonaro used to boost ties with Chinese counterpart Xi Jinping.

"Trade tensions and policy uncertainty have taken a toll on confidence, trade, investment and growth" in the global economy, said Bolsonaro, as he read out the declaration. "It is critical that all WTO members avoid unilateral and protectionist measures. We reiterate the fundamental importance of a rules-based, transparent, non-discriminatory, open, free and inclusive international trade."

Presidential Polls in Sri Lanka : Gotabaya Rajapaksa Storms to Victory

Sri Lanka's former civil wartime defence Chief Gotabaya Rajapaksa was declared the winner in the presidential election on November 17, 2019, after promising to secure the country against militant threats following Easter bombings this year.



Sri Lanka's President-elect Gotabaya Rajapaksa waves at supporters as he leaves the election commission office in Colombo.

Rajapaksa is the latest nationalist leader to sweep to election victory, tapping into the anger and fears of majority communities. In his first comments after defeating his rival Sajith Premadasa, a housing minister in the current government, Rajapaksa struck a conciliatory note, suggesting he would be leader of all Sri Lankans, regardless of their ethnic and religious identities.

"As we usher in a new journey for Sri Lanka, we must remember that all Sri Lankans are part of this journey. Let us rejoice peacefully, with dignity and discipline in the same manner in which we campaigned," Rajapaksa said in a tweet.

The election commission said Rajapaksa won 52·25% of the votes in the election, while Premadasa got 41·99%, giving Rajapaksa a far bigger lead than predicted by politicians and analysts. Other candidates got 5·7% votes.

Rajapaksa, 70, oversaw the military defeat of Tamil separatists under his brother and the then President Mahinda Rajapaksa 10 years ago. He has promised strong leadership to secure the island of 22 million people, the majority of whom are Sinhalese Buddhists.

Rajapaksa will be the second member from the Rajapaksa family to become the President. His elder brother Mahinda Rajapaksa was President from 2005 to 2015.

Leaning towards China

Rajapaksa had vowed to 'restore relations' with Sri Lanka's top lender, China, if he wins the election, despite international concerns over the island nation's financial debt to the Asian superpower.

Premdasa, meanwhile, was considered leaning more towards India and the US.

Prime Minister Narendra Modi congratulated Rajapaksa and said he looks forward to further deepen relations between the two nations.

Rajapaksa thanked the people of India and Modi, saying he looks forward to strengthening the friendship and meeting him in the near future.

The Rajapaksa senior's legacy of ending the Tamil separatist war has made him the darling of the Sinhala Buddhist majority. Gotabaya was his top defence ministry official who supervised the military operations against the

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LTTE. While doing so, he acquired the reputation of a ruthlessly efficient administrator.

Rajapaksa's victory marks the return of the family to the pinnacle of power in the island after they were surprisingly ousted in the previous presidential poll.

China Welcomes Election of New Sri Lankan President

China on November 18 congratulated the newly elected Sri Lankan President Gotabaya Rajapaksa, saying Beijing is ready to work with the new leadership for 'high-quality' cooperation under the Belt and Road Initiative (BRI), the connectivity project launched by President Xi Jinping.

Takes Oath

Rajapaksa was formally sworn in as Sri Lankan President on November 18, 2019 at an ancient Buddhist Temple outside Colombo. In his short speech, he promised to fulfil the promises made in his election manifesto. He also pledged support to the United Nations' sustainable development goals and make Sri Lanka one of the leading countries in sustainable development.

Sri Lankan President Picks Brother as PM

Meanwhile, the newly elected President on November 20, named his brother Mahinda Rajapaksa as Prime Minister. Mahendra Rajapaksa had been President of Sri Lanka for two terms during which the LTTE was finished. The present PM Ranil Wickremesinghe tendered his resignation after his party suffered a humiliating defeat at the presidential polls.

Israel, Palestine Imbroglio : US Says Israeli Settlements in the Palestinian Territories Are Not Illegal

Key highlights

- US Secretary of State Mike Pompeo's declaration comes after US changed position on Jerusalem and Golan heights.
- In a single stroke Trump administration reverses four decades old American policy.

America no longer believes that Israeli settlements in the Palestinian territories are illegal, secretary of state Mike Pompeo said on November 18, 2019 in the latest pro-Israeli shift by Washington.

At Odds with UNSC Resolutions

The statement puts the US at odds with virtually all countries as well as UN Security Council resolutions and was hailed by Israeli PM Netanyahu, a close ally of US President Donald Trump.

After carefully studying all aspects of the legal debate," Pompeo said, "the US has concluded that "The establishment of Israeli civilian settlements in the West Bank is not, per se, inconsistent with international law."

"Calling the establishment of civilian settlements inconsistent with international law hasn't worked. It hasn't advanced the cause of peace," Pompeo said.

Why Reaching a Settlement has been Hard

1. **Bone of Contention :** The controversy over the Jewish settlements is one of the most contentious between Israel and Palestine. More than 600,000 Israelis live in around 140 settlements in east Jerusalem and the West Bank, alongside more than 3 million Palestinians.
2. **Six-day War :** Israel seized control of the territories, seen as pivotal to any future Palestinian state, in the 1967 Six-day War. Israel argues that a Jewish presence has existed here for thousands of years and was recognized by the League of Nations in 1922.
3. **US Flip-Flops :** in 1978, the Jimmy Carter administration said the settlements violated global laws. But in 1981, Ronald Reagan said he did not believe so. Under the Oslo Accords signed by Israel & the Palestinians in the 90s, both sides agreed the issue would be resolved via talks. But all efforts at parleys have proven still born.

Palestinian Contention

The Palestinian Authority—which has refused negotiations through the Trump administration, which it considers biased—denounced the latest decision.

Washington is "not qualified or authorized to cancel the resolutions of international law, and has no right to grant legality to any Israeli settlement," Palestinian presidential spokesman Nabil Abu Rudeineh said.

Netanyahu said that the US shift "rights a historical wrong" for the 600,000 Israeli settlers who live in the West Bank and east Jerusalem among around 2·9 million Palestinians. "This policy reflects a historical truth that the Jewish people are not foreign colonialists in Judea and Samaria," he said.

EU Stand

The EU said it continued to believe that Israeli settlement activity in occupied Palestinian territory was illegal under international law.

Pakistan Test-fires Nuclear Capable Missile Shaheen-I

Pakistan on November 18, 2019 successfully test-fired a nuclear-capable surface-to-surface ballistic missile which can strike targets up to 650 kilometres, bringing many Indian cities under its range.

The test of the **Shaheen-I missile** by the Pakistani military took place amid Indo-Pak tensions over New Delhi revoking Jammu & Kashmir's special status.

The missile was test-fired as part of a training exercise "aimed at testing the operational readiness of Army Strategic Forces Command," the army's media wing said in a statement.

The missile is capable of delivering all types of warheads upto range of 650 km, the Inter Services Public Relations tweeted.

Pakistan had successfully test-fired nuclear-capable surface-to-surface ballistic missile Ghaznavi which has a range of upto 290 kilometres on August 29, days after India revoked Jammu & Kashmir's special status on August 5.

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Regional News



Jammu & Kashmir and Ladakh

Jammu & Kashmir Lieutenant-Governor Gets Advisers for Administrative Works

Retired IPS officer Farooq Khan and retired IAS officer K.K. Sharma were in November 2019 appointed as advisers to Girish Chandra Murmu, the Lieutenant-Governor of the newly-formed Union Territory of Jammu & Kashmir. Both officials had also served as advisers to Satya Pal Malik, Governor of the erstwhile state of Jammu & Kashmir.

The Union Home Ministry makes it clear in its order that the appointments of both the advisers will take effect from the day of their taking up assignments. They will assist Mr. Murmu in the administrative work.

Maharashtra

Uddhav Thackeray Sworn in As Maharashtra Chief Minister

Shiv Sena, NCP and the Congress' post poll coalition formed government in Maharashtra when Shiv Sena President 'Uddhav Thackeray took oath of office as the Chief Minister of the State on November 28, 2019 at the crowded Shivaji Park in Mumbai. Maharashtra Governor Bhagat Singh Koshyari administered the oath to Mr. Uddhav along with six cabinet ministers, two each from Shiv Sena, NCP and the Congress. Uddhav Thackeray is the third leader of Shiv Sena to become the Chief Minister of Maharashtra after Manohar Joshi and Narayan Rane and the first person from Thackeray family.

Shiv Sena's 'Eknath Shinde' and 'Subhash Desai', NCP's leaders Jayant Patil and Chhagan Bhujbal and Congress' Balasaheb Thorat and Nitin Raut became the cabinet ministers in the new coalition government in Maharashtra.

Maharashtra state witnessed a huge political drama after the results of Maharashtra assembly polls, 2019 in October, 2019. Shiv Sena and the Bharatiya Janata Party contested the assembly polls in the state as an alliance and got the majority to form the government. But Shiv Sena and the BJP got separated over the question of the post of Chief Minister. After many days of uncertainty, the President's rule was imposed in the state. Now NCP Chief Sharad Pawar came into the lead role and became active to form a post poll coalition government comprising Shiv Sena, NCP and the Congress. He developed a consensus among the three parties over a common ruling programme. Shiv Sena President Uddhav Thackeray emerged as the clear candidate for the Chief Minister's post in the State.

Earlier BJP leader Devendra Fadnavis was sworn in as the Chief Minister after lifting the President's rule in the night on November 23. The Shiv Sena-NCP-Congress alliance cried it foul as they claimed the BJP did not have majority. They took the matter to the Supreme Court which ordered a floor test in the Assembly to ascertain the strength of the government and the opposition. Devendra Fadnavis resigned on November 26 as the Chief Minister before the floor test in the Maharashtra assembly.

After huge political upheavel, Uddhav Thackeray became the CM.

North-East States

Justice Akil Kureshi Becomes Fifth Chief Justice of High Court of Tripura

Justice Akil Abdul Hamid Kureshi was sworn in as the new Chief Justice of the High Court of Tripura on November 16, 2019 as Governor Ramesh Bais administered the oath of office and secrecy to Kureshi at the old Raj Bhavan in Agartala.

Chief Minister Biplab Kumar Deb, two judges of the high court, state ministers and senior officials were present in the swearing-in ceremony.

Justice Kureshi, who was previously a judge of the High Court of Bombay, has become the fifth Chief Justice of the High Court of Tripura.

He succeeds Justice Sanjoy Karol who has been appointed as Chief Justice of the High Court of Patna. "I convey my good wishes to people of Tripura," Justice Kureshi told reporters.

Earlier this month, the law ministry had cleared the name of Kureshi for elevation as the chief justice of the Tripura High Court.

West Bengal

25th Kolkata International Film Festival, 2019

The 25th Kolkata International Film Festival, 2019 was inaugurated at a glittering ceremony at the Netaji Indoor Stadium in Kolkata on November 8, 2019 in the presence of West Bengal Chief Minister Mamata Banerjee, BCCI President Sourav Ganguly, Bollywood star Shahrukh Khan and a galaxy of cine personalities and stars. The Festival kicked off with the screening of Satyajit Ray–directed **'Gupi Gayen, Bagha Bayen'** film. 213 feature films and 152 short films and documentaries from 76 countries were screened in the eight-day film festival.

The Festival came to a successful conclusion with a grand closing ceremony on November 15, 2019. Chief

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Minister Mamata Banerjee, veteran actress Shabana Azmi who was the chief guest at the closing ceremony and many others attended the ceremony.

Spanish movie **'The Weeping Woman' (La Ilorona)** got the Golden Royal Bengal Tiger Award for the Best Film in International Competition of the 25th Kolkata International Film Festival.

Czech film **'The Painted Bird' (Nabarven ptce),** a black-and-white war drama written, directed and produced by Vclav Marhoul, got the Best Director crown in International Competition category getting ₹ 21 lakh as prize money apart from the Golden Royal Bengal Crown at the function.

The Special Jury prize in International Competition section went to **'Aga's House' (Shpia-e-Ags)** by Lendita Zeqiraj.

The NETPAC Award for Best Film went to **The Goddess and the Hero** by Aditya Kripalani.

Malayalam movie **'Run Kalyani'** got the Special Jury Award in Indian Language Films Category while the Hiralal Sen Memorial Award for Best Director in Indian language went to Indrashis Acharya for his Bengali film **'Parcel'.**

The Hiralal Sen Memorial Award for Best Film in Indian language went to **Mai Ghat Crime No. 103-2005** by Ananth Mahadevan.

While Acharya got ₹ 5 lakh apart from the crown as prize money for 'Parcel', Mahadevan got ₹ 7 lakh as prize money.

MAGAZINE KING

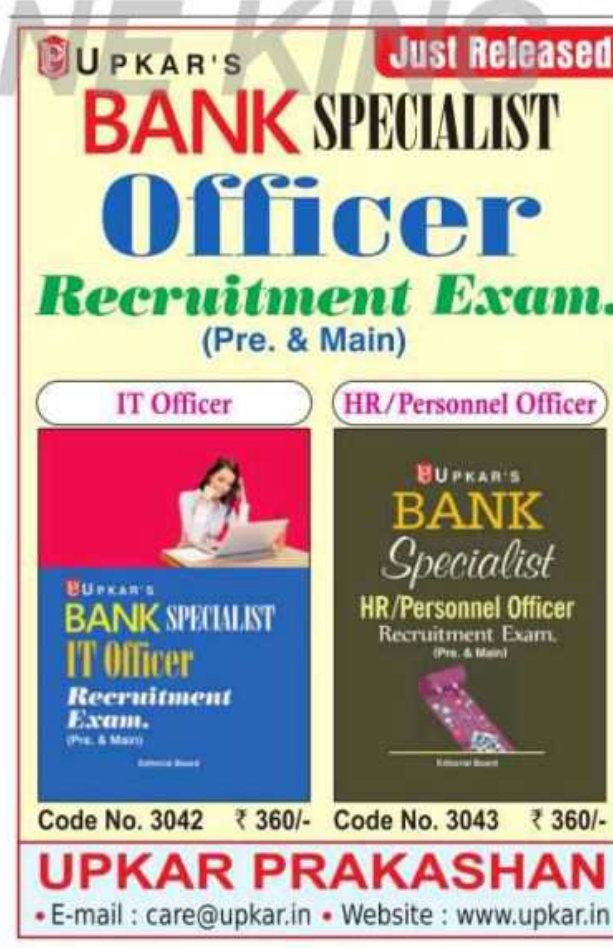
Continued from Page 28

China Has the Most Diplomatic Posts in the World : Study

With 123 embassies and High Commissions and 54 consulates, India is placed 12th among the 61 nations ranked by Sydney-based Lowy Institute.

China now has more diplomatic posts across the world than the US, a marker of its growing international clout and ambition, **an Australian Think tank** said on November 27, 2019.

- China's expansion in worldwide diplomatic presence has come only at the expense of Taiwan, a self governing democracy, which Beijing says is a break away province.
- The 2019 Global Diplomacy Index released on November 27, 2019 by the **Sydeny-based Lowy Institute** gives the latest statistics, marking how the world's diplomatic networks are expanding and, in certain cases, shrinking.
- **China overtook the US in 2019 with 276 embassies and consulates worldwide, which is three more than the US.** The study said both countries have an equal number of embassies, but Beijing has three more consulates.
- The next three spots on the list are occupied by France, Japan, and Russia.
- India is 12th among the 61 countries ranked by Lowy Institute. As of 2019, New Delhi has 123 embassies and high commissions and 54 consulates globally.
- Despite slipping to No. 2, "the US remains—by a wide margin—the most popular place for countries to maintain embassies and consulates. The US is home to some 342 posts belonging to the 61 countries included in the index. China, with 256, is a distant second", wrote Bonnie Bley, the Lowy Institute research fellow who compiled the list.
- China's expansion, however, has been rapid. "In two years, Beijing has grown its network by five diplomatic posts, following the opening of seven new missions and the shutdown of two. Its ascent to the top spot has been rapid. In 2016, China was in third place behind the US and France, and by 2017, it had moved to second place ahead of France," Bley wrote in her analysis.
- Beijing's global diplomatic outreach has been aided by its economic clout as under President Xi Jinping it has been **pumping billions of dollars into the Belt and Road Initiative.**



Updates National and International



ACRONYMS

CT — Climate Transparency
IMX — International Maritime Exercise
NCLAT — National Company Law Appellate Tribunal
NDC — Nationally Determined Contribution
NRC — National Register of Citizens
USFDA — The US Food and Drug Administration

APPOINTMENTS

Sanjay Gupta Named Country Manager at Google India

Google on November 8 appointed Sanjay Gupta as the new country manager and vice-president of sales and operations for India.

With a career spanning nearly three decades, Gupta joins Google from Star and Disney India where he was the managing director.

He will take on the role early next year and will be based out of Mumbai.



Sanjay Gupta

"Our ongoing engagement in India is a source of pride for both our Googlers in India and around the world. Our Indian operation is important and strategic for its own sake but also for the innovation which then feeds breakthroughs elsewhere in Google. We are delighted to have Sanjay join us," Scott Beaumont, president of APAC, Google, said in a statement.

He is a post graduate from the Indian Institute of Management Kolkata and is an engineer from Delhi College of Engineering.

Lt. Commander Karabi Gogoi : Navy Picks First Woman Officer as Defence Attache

The Indian Navy has selected its first woman officer for the post of a defence attaché abroad, which comes a month after the Indian Air Force posted Wing Commander Anjali Singh as the deputy attache at the Indian embassy in Moscow.

Sources said Lt. Commander (equivalent to an army major) Karabi Gogoi, a naval engineer currently posted at the Karwar base in Karnataka, has been selected for the post of assistant naval attache also at the Indian embassy in Russia. "Lt-Commander Gogoi will finish her Russian language course this month. She is likely to take over the new post in Moscow in December after requisite approvals," said a source.



Lt. Commander Karabi Gogoi is likely to take over the new post in Moscow next month.

The appointments of Wing Commander Singh and Lt. Commander Gogoi are the first for women officers to have been selected for defence diplomacy in the male-dominated environs of the armed forces. If the former as an aeronautical engineer specialises in handling fighter jets, the latter has experience in warship construction and maintenance.

Lt. Commander Gogoi, who grew up in Guwahati, was commissioned into the Navy in 2010. Her husband Lt. Commander Pranjal Handique, is also a gunnery officer in the Navy.

"She was selected over other candidates for the diplomatic assignment after an interview conducted by a board of senior naval officers," said the source.

India has well over 100 defence attaches or advisors posted in different countries across the globe, with some countries like the US, UK and Russia having representatives from all the three Services—the Army, Navy and IAF. DAs act as the main interface with the host country's military authorities, while also assisting in security and protocol tasks as well as keeping track of the military technology available in the country. Russia, of course, is a long-standing strategic partner of India, having been the primary source for acquisition of weapon systems since 1960s.

MAGAZINE KING

PERSONS IN THE NEWS

Dr. Manmohan Singh Nominated to the Parliamentary Standing Committee on Finance

Rajya Sabha chairman Venkaiah Naidu has nominated former Prime Minister and senior Congress leader Manmohan Singh to the parliamentary standing committee on finance in place of party colleague Digvijaya Singh.

Digvijaya Singh has now been nominated to the parliamentary standing committee on urban development by the chairman of the Upper House, according to a Rajya Sabha bulletin.



Manmohan Singh

Digvijaya reportedly resigned from the committee on finance to make way for the former Prime Minister.

Manmohan Singh, who was the country's finance minister between 1991 and 1996, was a member of the panel from September 2014 to May 2019 before his tenure in the Upper House ended in June this year.

Brazil ex-President Lula Walks Out of Prison

His fist thrust in the air, former President Luiz Inacio Lula da Silva of Brazil triumphantly walked out of prison on November 8, 2019 after the Supreme Court issued a broad ruling that allows defendants to remain free while their appeals are pending.

Though da Silva can't run for office unless his criminal convictions are overturned, his mere release could upend Brazil's politics by pitting him as a fiery, leftist rival to President Jair Bolsonaro, whose far-right policies have left the country polarised. The charismatic da Silva, 74, is widely expected to plunge back into the political fray, bolstered by his popularity. As president, he launched programmes that lifted millions out of poverty, expanded access to higher education and promoted racial equality.



Luiz Inacio Lula da Silva

On November 8, 2019 he railed against the police and prosecutors who handled his case. "They tried to criminalise the left... They didn't lock up a man, they tried to kill an idea. But an idea can't be destroyed." There was no immediate comment from Bolsonaro who shot to presidency last year on a wave of anger about corruption and violence.

Nita Ambani Joins New York Metropolitan Museum of Art Board

Philanthropist and chairperson of the Reliance Foundation Nita Ambani has been elected to the board of the Metropolitan Museum of Art for her 'truly exceptional' commitment to preserve and promote India's art and culture.

Daniel Brodsky, chairman of the museum, announ-ced that Ambani has been named its "Honorary Trustee". Her election took place at a meeting of the board. Welcoming Ambani, 56, to the board, Brodsky said that her "support has an enormous impact on the museums' ability to study and display art from every corner of the world". Nita Ambani's Reliance Foundation has been supporting the Met since 2016.



Nita Ambani at Metropolitan Museum of Art in New York on Nov. 13, 2019.

MAGAZINE KING

DEATHS

Nabaneeta Deb Sen, Litterateur, Academician Passes Away

Eminent litterateur and academician Nabaneeta Deb Sen died in her south Kolkata residence on November 7, 2019. She was 81. Winner of Sahitya Akademi award and Padma Shri, Deb Sen was suffering from cancer for a long time and her condition deteriorated during the past 10 days. A poet, a novelist, a columnist and writer of short stories and travelogues, Deb Sen was also known for her research on the Ramayana.



Nabaneeta Deb Sen

Born to poet-couple Narendranath Dev and Radharani Devi in Kolkata on January 13, 1938, she graduated from the Presidency College Kolkata. She married Nobel laureate economist Amartya Sen in 1958. They got divorced in 1976. West Bengal CM Mamata Banerjee expressed grief over Deb Sen's demise. The Presidency Alumni Association, of which Dev Sen was the president, said in a statement, "We convey our dee-pest condolences at the sad demise of Nabaneeta Deb Sen, beloved President of Presidency Alumni Association. She was the first woman president of Alumni Association."

Yvettee Lundy : Woman Who Resisted Nazis Dies Aged 103

Yvette Lundy, a French Resistance figure who taught reconciliation after surviving the horrors of a Nazi concentration camp, has died aged 103 in the northern French town of Eperay. On the occasion of her 100th birthday that year, she was elevated to the **Legion of Honour's** second-highest level, that of **Grand Officer**. Beginning in 1940, she supplied fake papers to Jews, men fleeing the Nazis' forced labour programme in Germany, and escaped prisoners of war, who were hidden by her brother Georges at his farm.

Robert C Norris : Ist Marlboro Man Dies Never Having Smoked in Life

Robert C Norris rancher known for his role as the Marlboro Man in TV acts for the cigarette brand, died on November 10, 2019 in a hospice facility in Colorado. He was 90.

His death was announced in an obituary posted on his Tee Cross Ranches website. Norris, portrayed in Marlboro ads with a cigarette in his hand or mouth, was the face of the Marlboro brand for 14 years. Norris, although never a smoker, eventually abandoned the campaign because he felt he was setting a bad example for his children, the ranch website said.



Robert C Norris

Mathematician Vashishth Narayan Singh Passes Away

Noted mathematician Vashishth Narayan Singh passed away in Patna on November 14, 2019. He was 77.

The mathematician is **said to have challenged Einstein's theory of relativity.**

Singh did his schooling from Netarhat Residential School. In 1962, he passed Class X.

Later, while studying at Patna Science College, he met American Professor Kelly, who invited him to Berkley, US for research.

In 1963, he went to California University for research. In 1969, he received a Ph.D. degree from the varsity. His research on Cycle Vector Space Theory made him famous.

After completing his studies, he returned to India.

Later, he joined as a mathematics professor in Washington.

Former Navy Chief Sushil Kumar Passes Away

Former Navy Chief Admiral (retd.) Sushil Kumar died at a military hospital on November 27, 2019. He was

79. Kumar was Navy Chief from 1998 to 2001. Prime Minister Narendra Modi condoled his demise, saying Kumar contributed towards strengthening the country's maritime security. "Admiral Sushil Kumar will be remembered for his great service to the nation. He contributed to the strengthening of our maritime security. Anguished by his demise. May his soul rest in peace," the Prime Minister's Office tweeted quoting Modi. Known for his strategic thinking Kumar had pushed for significantly expanding Indian Navy's presence in the Indian Ocean Region. He was also part of the high-level group devising strategy during the Kargil war in 1999. Kumar was Chairman of the Chiefs of Staff Committee when India had planned Operation Parakram in the wake of the terror attack on parliament.

RESIGNATION

Longest Serving British Indian MP Keith Vaz Resigns

Keith Vaz, who was first elected in 1987 and went on to win eight subsequent elections in a controversial career, announced his retirement on November 10, 2019 days after being charged with damaging the reputation and integrity of the House of Commons.

Vaz's announcement spares the Labour Party of discomfiture before the December 12 election, with questions raging over his candidature after the Commons standards committee recommended a six-month suspension in a drug scandal that emerged in 2016.



Keith Vaz

Vaz, who was born to Goan parents in Yemen, has been a prominent figure in the Indian community in the UK, besides forging links with leading politicians and others in India.

The senior Labour MP said : "I have decided to retire after completing 32 years as the Member of Parliament for Leicester East. In that time I have won eight general elections. It has been an honour and a privilege to serve my constituency.

"I want to thank the people of Leicester East for their absolute loyalty and support."

Bolivian President Evo Morales Resigns

Bolivian President Evo Morales has resigned, caving in following three weeks of sometimes–violent protests over his disputed re-election after the army and police withdrew their backing, sparking wild celebrations in La Paz.

"I resign my post as president," the leftist said November 10, 2019 in televised address, capping a day of fast-moving events in which many ministers and senior officials quit as support for Latin America's longest-serving president crumbled and created a temporary leadership vacuum in the country.

The main opposition candidate in the election, former president Carlos Mesa, said Bolivians "have taught the world a lesson. Tomorrow Bolivia will be a new country."

In the confusion, a group of 20 lawmakers and government officials took refuge at the Mexican ambassador's residence, and Mexico announced it was offering asylum to Morales as well.

Morales later tweeted that there was a warrant for his arrest, but police commander Vladimir Yuri Calderon told local United television that was not the case.

AWARDS AND HONOURS

Sir David Attenborough Chosen for Indira Gandhi Prize for Peace, Disarmament and Development, 2019; CSE Gets the Honour for 2018.

Eminent naturalist and broadcaster Sir David Attenborough was on November 19, 2019 chosen for the Indira Gandhi Prize for Peace. Disarmament and Development for 2019.

His name was chosen by an international jury chaired by former President Pranab Mukherjee. He got the honour for his efforts to reveal the wonders of the natural world to the world.

Attenborough has been the recipient of several awards including the knighthood. He has received the Kalinga Prize from UNESCO, the Michael Faraday Prize, the Descartes Prize and several Emmy and BAFTA honours.

Centre for Science and Environment (CSE), a New Delhi-based independent research group was on November 19, 2019 honoured with the Indira Gandhi Prize for Peace, Disarmament and Development for 2018. Former Vice-President of India Mohammad Hamid Ansari presented the award to Sunita Narain, the Director-General of CSE at a ceremony. CSE got the coveted honour for its pioneering work over almost four decades in environmental education, and efforts for environment conservation.

Mikhail Gorbachev (1987), The UNICEF (1989), Vaclav Havel (1993), Jimmy Carter (1997), Kofi Annan (2003), Angela Merkel (2013) and ISRO (2014) are some past recipients of the honour.

Kiran Mazumdar-Shaw Gets ICMR Lifetime Achievement Award

Biocon chairperson Kiran Mazumdar Shaw was on November 17, 2019 honoured with the Indian Council of Medical Research (ICMR) Lifetime Achievement Award in New Delhi for Her huge contribution to healthcare and society.

Bill and Melinda Gates Foundation co-chair and co-founder of global software giant Microsoft Bill Gates presented the honour to her in a ceremony marking the 108th Foundation Day of ICMR.

Eliud Kipchoge and Dalilah Muhammad Named World Athletics Male and Female Athletes of the Year

Kenya's **Eliud Kipchoge**, the great marathon runner and American 400 metre hurdles world record holder **Dalilah Muhammad** were named 'World Athletics' Male and Female Athletes of the year on November 23, 2019 in Monaco. Kipchoge won the top athletics honour for the second year in a row. He is the first athlete to run a marathon in under two hours.

Ethiopia's world 5,000 metre silver medallist **Selemon Barega** was named Male Rising Star Athlete of the year while Ukraine's **Yaroslava Mahuchikh** won the female Rising Star of the year honour.

International Emmy Awards, 2019

The International Emmy Awards for 2019 were presented at a glittering award ceremony in different categories on November 25, 2019 in New York, USA to celebrate and acknowledge the excellence in international television. It was the 47th edition of International Emmy honours.

The India connection to the winning teams at the International Emmy gala held in New York was *McMafia*, a British show that features Indian actor Nawazuddin Siddiqui, which won the Best Drama Series award.

International Emmy Awards, 2019 : Major Winners

Category	Winner
Best Drama Series	McMafia (United Kingdom)
Best Comedy Series	Especial de Natal Porta dos Fundos (The Last Hang-over) — 'Brazil'
Best Performance by an Actress	Marina Gera for 'Orok Tel' (Hungary)
Best Performance by an Actor	Haluk Bilginer for 'Sahsiyet' (Turkey)
Best TV Movie/Mini Series	Safe Harbour (Australia)
Best Arts Programming	Dance or Die (Netherlands)
Best Non-English Langua-ge US Primetime Program	Falco
Best Telenovela	La Reina del flow — (The Queen of Flow) 'Colombia'
Best Short Form Series	Hack The City (Brazil)

Malayalam Poet Akkitham Chosen For 55th Jnanpith Award

Eminent Malayalam poet Akkitham Achuthan Namboothiri was selected for the 55th Jnanpith Award, the prestigious literary honour in India on November 29, 2019. Jnanpith Award jury chaired by great novelist and Jnanpith laureate Pratibha Ray selected the poet for the top honour.

He has about 55 books to his credit including 45 books of poetry collections. **'Khanda Kavyas', 'Katha Kavyas', 'Charitha Kavyas'** are some noted literary works by Akkitham.

'Veeravadam', 'Balidarsanam', 'Nimisha Ksheth-ram' are some other celebrated literary creations of Akkitham.

50th IFFI–2019 : Blaise Harrison's Particles Wins the Golden Peacock Honour

50th edition of the International Film Festival of India (IFFI) was successfully organised from November 20 to 28, 2019 at Panaji, Goa with full cinematic zeal and fervour. The festival opened with a glittering ceremony on November 20 in the presence of veteran Indian actors duo Amitabh Bachchan and Rajinikanth, Karan Johar (the host of the evening), eminent French actress Isabelle Huppert and a galaxy of cine stars.

Union Information and Broadcasting Minister Prakash Javadekar, Goa Chief Minister Pramod Sawant and several other luminaries were also present in the opening ceremony. Mr. Javadekar released a postal stamp commemorating 50th edition of IFFI. **Megastar Rajinikanth was honoured with the Icon of the Golden Jubilee award** for his immense contribution to Indian cinema. French actress Isabelle Huppert was decorated with the IFFI Lifetime Achievement Award.

The Golden Jubilee edition of IFFI, 2019 opened with the screening of Goran Paskaljevic's **'Despite the Fog'** (Nonostante la Nebbia) an Italian movie based on refugee background. Over 200 acclaimed films from 76 countries were screened in the festival. 26 feature films and 15 non-feature films in the Indian panorama section were also screened in the festival.



50th IFFI Awards : Major Winners

- **Golden Peacock Award for Best Film**—Particles directed by Blaise Harrison
- **Silver Peacock Award for Best Director**—Lijo Jose Pellissery for his Malayalam film 'Jallikattu'
- **Best Actor**—Seu Jorge for the Brazilian film 'Marighella'
- **Best Actress**—Usha Jadhav for the Marathi film 'Mai Ghatt : Crime No.103/2005.
- **Centenary Award for Best Debut Feature Film of A Director**—Marius Olteanu for 'Monstri' and Amin Sidi Boumediene for 'Abou Leila'
- **Special Jury Award**—Hellaro, a Gujarati film directed by Abhishek Shah
- **ICFT–UNESCO Gandhi Medal**—Rawanda, an Italian film directed by Riccardo Salvetti
- **IFFI Icon of the Golden Jubilee Award**—Rajinikanth
- **IFFI Lifetime Achievement Honour**—Isabelle Huppert

The festival closed with eminent Iranian filmmaker Mohsen Makhmalbaf's movie **'Marghe and her mother'**.

- Russia was the country of focus in the 50th IFFI.
- 'Soul of Asia' was the theme of this year IFFI, 2019.
- John Bailey was the head of the 50th IFFI International award jury.

Particles, the French-Swiss movie directed by Blaise Harrison won the Golden Peacock honour, the top honour at the 50th IFFI on November 28, 2019. The Golden Peacock Award carries a cash prize of ₹ 40 lakh, a trophy and a citation. The 50th IFFI International award jury chaired by John Bailey described 'Particles' as an "amibitious yet modest film about the mysteries of being a teenager". The prize money will be equally shared between director Harrison and the producer of the movie Estelle Fialon.

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Lijo Jose Pellissery claimed the Best Director honour at the 50th IFFI for the Malayalam movie **'Jallikattu'**. Lijo Jose Pellissery had won the best director honour in the previous IFFI edition also for the film **'Ee, Ma.Yau'**.

NDTV Wins IPI India Award For Excellence in Journalism, 2019

News Channel NDTV was on November 27, 2019 chosen for the Interenational Press Institute India award for Excellence in Journalism, 2019 for its expose of the conspiracy to scuttle the Kathua rape and murder case probe. A jury of eminent editors chaired by former Attorney General of India Soli Sorabjee unanimously selected NDTV for the coveted honour for its courageous and unbiased reporting on the Kathua rape case.

The award carries a cash prize of ₹ 2 lakh, a trophy and a citation.

IPI India had instituted the annual award in 2003 to recognise and honour the best work done by an Indian media organisation or journalist in print, radio, television and internet mediums, in furtherance of public interest, including safeguarding of freedom of the press and other freedoms such as human right.

The first award for the IPI India Excellence in Journalism, 2003 was given to The Indian Express for its reporting of the Gujarat riots and its aftermath. NDTV had also won the award in 2004 for its expose of the baby-swapping racket in Hyderabad, and the corruption trail of the Telgi stamp scam.

Infosys Science Foundation Prizes, 2019

Infosys Science Prizes for 2019 were announced on November 7, 2019 in Bengaluru by the Infosys Science Foundation. Six persons including two women were chosen for the Infosys Science Prize in six categories — **Engineering and Computer Sciences, Humanities, Life Sciences, Mathematical Sciences, Physical Sciences** and **Social Sciences**.

The award carries a gold medal, a citation and a prize purse of $ 1,00,000 or its equivalent in rupees for each winner.

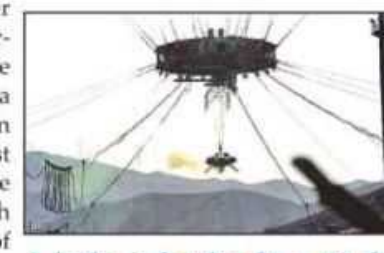
	Category	Winner
1.	Engineering and Computer Science	Sunita Sarawagi (IIT Bombay)
2.	Humanities	Manu V. Devadevan (IIT, Mandi)
3.	Life Sciences	Manjula Reddy (Centre for Cellular and Molecular Biology, Hyderabad)
4.	Mathematical Sciences	Siddhartha Mishra (ETH Zurich)
5.	Physical Sciences	G. Mugesh (IISc, Bengaluru)
6.	Social Sciences	Anand Pandian (Krieger School of Arts and Sciences, Johns Hopkins University)

SPACE

Red Planet in Sight : Test Done, China's Mars Lander Ready for Mission

China on November 14, 2019 successfully completed a crucial landing test in northern Hebei province ahead of a historic unmanned exploration mission to Mars next year.

China is on track to launch its Mars mission, Zhang Kejian, head of the China National Space Administration, said on November 14, 2019, speaking to foreign diplomats and the media before the test.



A lander is hanging for a test for China's Mars mission at a facility in Huaila.

The Mars lander underwent a hovering and obstacle avoidance test at a sprawling site in Huailai, north west of Beijing. The site was littered with small mounds of rocks to simulate the uneven terrain on Mars which the lander would have to navigate on its descent to the planet's surface.

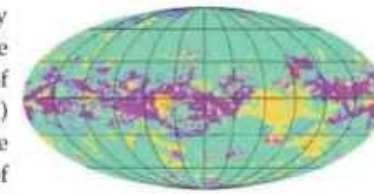
"The hovering-and-obstacle avoidance test for the Mars lander was carried out as a crucial part of the development process. As scheduled, China's first Mars exploration mission will take place in 2020."

China has developed the powerful Long March 5 rocket to transport the probe to Mars in 2020.

The journey through space will take about seven months, while landing will take seven minutes, said Zhang Rongqiao, chief architect of the Mars exploration programme.

New Mapping : Saturn's Moon Titan Looks Pretty Much Like Earth

The largest of Saturn's many moons has lakes, mountains and dunes, with its surface scarred and crafted by many of the same forces which have shaped Earth, scientists said.



The first global geologic map of Saturn's largest moon, Titan, based on radar, visible and infrared images.

A team led by Rosaly Lopes at the California Institute of Technology (Caltech) said Titan's visible exterior was "one of the most geologically diverse in the **Solar System.**"

"Despite the differences in materials, temperatures and gravity fields between Earth and Titan, many of their surface features are similar and can be interpreted as products of the same geological processes," the scientists said in an article in Nature Astronomy on November 18, 2019.

Using radar and infrared data generated by the now defunct Cassini probe, which completed a 20-year mission by crashing into Saturn in 2017, the scientists said they could fill in many of the gaps in mapping Titan, some 1·2 billion kilometres from Earth.

Dunes and lakes, they said, were relatively young while mountainous terrain appeared older. Titan's surface was sculpted by the accumulation and erosion of sediment and showed "clear latitudinal variation, with dunes at the equator, plains at midlatitudes and labyrinth terrains and lakes at the poles," they said.

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The region around the equator is arid, with Titan getting wetter closer to the poles.

Just as on Earth, Titan's surface has been marked by impact craters, liquid-and air-driven erosion, methane laden rainfall tectonic plate movement and possible volcanic activity.

Alice Le Gall, one of the team and working at Paris-Saclay University, said Titan "is the only known extra-terrestrial body to have liquid bodies on its surface."

CLIMATE CHANGE/ENVIRONMENT

India Worst Hit by Climate Change Among G20 : Report

India is not only among the worst affected in the **G20 countries** due to climate change, but also in the best position in the grouping to achieve emission-cut targets aimed at minimising its impact by the turn of the century, says the latest yearly report measuring the climate action taken by the group.

- G20, as a whole, had seen 16,000 deaths and economic losses of USD 142 billion every year on an average in the last 20 years, says **'Brown to Green'** — the study by **Climate Transparency (CT).** CT is a global consortium that puts together climate information on G20 countries. India was clubbed with Russia, France, Italy and Germany among the top 5 for average climate related annual deaths at 3,661 and closeted with US, China, Australia and Mexico for paying the highest average yearly cost at $ 12·82 billion.

The NDCs

- The study provides a huge incentive for G20 nations for cutting down their Nationally Determined Contributions (NDCs) to a point where the global temperature rise at the end of the century could be limited to 1·5 degree Celsius above pre-industrial levels. A 1·5 degree Celsius rise as opposed to 3 degree Celsius rise—which is likely due to the current NDCs–will reduce the negative impact across sectors in G20 nations by over 70%, says the assessment.

  For example, the average drought length will be reduced by 68% and the number of days with temperatures above 35 degree Celsius a year will come down from 50 to 30 if the NDCs are signi-ficantly reset, says the report.
- NDCs are intended reductions in greenhouse gas emissions under the UN framework on Climate Change.
- The assessment says that while India, China, EU, Indonesia, Russia, Saudi Arabia and Turkey will likely meet or surpass their NDCs targets (except for curbing emissions from land use change and forestry sector), none of the G20 countries' NDCs were aligned to limit the global temperature rise to 1·5 degree Celsius.
- However, India had the most ambitious NDC and it could align it with the '1·5 degree Celsius target' if it "continued to abandon planned coal-fired power plants in favour of cheaper renewable energy technology" says the report.

  "India, however, has to prove that it is actually preparing for the deep transition required; namely by developing dense and energy efficient cities and building energy-efficient housing for the 80% of its built environment that will be constructed by 2030," the assessment added.
- Climate scientist at the Indian Institute of Science Professor NH Ravindranath said, "...India alone cannot do much. Its actions will depend on what other countries announce and how financial assistance comes through...".

Permafrost Degradation : Melting of Arctic Ice May Trigger More Abrupt Climate Change : Study

Researchers have predicted that the climate in various regions of the Arctic may change abruptly as the region undergoes large scale melting of permafrost—frozen soil beneath the ground surface.

The study published in the journal Nature Climate Change, suggests that the severity of wild fires could double from one year to the next, and remain at the new higher rate for several regions in Canada as the per-mafrost across the territories degrades. The researchers, including those from McGill University in Canada, analysed climate model simulations for the Arctic region, and noticed abrupt changes in soil moisture, as well as sudden increases in intense rainfall with a likely increase in lightning and wildfires.



A rock overlooking the Helheim glacier in Greenland.

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Population Control is a Critical Part of Climate Fight, Warn 11,000 Scientists

Forty years ago, scientists from 50 nations converged on Geneva to discuss what was then called the "CO_2-climate problem." At the time, with reliance on fossil fuels having helped trigger the 1979 oil crisis, they predicted global warming would eventually become a major environmental challenge.

- The scientists got to work, setting forth proposals on how to attack the problem, setting the stage for the eventual creation of the Intergovernmental Panel on Climate Change, the world's pre-eminent body of climate scientists. Their goal was to get ahead of the problem before it was too late. But after a fast start, the fossil fuel industry, politics and the prioritization of economic growth over planetary health slowed them down. Now, four decades later, a larger group of scientists is sounding another, much more urgent alarm.
- More than 11,000 experts from around the world are calling for a critical addition to the main strategy of dumping fossil fuels for renewable energy, there needs to be far fewer humans on the planet.
- "We declare, with more than 11,000 scientist signatories frown around the world, clearly and unequivocally that planet Earth is facing a climate emergency," the scientists wrote in a stark warning published in the journal Bio-Science. While war-nings about the consequences of unchecked climate change have become so commonplace as to inure the average news consumer, this communique is significant given the data that accompanies it.

"We study climate-engineering infrastructure (*e.g.* roads, ports, buildings, pipelines and mining infrastructure) interactions in a changing climate. Arctic infrastructure is particularly impacted by permafrost degradation and associated soil moisture changes, among other factors," said study co-author Laxmi Sushama from McGill University.

In the current study, the researchers built a finer model of permafrost degradation. "We used climate model data spanning the 1970-2100 period to understand probable changes in the Arctic climate and permafrost. What we came away with was a picture of alarming changes to climate driven by permafrost degradation," said study co-author Bernardo Teufel from McGill University.

New Zealand Turns Zero-Carbon Target into Law

New Zealand's plan to reduce carbon emissions to net zero by 2050 became law on November 7, 2019, when it cleared its final hurdle in parliament. The legislation mandates that, in net terms, the country should produce no greenhouse gases—except methane—by the middle of the century, as part of New Zealand's bid to meet its Paris climate accord commitments.



ODE TO NATURE : Routeburn Track in Glenorchy, New Zealand.

Methane—a by-product of the key agricultural sector—will be cut by 24% to 47% over the same time frame.

The bill establishes an independent Climate Change Commission to advise the government on how to achieve its targets and to produce "carbon budgets" every five years saying how many emissions will be allowed in that period. "We are on the right side of history," PM Jacinda Ardern said.

New Zealand is one of 65 countries that have pledged to achieve net zero carbon emissions by 2050, but not all have enshrined the target in law.

China Promotes 'Green Living' Among Citizens

China launched a national 'Green living' campaign on November 6, 2019 to urge people to cut waste, save water and plant trees as part of a broader effort to reverse the damage done by decades of untrammelled growth. While the government did not specify how its targets would be met or enforced, the campaign will use traditional Communist Party mobilisation methods to change individual behaviour. By 2022, more than 60% of households would be expected to engage in "green living" activities such as tree-planting, wildlife protection, and cutting plastic waste.

Arctic Ocean Acidification May Cause More Harmful Emissions : Study

The gradual acidification of the subarctic region of the Pacific Ocean is causing a significant increase in the production of nitrous oxide, an ozone-depleting greenhouse gas, according to a study.

- The researchers, including those from the Swiss Federal Institute of Technology Lausanne (EPFL) in Switzerland, studied the production of nitrous oxide near the Hobbaido and the Kurile Islands—disputed territory between Japan and Russia in the northern Pacific ocean. The rising levels of carbon dioxide in the atmosphere due to human activities increase the acidity of the ocean, according to the researchers. The study, published in the journal Nature Climate Change, revealed that if pH - which has a scale from zero (most acidic) to 14 (most alkaline) - keeps falling at the current rate of 0·0051 units per year, the nitrous oxide produced in this Pacific region may rise by 185% to 491% by 2100. The researchers added that the greenhouse effect of nitrous oxide, forming in these regions, is 298 times greater than that of carbon dioxide.
- As part of the study, they collected samples at five different sites off the coast of Japan, from the subarctic region to the subtropical region. When they lowered the samples' pH levels, it triggered a natural process in which microbes in the water converted ammonium into nitrate and nitrous oxide. "Our study provides additional proof that rising carbon dioxide emissions are disrupting natural biogeochemical cycles, which are highly sensitive to changes in the environment. However, our conclusions are valid only for the part of the Pacific that we examined," said study author Florian Breider from EPFL.

South Africa : Gandhi, Mandela Busts Unveiled at Tolstoy Farm

Two larger-than-life busts of Mahatma Gandhi and Nelson Mandela have been unveiled at Tolstoy Farm, the self-sufficient commune that he started during his tenure as a lawyer in Johannesburg. Tolstoy Farm, named after the great Russian writer whom Gandhi much admired, was a community started by Gandhi in Transvaal, South Africa, in 1910. It became the headquarters of the Satyagraha campaign which Gandhi led at that time. High Commissioner for India Jaideep Sarkar lauded the revival of the once-thriving Tolstoy Farm which had been fully destroyed over several decades.

STUDY

Maharashtra Ist in Justice Delivery, But Scores Under 60% : Study

'Top-Spender' on Judiciary is Delhi at just 1·9% of GDP.

Maharashtra emerged as the best state for justice delivery in the first such ranking but could not score even 60% in **performance in police, prison, judiciary** and **legal aid—the four pillars of** justice. **Goa** topped among small states.

The **India Justice Report 2019**, announced on November 7, 2019 placed Kerala and Tamil Nadu second and third followed by Punjab and Haryana. Among, smaller states Goa was followed by Sikkim and Himachal Pradesh.

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The report, a civil society study relying on government data since 2012, throws light on problems plaguing the justice system, and retired SC Justice Madan Lokur hoped it would be used to "urgently plug gaps in management of the police, prisons, forensics, justice delivery, legal aid and (in) filling up the vacancies."

Interestingly, Maharashtra didn't lead in any category but emerged top in overall performance. The report also revealed that India spends 0·08% of its GDP on the judiciary "On an average, except Delhi (1·9%), every other state and UT spends less than 1% on its judiciary," said the report.

The report, a Tata Trusts initiative with Centre for Social Justice, Common Cause, Commonwealth Human Rights Initiative, Daksh, Tiss-Prayas and Vidhi Centre for Legal Policy, involved an 18-month quantitative research of "siloed statistics from government sources", said Shireen Vakil, Tata Trusts' head of policy and advocacy.

MEDICINE

Made from Sea Weed : China Okays First Alzheimer's Drug in 17 Years

China approved a drug to treat Alzheimer's disease made by a Shanghai-based pharmaceutical company, the first new therapy endorsed for the disease in 17 years and a major breakthrough in the country's push to become a leader in scientific research.

The National Medical Products Administration said on November 2, 2019 that it granted conditional approval to Oligomannate. In trials, the drug statistically improved cognitive function in patients suffering from mild to moderate Alzheimer's as early as week four, Shanghai Green Valley Pharmaceuticals said in a statement.

The drug is slated to be available in China by the end of 2019, Green Valley said, and joins only a handful of Alzheimer's-related therapies worldwide. There are currently no globally approved treatments to slow or stop the neuro-degenerative disease, which is the most common cause of dementia in the US and robs people of their ability to remember and to perform basic tasks.

Pharmaceutical companies around the world have spent billions of dollars over decades chasing a cure for Alzheimer's, with little to show for their efforts. Earlier, in another potential breakthrough, Cambridge, Massachusetts-based Biogen Inc said it would ask US regulators to approve an experimental therapy after new analysis of data from two failed trials showed promising results.

Green Valley's drug is a low molecular acid oligosaccharide compound extracted from marine brown algae, according to the Chinese regulator's statement.

HEALTH CARE

Indian Anti-Cancer Kit a Breakthrough Device, Says USFDA

The US Food and Drug Administration (USFDA)'s Centre for Devices and Radiological Health has designated a medical invention by a Bengaluru-based scientist as a "breakthrough device in liver, pancreatic and breast cancer treatment."

Cytotron, developed by Rajah Vijay Kumar aids in tissue engineering of cancer cells altering how specific proteins are regulated to stop these cells from multiplying and spreading.

"We are pleased to inform you that your device and proposed indication for use meet the criteria and have been granted designation as a breakthrough device," states a communique from the FDA wing to Shreis Scalene Sciences, the company that had taken the device to the US.

Cytotron is intended to cause degeneration of uncontrolled growth of tissues. "It is indicated for treating protein-linked, abnormally regenerating disorders such as neoplastic disease, and allowing extended progression free survival, with pain relief, palliation, improved quality and dignity of life," says the letter.

Kumar had developed Cytotron at the Centre for Advanced Research and Development, which is headquartered in Bhopal, after nearly 30 years of research into cellular pathways and interactions with specifically modulated first radio bursts.

"It is a great feeling that after so many years of hard work against all odds, an institution like the USFDA is designating our work as a breakthrough in the treatment of three types of cancers" Kumar said.

How it Works

- Cytotronn alters protein pathways in cancer cells.
- Stops metastasis, which causes 90% cancer deaths.
- To be made in India as hardly any imported components needed.
- Already approved and in use in UAE, Mexico, Malaysia and Hong Kong.

American Partner

New technologies in the battle against cancer have generally been hard to come by. It's even rarer for an Indian device to get breakthrough status in the US. The Centre for Devices and Radiological Health is responsible for pre-market approval of all medical devices in the US, ensuring they are safe for use and effective.

"The devices will all be made in India, given that there are hardly any imported components. And our American partner will take the device to the US. Cytotron is already an approved medical device and is in use in the UAE, Mexico, Malaysia and Hong Kong, among others," Kumar said.

WEALTH MATTERS

Billionaires' Wealth Falls for First Time Since 2015 : UBS/PWC Billionaires Report

The world's richest people became a little less well off last year, according to a report by UBS and PWC, as geopolitical turmoil and volatile equity markets reduced the wealth of billionaires for the first time since 2015.

- Billionaires' wealth fell by 4·3% globally to $ 8·5 trillion last year, the UBS/PWC report found, with a sharp decline in Greater China, including Hong Kong, and the Asia-pacific region more broadly.
- Private wealth in Hong Kong fell 4% in 2018 to $ 319·8 billion, the report shown with months of anti-government protests in the Chinese-ruled city and an economic recession clouding the outlook this year.
- Private banks including the world's largest wealth manager UBS have felt the effects of US-China trade tensions and global political uncertainties, as clients last year shied away from trading and taking on debt in favour of hoarding cash. The networth of China's richest dropped 12·8% in dollar terms on the back of tumbling stock markets, a weaker local currency and a slowdown in growth, the report found, knocking dozens off the billionaires list.
- Despite the drop, China still produces a new billionaire every 2-2·5 days, UBS's head of ultra-high net worth clients, Josef Stadler, said in the report released recently.
- Worldwide, the number of billionaires fell everywhere except in the Americas, where tech entrepreneurs continued to buoy the ranks of the United States' wealthiest.

  "This report shows the resilience of the US economy, where there were 749 billionaires at the end of 2018, said John Mathews, head of private wealth management and ultra-high networth business for UBS in the US.
- While a stock market recovery from a steep drop in late 2018 has helped wealth managers increase their assets , the world's richest families remain concerned about global affairs from trade tensions and Brexit to populism and climate change and are keeping more of their money in cash.

  "It is likely that billionaire wealth will go up again this year," said Simon Smiles, UBS's chief investment officer for ultra-wealthy clients.

Bill Gates Tops Jeff Bezos as World's Richest

This time it's official Microsoft co-founder Bill Gates overtook Amazon's Jeff Bezos as the world's richest person reclaiming the top ranking for the first time in more than two years.

Gates may have been helped in part by the Pentagon's surprise decision announced October 25 to award a $ 10 billion cloud-computing contract to Microsoft over Amazon Shares of Microsoft have since climbed 4%, giving Gates a $ 110 billion fortune, according to the Bloomberg Billionaires Index. Amazon's stock is down about 2% since the announcement, putting Bezos's net worth at $ 108·7 billion.

WEAPONARY

Founder of AK-47 : Russia Marks Kalashnikov's 100th Birthday

Dozens of cadets and youngsters from Russia's Youth Army have been getting up close and personal with perhaps the world's most iconic firearm as their country marks the centenary of the birth of Mikhail Kalashnikov, inventor of the legendary AK-47 rifle.

At Victory Museum in western Moscow, visitors are invited to assemble Kalashnikovs and pose for selfies at the exhibition dedicated to the ubiquitous automatic weapon.



Students of the General Yermolov Cadet School assemble a Kalashnikov assault rifle in Stavropol.

On November 10, 2019, the 100th anniversary of Kalashinkov's birth is to be marked by a number of events, including the museum display and a biopic.

The military engineer, who died in 2013 at the age of 94, was showered with every possible major prize in the Soviet Union, and the Kremlin in 209 gave him the highest honour—Hero of Russia.

His assault rifle has become a weapon of choice for both guerrillas and governments the world over.

Wounded during a bloody battle with Nazi forces in 1941, Kalashnikov was given a leave during which he thought up the first versions of the rifle.

In 1945, a prototype was entered into a competition and the design was eventually recommended for use in the Soviet army.

It quickly became prized for its simplicity, affordability and sturdy reliability.

AK-47's name stands for Kalashnikov's Automatic and the year its final version was designed, 1947.

More than 100 million Kalashnikovs have been sold worldwide and about 50 armies use the AK-47.

PALEONTOLOGY

11·6 Million Years Ago : Found : Fossils of Ape That Pioneered Walking

Fossils unearthed in southern Germany of a remarkable ape that lived about 11·6 million years ago may dramatically alter the understanding of the evolutionary origins of a fundamental human trait - walking upright on two legs.

Scientists said the ape, called Danuvius guggenmosi, combined attributes of humans-straight lower limbs adapted for bipedalism—with those of apes—long arms able to stretch out to grasp tree branches. That indicates Danuvius was able to walk upright on two legs and also use all four limbs while clambering through trees.

It is the oldest-known example of upright walking in apes. The discovery suggests that bipedalism originated

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in a common ancestor of humans and the great apes - a group that includes chimpanzees, bonobos, gorillas and orangutans-that an inhabited Europe rather than ancestor from Africa, the continent where our species Homo sapiens first appeared roughly 300,000 years ago, the researchers said.



An artistic rendering of the Danuvius guggenmosi.

Until now, the oldest fossil evidence of bipedalism in human kind's evolutionary tree dated to about 6 million years ago : fossils from Kenya of an extinct member of the human lineage called Orrorin tugenensis as well as foot-prints on the Mediterranean island of Crete. If Danuvius turns out to be ancestral to humans, that would mean that some of its descendants at some point made their way to Africa.

"Danuvius changes the why, when and where of evolution of bipedality dramatically," said paleoan-thropologist Madelaine Bohme of the University of Tubingen in Germany, who led the research published in the journal Nature.

The discovery of Danuvius may shatter the prevailing notion of how bipedalism evolved: that perhaps 6 million yeas ago in East Africa a chimpanzee-like ancestor started to walk on two legs after environmental changes created open landscapes and savannahs where forests once dominated.

"This paradigm is now declining or, in other words, is shown by us to be wrong," Bohme said.

CRIME AND ALLIED TOPICS

NCRB (National Crime Record Bureau); Farm Suicide Data Adds to Distress Debate

Data on farmer suicides for 2016 that was released only sometime back shows that 11,379 people in the agriculture sector committed suicide that year, with 6,270 of them being farmers and the others, agricultural labourers.

The number (11,379) is the lowest in 16 years.

The National Crime Records Bureau released the Accidental Death and Suicides in India report for 2016. The report has come with a time lag. While ADSI contains information on accidental deaths and suicides in India, its most awaited statistics is on farmer suicides in the country, which have become an indicator of the severity of farm distress to many.

To be sure, suicides in the farming sector have been going down in the current decade.

(See Chart 1) The reduction notwithstanding, the 2016 ADSI report is likely to create a controversy over the role of farm-distress as a driver of suicides in the sector. This is ironical as the previous ADSI report had helped resolve this controversy. Here's why.

While many people believed that farmer suicides were the most macabre manifestation of the agrarian crisis in India, there was (and is) another view that farmer

Did farmer suicides come down because of lower distress?

2016 ADSI doesn't give reason wise break up for farmer suicides

CHART 1 Farm related suicides were lowest in 16 years in 2016

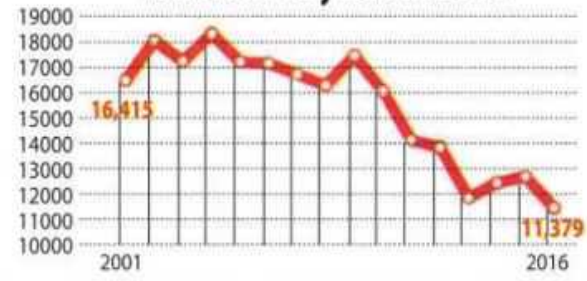
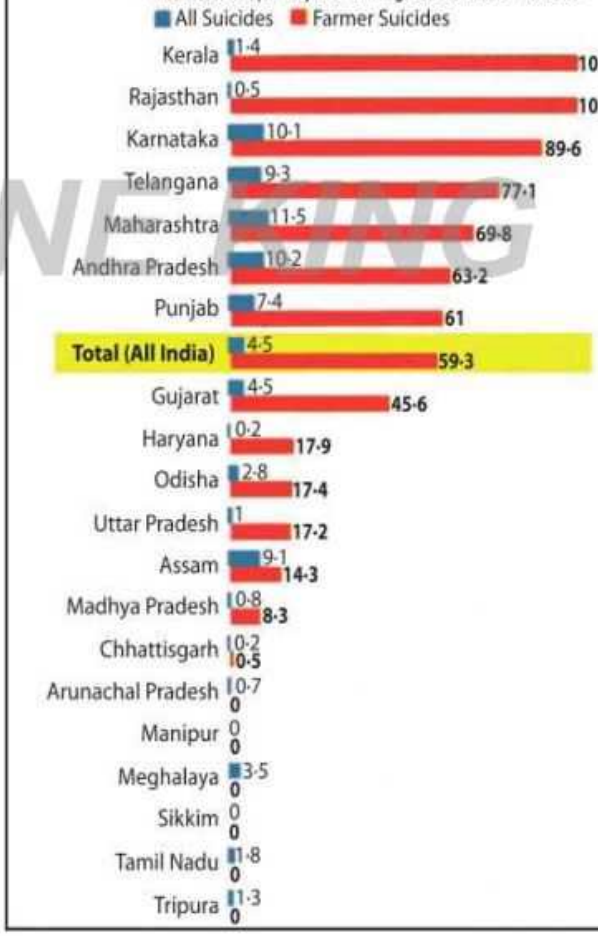


CHART 2 Economic distress was a bigger cause of farmer suicides in '15

Columns show percentage share of suicides due to bankruptcy/ indebtedness, poverty and farming related issues in suicides



suicides were not necessarily a result of economic distress. In 2015, then agriculture minister said in the Rajya Sabha that myriad reasons like family problems and drug use were driving farmers' suicides.

Statistics helped resolve this conundrum, as the NCRB started giving reasons for suicides for various

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professions from 2015. The data showed that economic reasons were a bigger trigger for farmer suicides than among non-farmers. These facts were highlighted in a 2017 Mint article by author. (See Chart 2) 'The time lag in releasing the report (ADSI) and lack of information on causes for farmers' suicides, which was given in previous reports, in questionable", said Vijoo Krishnan from the All India Kisan Sabha.

TRANSPORTATION

China Opens a New Bridge Close to Border with India

Chinese engineers have constructed a new bridge over the Brahmaputra river (Yarlung Tsangpo in Tibet), which will enhance rail connectivity in south Tibet, near the Chinese border with India. Rail connectivity is crucial for logistical support in both infrastructure building and military activities.

Chinese media described Bayu bridge, the new 283-metre-long and 19-metre-wide bridge, an engineering feat as it has been constructed in a difficult mountainous terrain.

Chinese media described Bayu bridge, the new 283-metre-long and 19-metre-wide bridge, an engineering feat as it has been constructed in a difficult mountainous terrain. The bridge, standing 61·5 metres above the river in the city of Shannan, finally connects a 435 km-long railway line, from Lhasa to Nyingchi in southeast Tibet. This comes months after China opened a 409 km new expressway linking Lhasa with Nyingchi, which is close to the border with Arunachal Pradesh.

The 409 km toll-free expressway, which cost nearly $ 5·8 billion, linked the two major cities which are also tourist attractions in Tibet, state-run Xinhua reported.

WILD LIFE

Deer-like Animal Rediscovered After 30 Years

An extremely rare species of a small, deer like animal thought to be on the verge of extinction has been spotted in the north western jungle of Vietnam for the first time in early 30 years.

Known as the 'Silver backed Chevrotain' or 'mouse deer', a specimen was last recorded in 1990, according to a study published in the journal Nature Ecology and Evolution.



A silver-backed chevrotain is captured by camera trap in an undisclosed forest in Vietnam.

The species, Tragulus versicolor, was first described in 1910 based on several animals found near Nha Trang, about 450 km northeast of Ho Chi Minh City.

With no confirmed sightings since 1990, experts assumed the species must have been pushed to the brink of extinction by hunting. Expert Andrew Tilker-cautioned in a blog post however that "just because we found this species relatively easily doesn't mean it is not threatened".

THE WATERY WILD

Russia Releases Last Belugas from 'Whale Jail'

The last whales held in a notorious facility dubbed the 'whale jail' in Russia's Far East have been released, the institute overseeing the operation said.

The fate of the whales, which were captured to perform in aquariums, sparked international outrage earlier this year after pictures appeared in the media of them struggling to swim through ice-encrusted waters in cramped enclosures.



A killer whale being loaded into a special tank on a truck at a holding facility, known as 'whale jail' in Srednyaya Bay.

Moscow eventually bowed to pressure to release the 93 beluga whales and 11 orcas, which were held for more than a year in the secretive facility in Srednyyaya Bay near the far eastern town of Nakhodka.

The whales have since been released in batches with the last of the orcas freed in August. The All-Russian Fisheries and Oceanography Institute said the operation to free the last belugas started five days ago.

"In the region of Primorsky Krai, the operation to release the marine mammals into their natural habitat has been completed," it said in a statement.

Russian NGO Sakhalin Watch, which campaigned for the whales to be freed, said the final 21 belugas were released from two ships.

The organisation said it was delighted that "the release of all the beluga whales has taken place and that the 'whale jail' has finally freed its last prisoners."

DISCOVERY

Is there Life Beyond Us ? Mineral Capable of Preserving Life's Signature Found on Mars : Study

Researchers, using data from NASA's Mars Reconnaissance Orbiter, have found deposits of **hydrated silica**—a mineral that preserves chemical signatures of life—in a crater on the Red Planet where the US space organisation plans to land a rover next year.

The study, published in the journal **Geophysical Research Letters**, noted that the crater, named Jazero, contains a large delta deposit formed by ancient rivers that fed an ancient lake.

The researchers, including those from Brown University in the US, used the Compact Reconnaissance Imaging Spectrometer for Mars (CRISM) instrument that flies aboard NASA's Mars Reconnaissance Orbiter, and

applied big data analysis methods to tease out the spectral signature of the silica deposits.

They said the delta would have concentrated a wealth of material from a vast watershed, similar to deltas on the Earth which are good at preserving signs of life.



A photo showing InSight's heat probe digging into the surface of Mars.

According to the researchers, finding hydrated silica at Jezero increases the preservation potential of chemical signatures of life.

They said one of the silica deposits was found on the edge of the delta at low elevation. "The material that forms the bottom layer of a delta is sometimes the most productive in terms of preserving biosignatures so if you can find that bottom layer, and that layer has a lot of silica in it, that's a double bonus," said the study's co-author Jack Mustard, professor at Brown University.

The study noted that the minerals may have formed in the discovered region, and may represent the bottom layer of the delta deposit.

The researchers said it is also possible that the minerals could have formed upstream in the watershed that fed Jazero and may have been washed subsequently into the crater, by volcanic activity or later episodes of water saturation in the crater lake.

The rover should be able to isolate the real source, the researchers said.

"We can get amazing high-resolution images and compositional data from orbit, but there's a limit on what we can discern in terms of how these mineral formed," Jesse Tarnas, the study's co-author at Brown University, said.

GREEN TEECH

Dubai Airshow Unveils First Electric Racing Aircraft

An Airbus-backed air racing tournament unveiled an electric-powered sports aircraft, billed as the world's first, as the European planemaker seeks to boost its green aerospace technology.

Several companies, including US ride-hailing company Uber Technologies Inc., are working on electric-powered flying cars, amid increasing concerns about the environmental impact of fossil-fuel intensive air travel.



The aricarft, called White Lightning, will be manufactured by UK-based Condor Aviation.

Earlier Airbus rival Boeing announced a partnership with automaker Volkswagen's sports car brand, Porsche, to develop a concept electric flying vehicle capable of transporting people in urban environ-ments.

Air Race E said the aircraft, called White Lightning and unveiled at the Dubai Air Show, will be manufactured by UK-based Condor Aviation. The aircraft will use an electric motor that will carry it at flight speeds of around 482 kilometers per hour on a tight 5 kilometer circuit, just 10 meters above the ground.

"The racing series will provide a test bed for innovation and accelerate the journey towards electric commercial travel," Air Race E chief executive Jeff Walkman said.

Lithium batteries installed under the fuselage of the plane will provide power for five minutes of high intensity racing and around 10 minutes of reserve flying at reduced power, the firm said.

Air Race E is aiming to be the world's first all-electric airplane competition when it launches its inaugural series of international races in 2020.

ORNITHOLOGY

Himalayan Griffon Vultures Spotted at Aravalli Park

The sighting of at least 15 Himalayan griffon vultures at **Gurugram's Aravalli Biodiversity Park** on November 16, 2019 created a flutter among bird enthusiasts in the national capital region. The sighting marks the first ever record of the vulture species at the park, which has recorded the presence of at least 183 other avian species since 2010. Experts termed the sighting as a rare chance encounter and are watching closely to see the birds continue to roost in the park.



At least 15 specimens of the Himalayan griffon vultures were sighted by bird enthusiasts.

The sighting is exciting mainly because it was so unexpected. You wouldn't typically find these vultures here, but it is a glimmer of hope that they chose to make a stopover in the park," said Pankaj Gupta of the Delhi Bird Foundation, who photographed two of the reported 15 specimens. He explained that these birds can be commonly seen in India's Himalayan states, and that they sometimes migrate to the lower foothills of the Himalayas in the winter months.

"There have been only about two or three sightings of this species in Delhi-NCR over the last 10 years. There have been some one-off records near Faridabad and also in Okhla. Infact, the vulture was last spotted in Delhi-NCR five years ago, in 2014 at Okhla," added Gupta, who clarified that the bird should not be confused with the European griffon vulture, which is a passage migrant in India.

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The vultures were first seen by birders Vijay Dhasmana and Ram Veer and subsequently by Gupta. Dhasmana, who has helmed the ecological restoration of the Aravalli Biodiversity Park from an erstwhile stone quarry to its current biodiversity-rich condition said, "It's a lucky sighting; definitely one to be happy about, though I wouldn't read too much into it. Perhaps the vultures sensed that the area was a safe space, which is important in itself, which is why they stopped here."

Rare Bird Spotted After Sixteen Years in Haryana

A rare sighting of two rufous-vented grass babblers has been recorded in Haryana's Sirsa district, exactly 16 years after the species was reportedly first spotted in the area. This sighting however, marks the first time that the bird has been photographed in Haryana, confirming speculation of its residence in the state. The previous sighting was reported in October, 2008, in the same region, but could not be corroborated at the time.

Birders have termed this latest sighting as significant, given the elusive nature of the rufous-vented grass babbler, which is recorded as a 'near threatened species according to the IUCN red list. The bird is rarely seen due to its proclivity for tall grass and reed beds. "it won't be found unless you are looking for it," said Pankaj Agarwal of the Delhi Bird Foundation.



The rufous-vented grass babblers were spotted in Ottu Barrage on October 20, after its last sighting in 2003.

The recent sighting was recorded by birders Rakesh Ahlawat, of Dighal, and Sanjeev Goyal, a Sirsa resident, on the morning of October 20 in Sirsa's Ottu Barrage region, which houses the Ottu reservoir, a waterbody. The barrage was built in 1896 to arrest water from Haryana's Ghaggar river for agricultural purpose and provides the ideal habitat for the babbler in the form of reed beds, Ahlawat said.

Ahlawat, who first spotted the bird, said, "There have been established recordings of the species in Punjab's Harike region, near Amritsar, as well as in the Ropar wetlands. The bird has also been frequently spotted in Pakistan, where it lives in plains along the Indus channel. However, the bird is a resident and does not migrate, so now we can say that it is also a resident of Haryana, albeit, a reclusive one."

Birder Suresh Sharma, who reportedly spotted the species 16 years ago, said, "This is a wonderful find. We had recorded the bird in October 2003, but had no way to confirm its species. It's a good feeling to know that we were probably right, since Ahlawat's sighting happened in the exact same region."

Experts said until recently, the rufous-fronted grass babbler was considered a prinia. "Now, it is broadly accepted that it is not a prinia, but a babbler, according to verification," Agarwal said.

MIGRATORY MAMMALS

Caribou Tops List of Mammals That Migrate Farthest

Whales, eels, birds, and even lady bugs are known for epic migrations that take them hundreds or even thousands of miles through the air and across the sea.

But the land has its fair share of long – distance travellers too. Recently, an international team set out to determine which terrestrial mammals migrate the farthest. They published a ranking in October, 2019 in **'Scientific Reports'**.



The Bathurst Herd and the Porcupine Herd of caribous each travel 840 miles.

5. Tibetan Antelopes

Female Tibetan antelopes travel about 430 miles each year to and from their calving grounds in the Kunlun Mountains. These bovid species edged out more well-known contenders to enter the top five, including the millions of blue wildebeests that travel about 400 miles through the Serengeti.

4. Mule Deer

Every summer in the US, mule deer travel from the Red Desert of Wyoming to Island Park, Idaho—about 480 miles—although they now must cross two highways. Scientists and other concerned parties are working to minimise manmade interruptions.

3. Gray Wolves

Taking the bronze is a pack of gray wolves in Canada's Northwest Territories, which migrate about 630 miles in pursuit of their prey, caribou. They're the only predators that made the list. The paper put together a second ranking measuring total cumulative distance travelled. A gray wolf from Mongolia came out on top, covering 4,500 miles as it chased khulan, or the Mongolian wild ass, and wild camels over a year.

2. Reindeer

The runners-up are a herd of reindeer from Russia's Taimyr Peninsula, which travelled nearly 750 miles annually. They may not hold this place for long. In recent years, swarms of mosquitoes have driven many of the reindeer away from their regular route. The population has also been decimated by poaching.

1. Caribou

For the moment, caribou stayed on top. In fact, if you were to rank by groups of animals, rather than species, populations of caribou would take all five top spots. The Bathurst Herd, from the Northwest Territories, and the Porcupine Herd, from Alaska and the Yukon Territory—each travelled 840 miles.

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PLACES IN THE NEWS

Hyderabad

A new institute to impart professional training in the management of railway finances was inaugurated on November 24, 2019 in Hyderabad by the Indian railway board chairman Vinod Kumar Yadav. The Indian Railways Institute of Financial Management (IRIFM), Hyderabad has been designed by noted architect Hafeez contractor. The green building can generate 90% of its own power needs with solar installations on the campus besides rainwater harvesting structures and water-recycling plants.

Three Indian Cities Bangalore, Delhi and Mumbai Feature on First PICSA Index

Bangalore emerged as India's highest-ranked city at No. 83 rank in a new index of the world's 113 cities in terms of economic and social inclusivity, topped by Zurich in Switzerland.

The first-ever Prosperity & Inclusion City Seal and Awards (PICSA) Index, released in the Basque Country capital of Bilbao in northern Spain on November 21, 2019 is designed to showcase not only the quantity of economic growth of a city but also its quality and distribution across populations.

Delhi at 101 and Mumbai at 107 are the other Indian cities to make at the index, with the top 20 awarded a PICSA Seal as the world's highest-ranked cities building inclusive prosperity.

Bilbao, the host city of the new index, is ranked at 20.

Commissioned by Basque institutions and compiled by D&L Partners, the PICSA Index measures factors such as the affordability of housing and access to education and healthcare, besides GDP per capita.

It marks the first time that the world's major cities have been ranked not just by the size and health of their economy, but for their efforts to build inclusive and prosperous environments for all its citizens.

Zurich, as the number one, scores strongly across all measures, particularly on quality of life, work, housing, leisure, safety, and education - with the Swiss higher education system attaining an especially high score.

Vienna, the Austrian capital in second place, scores close to top marks on healthcare. Copenhagen, Luxembourg and Helsinki complete the top five.

BOOKS AND AUTHORS

1. **Blue Moon** —By Lee Child, Penguin
2. **Ballots and Breakups** —By Sunita Jain, Bloomsbury
3. **Kashmir's Untold Story Declassified**
   —By Iqbal Chand Malhotra, Bloomsbury
4. **Kaagaz Ki Naav (Paper Boat)**
   —By Nasera Sharma, recipient of 29th Vyas Samman
5. **Chasing the Raag Dream—A look into the World of Hindustani Music**
   —Aneesh Pradhan, Harper Collins
6. **Bridgital Nation**
   —By N. Chandrasekaran and Roopa Purushothaman, Penguin

IMPORTANT DAYS/WEEKS/YEARS

January 2020

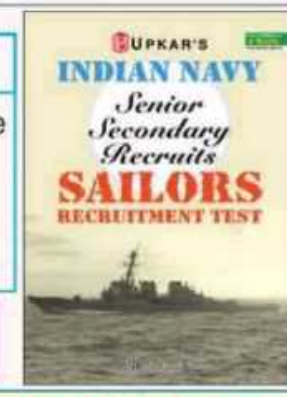
National Days

January	9	Non-Resident Indian (NRI) Day
January	12	National Youth Day (Birthday of Swami Vivekanand)
January	15	Army Day
January	24	National Girl Child Day
January	25	National Tourism Day
January	25	National Voters Day
January	26	Republic Day
January	30	Martyrs' Day (Mahatma Gandhi's Martyrdom Day)

International Days

January	1	Global Family Day
January	26	International Customs Day
January	26	World Leprosy Eradication Day (Last Sunday of January)

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Employment And Career News

Chhattisgarh Public Service Commission, Raipur

Invites online applications from eligible candidates for 'State Service Examination, 2019'.

Last Date for Submission of online Applications—January 04, 2020.

Age Limit (As on January 01, 2019)—The age of the candidates should not be less than 21 years for all posts as on January 01, 2019. The upper age limit for the post of Assistant Superintendent of Police is 28 years. Candidates who are domicile of Chhattisgarh can apply for other posts upto the age of 40 years as on January 1, 2019. Relaxation in the upper age limit will be given as per government norms.

Essential Educational Qualifications—Candidate must possess a Bachelor's Degree or equivalent from a government recognized university or educational institution.

Date of Preliminary Examination—February 09, 2020.

Scheme of Examination—There will be a Preliminary Examination, carrying two compulsory papers. Both the question papers will have objective type multiple choice questions. First Paper of the Preliminary Examination will be of General Studies, carrying 100 questions of 2 marks each. Second Paper will be the Aptitude Test of 100 questions of 2 marks for each question. Successful candidates in the Preliminary Examination will be invited for the Main Examination.

How to Apply—Candidates are required to apply online using the website—**www.psc.cg.gov.in**

Indian Air Force

Invites online Applications from eligible candidates for 'Air Force Common Admission Test (AFCAT) 01/2020/NCC Special Entry'

Last Date for Submission of online Applications—December 30, 2019.

Age Limit—(a) **Flying Branch** 20 to 24 years as on 01 January 2021 *i.e.* born between 02 January, 1997 and 01 January, 2001 (both dates inclusive). Upper age limit for candidates holding valid and current Commercial Pilot License issued by DGCA (India) is relaxable upto 26 years *i.e.*, born between 2 January, 1995 and 01 January, 2001 (both dates inclusive).

(b) **Ground Duty (Technical/ Non-Technical) Branches** 20 to 26 years as on 01 January, 2021 *i.e.* born between 02 January, 1995 and 01 January, 2001 (both dates inclusive).

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FORTHCOMING COMPETITIVE EXAMINATIONS

2019

UP SSSC Junior Assistant (General Selection) Competitive Exam., 2019	(Dec.)
Haryana SSC Cooperative Societies Sub-Inspector (General Line) Exam., 2018	(Dec.)
Uttarakhand Subordinate Services Commission Agriculture Officer Category-3 (Group C) Direct Recruitment Exam.	(Dec.)
SSC Central Armed Police Forces/Delhi Police Sub-Inspector Exam. and CISF Assistant Sub-Inspector Paper-I Exam., 2019	(11-13 Dec.)
IBPS Bank Clerical Cadre Recruitment Exam. (Online)	(14 & 21 Dec.)
NTA CSIR-UGC NET/JRF Exam. Dec. 2019	(15 Dec.)
Uttar Pradesh TET Exam., 2019	(22 Dec.)
Bihar Sub-Inspector (Pre.) Exam., 2019	(22 Dec.)
Himachal Pradesh Forest Department Forest Guard Exam., 2019	(22 Dec.)
IBPS Bank Specialist Officer (Pre.) Exam., 2019	(28-29 Dec.)

2020

UP SSSC Forest Guard and Wildlife Guard (General Selection) Competitive Exam., 2019	(Jan.)
All India Sainik Schools Entrance Exam., 2020 (For Class VI & IX)	(5 Jan.)
Jawahar Navodaya Vidyalaya Entrance Exam., 2019 (Class VI)	(11 Jan.)
U.P. Sainik School Entrance Exam., 2020-21 (for Class VII & IX)	(12 Jan.)
Madhya Pradesh PSC State Services/Forest Services (Pre.) Exam., 2019	(12 Jan.)
IBPS Bank Clerical Main Exam., 2019	(19 Jan.)
IBPS Bank Specialist Officers (Main) Exam., 2019	(25 Jan.)
Indian Navy Artificer Apprentice (AA) and Senior Secondary Recruit (SSR) Exam., 2019	(Feb.)
Indian Navy Sailors Matric Recruit (MR) Recruitment Exam., 2019	(Feb.)
Combined Defence Services Exam. (I), 2020	(2 Feb.)
Jawahar Navodaya Vidyalaya Entrance Exam., 2020-21 (for Class IX) (**Online Closing Date :** 10 Dec., 2019)	(8 Feb.)
Chhattisgarh PSC State Services (Pre.) Exam., 2019 (**Online Closing Date :** 4 Jan., 2020)	(9 Feb.)
SSC Combined Graduate Level Exam., 2019 (Tier-I)	(2-11 Mar.)
SSC Combined Higher Secondary (10+2) Level Computer Based Exam., (Tier-I) (**Online Closing Date :** 10 Jan., 2020)	(16-27 Mar.)
SSC Stenographer Grade 'C' & 'D' Exam., 2019 (Online)	(5-7 May)
Chhattisgarh PSC State Services (Main) Exam., 2019	(17-20 June)
SSC CAPF/Delhi Police Sub-Inspector Exam., 2019 (Paper-II)	(21 June)
SSC CGL Exam., 2019 (Tier-II)	(22-25 June)
SSC CHSL Exam. (Tier-II Descriptive)	(28 June)

- **Physical/Medical Standards, Educational Qualifications and Selection Procedure**-Details on physical/medical standards educational qualifications and selection procedure are available in detailed notification on the website—

https://careerindianairforce.cdac.in

or

https://afcat.cdac.in

Candidates can submit their online applications using the websites—

https://careerindianairforce.cdac.in

or

https://affcat.cdac.in

For more details read Employment News dates November 30 to December 6, 2019.

Rajasthan High Court, Jodhpur

Invites online Applications from eligible candidates for recruitment to the posts of Fourth Grade Workers (Office Peon/Equivalent)

Last Date for Submission of online Applications—December 17, 2019.

Age Limit—The age of the candidate should not be less than 18 years and not more than 40 years as on January 01, 2020. Relaxation in the upper age limit will be conceded as per the set governments norms.

Essential Educational Qualifications—Candidates must possess a secondary pass certificate or equivalent from a government approved Board or educational institution. Candidates must also possess practical knowledge of Hindi written in Devnagri manuscript and the knowledge of tradition and culture of Rajasthan.

Scheme of Examination—The selection procedure will comprise two phases—

(A) Written Examination

(B) Interview.

The Written Examination will carry objective type multiple choice questions based on General Hindi, General English and Rajasthani culture. The Written Part will carry 85 marks. Successful candidates in the written part will be invited for the Inteview which will be of 15 marks.

Candidates are required to apply online only. For more details candidates can log on to—

http://www.hcraj.nic.in

or

http://emitra.gov.in

Uttar Pradesh Metro Rail Corporation Limited

Invites online Applications from eligible candidates for numerous posts in 'Executive' and Non-Executive categories.

Last Date for Registration of online Applications—December 23, 2019.

Age Limit (As on December 01, 2019)—The age of the candidate should not be less than 21 years and not more than 28 years as on December 01, 2019. Relaxation in the upper age limit will be given as per the set government norms.

Essential Educational Qualification—Essential educational qualifications vary as per the different posts.

Scheme of Examinations—There will be computer Based Tests (CBT), carrying objective type multiple choice questions.

How to Apply—Candidates are required to apply online, using the website—

www.upmetrorail.com

Central Board of Secondary Education

Invites online Applications for numerous posts.

Last Date for Registration of the online Applications—December 16, 2019.

Age Limit (As on December 16, 2019)—The minimum age limit for all posts is 18 years as on December 16, 2019. But the upper age limit varies for different posts.

Posts	Upper Age Limit
Assistant Secretary/Assistant Secretary (IT)	40 years
Analyst (IT)	35 years
Junior Hindi Translator / Senior Assistant / Accountant	30 years
Stenographer / Junior Assistant / Junior Accountant	27 years

Essential Educational Qualifications—Essential educational qualifications vary for different posts.

Examination—There will be a Computer Based Test. Successful candidates will move ahead for Skill Test/Interview.

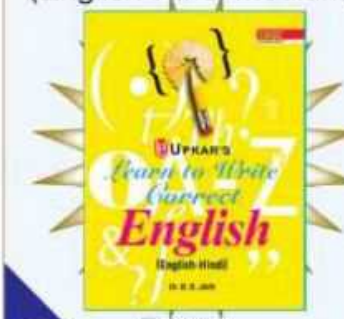
For more details candidates must visit the official website of CBSE—

www.cbse.nic.in

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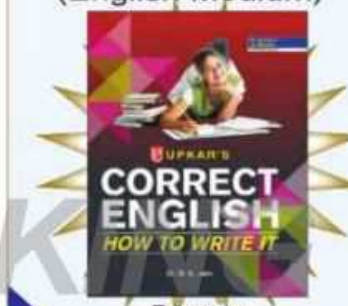
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Sports World

CRICKET

India-B Clinches Deodhar Trophy 2019

India B emerged champion of the Deodhar Trophy 2019 as it defeated India C in the final by 51 runs on November 4, 2019 at the JSCA Stadium in Ranchi. India B, batting first, set a target of 284 runs before India C which could score only 232 runs in reply and lost the title to India B.

Apart from the two finalists, India A was the third participant team of the tournament. Parthiv Patel was the captain of the Champion India 'B' team while Shubman Gill and Hanuma Vihari led India C and India A teams respectively as captains.

India Wins Bilateral T20 International Series Against Bangladesh

India won the three match bilateral India-Bangladesh T20 International series 2-1 by winning the third and series deciding match by 30 runs at the VCA Stadium in Nagpur on November 10, 2019.

First T20I—Bangladesh took 1–0 lead in the three match T20I series by winning the first match by seven wickets on November 3, 2019 at the Arun Jaitely Stadium (Ferozeshah Kotla), New Delhi. Bangladesh's Mushfiqur Rahim was declared the Man of the Match.

Second T20I—India levelled the series 1–1 as it won the second T20I by eight wickets on November 7, 2019 in Rajkot. India chased down 154 runs target with 26 balls to spare with the help of majestic 85 runs innings by skipper Rohit Sharma who was adjudged the Man of the Match later.

Third T20I—India clinched the series 2-1 by winning the third and series-deciding T20I match by 30 runs. India set a target of 175 runs before Bangladesh which got restricted on just 144 runs to lose the match and the series as well. India's Deepak Chahar took a hat-trick in the match. Chahar scalped six wickets in the match for just seven runs.

Chahar was adjudged the Man of the Match. He was also declared the Man of the Series also. His six wickets for just seven runs performance is best in the T20I format.

India Wins Test Series Against Bangladesh With Series Sweep

India completed the decimation of touring Bangladesh in a 2 Test Bilateral series with a series sweep 2–0 by winning the second Test at the Eden Gardens, Kolkata on November 24, 2019 by an innings and 46 runs. The second Test was also India's first Day-Night Test and the first of this kind match on Indian soil. Thus the Eden Gardens in Kolkata took the honours to host first Day-Night Test in India. West Bengal Chief Minister Mamata Banerjee and Bangladesh Prime Minister Sheikh Hasina officially opened the Test on November 23.

Riding high on the splendid bowling performance of Indian Pacers, India restricted Bangladesh on just 106 runs in the first innings and 195 runs in the second Bangla innings of the second Test of the Series. India scored 347 runs in its first innings. Thus the host won the second Test by an innings and 46 runs to claim the Series 2-0. Indian pacer Ishant Sharma was adjudged the Man of the Match in second Test.

Earlier, India took an unbeatable lead in the two Test India-Bangladesh Series by winning the first Test in Indore on November 16 by an innings and 130 runs. Indian opener Mayank Agarwal was declared the Man of the Match in the first Test.

- India's pace bowler Ishant Sharma was declared the Man of the Series.
- Virat Kohli was the skipper of Indian Team while Mominul Haque was the Captain of Bangladesh.
- India consolidated its position atop the ICC World Test Championship with 360 points after this phenomenal Test Series success against Bangladesh.

FOOTBALL

Brazil Wins FIFA Under-17 World Cup, 2019

Brazil emerged champion of the FIFA under-17 Football World Cup, 2019 as it pipped Mexico 2-1 in the final on November 17, 2019 at the Estadio Bezerraa, Brasilia. Kaio Jorge and Lazaro scored a goal each for the champions while Bryan Gonzalez scored a goal for Mexico in the final. It was Brazil's fourth FIFA under-17 title triumph. Brazil defeated France in the semi final to secure its title encounter with Mexico.

- France secured third place in the tournament with a 3-1 victory over the Netherlands for third place play off. Arnaud Kalimuendo Muinga scored a hat trick in the match to help France grab the third place.
- Sontje Hansen of the Netherlands won the Golden Boot honour of the tournament for being the top scorer in the event with six goals.

HOCKEY

India Chosen Host of FIH Men's Hockey World Cup, 2023

The International Hockey Federation (FIH) on November 8, 2019 declared India as the host country of the FIH Men's Hockey World Cup of

MAGAZINE PLUS

2023 edition, following recommendations of a Task Force formed to assess the hosting bids. India edged past Belgium and Malaysia to get the hosting rights. India will become the first country to host consecutive world cups after this FIH decision. The men's event is scheduled to be held from January 13 to 29, 2023 in India.

The hosting rights for the FIH women's World Cup in 2022 have been accorded to Spain and the Netherlands jointly the first time the event will be held across multiple countries. Germany, Malaysia and New Zealand were the other contenders for hosting the women's hockey event.

Bhubaneswar and Rourkela Declared Host Cities of FIH Men's Hockey World Cup, 2023

The 2023 Men's Hockey World Cup will be held in Bhubaneswar and Rourkela, Odisha Chief Minister Naveen Patnaik announced it in Bhubaneswar on November 27, 2019.

India will host the Men's Hockey World Cup for the second consecutive time after the country was picked to stage the game's showpiece event in 2023 by the International Hockey Federation (FIH) earlier this month.

The tournament will be held from January 13 to 29, 2023.

"We hosted the 2018 World Cup and I would like to announce that the 2023 Hockey World Cup will again be held in Bhubaneswar and Rourkela. Are you happy ? I am happy," Patnaik said, while addressing the crowd at the Kalinga Stadium in a brief ceremony.

The ceremony was also attended by International Hockey Federation and Indian Olympic Association President Narinder Batra, Hockey India President Mohd. Mushtaque Ahmed, Odisha Sports Minister Tusharkanti Behera, besides other dignitaries.

Bhubaneswar's Kalinga Stadium will host the game's showpiece tournament for the second consecutive time after successfully conducting the event in 2018, which was won by Belgium.

TENNIS

Novak Djokovic Wins Paris Masters Singles Title, 2019

Top seed Novak Djokovic of Serbia clinched the Paris Masters Men's Singles title, beating Canadian youngster Denis Shapovalov 6-3, 6-4 in the final on November 3, 2019. It was Djokovic's 34th Masters title triumph and fifth Paris Masters Crown.

It was Djokovic's fifth title of the year also as he had won the Wimbledon Open, the US Open, the Madrid Open and in Tokyo before this success in Paris.

French pair of Nicolas Mahut and Pierre-Hugues Herbert defeated Russian pair of Karen Khachanov and Andrey Rublev 6-4, 6-1 in the final to clinch the Paris Masters Men's Doubles title, giving chance to celebrate home crowd with this title.

France Wins Fed Cup Tennis Crown-2019

France emerged champion of the Fed Cup Tennis Crown for 2019, beating Australia 3-2 in the final on November 10, 2019 in Perth, Australia. It was France's first Fed Cup title since 2003 and third Fed title overall.

French pair of Kristina Mldenovic and Caroline Garcia won the deciding fifth rubber of the five rubber final to help France lift the title 3-2. Mladenovic and Garcia defeated the Australian pair of Ashleigh Barty and Samantha Stosur 6-4, 6-3 in the Double rubber to hand France the title. It was the 57th edition of Fed

Ashleigh Barty Wins WTA Finals Singles Title, 2019; Timea Babos and Kristina Mladenovic Win WTA Finals Doubles

Ashleigh Barty emerged champion of the season-ending WTA Finals Singles title as she prevailed over defending champion Elina Svitolina 6-4, 6-3 in the final on November 3, 2019 in Shenzhen. Barty became the first Australian to win the WTA Finals Singles since Evonne Goolagong Cawley clinched her second titles in 1976. Barty received $ 4-42 million for her title triumph in Shenzhen. It was fourth title of Barty in 2019 including the French Open.

Ashleigh Barty defeated Karolina Pliskova in the semifinal to set a title clash with Ukraine's Elina Svitolina who defeated Belinda Bencic in another semifinal of the event.

Barty will end the season with WTA No. 1 Singles ranking along with this title triumph.

Apart from the two finalists, **Karolina Pliskova, Belinda Bencic, Naomi Osaka, Bianca Andreescu, Simona Halep and Petra Kvitova** took part in the tournament.

Defending champions Timea Babos of Hungary and Kristina Mladenovic of France defeated Barbora Strycova of Czech Republic and Hsieh Su Wei of Taiwan 6-1, 6-3 in the final to retain their WTA Finals Doubles title.

Stefanos Tsitsipas Wins ATP Finals Singles Title, 2019

Stefanos Tsitsipas of Greece defeated Dominic Thiem of Austria 6-7 (6), 6-2, 7-6 (4) in the final on November 17, 2019 in London to clinch the season ending ATP Finals Singles title. Tsitsipas aged 21 years became the youngest ATP Finals Champion since 2001 when Lleyton Hewitt won the title. It is Tsitsipas biggest ATP Singles title so far and third title of the season.

Tsitsipas defeated Swiss legend Roger Federer in the semifinal. Thiem defeated Alexander Zverev in another semifinal of the tournament. Tsitsipas earned $ 2,656,000 in prize money and 1,300 ATP Rankings points for this title triumph.

Total eight players took part in the season-ending ATP Singles event. Apart from the two finalists, this year **Rafael Nadal, Roger, Federer, Novak Djokovic, Daniil Medvedev, Alexander Zverev and Matteo Berrethini** took part in the ATP Finals Singles tournament 2019.



Stefanos with his ATP Singles Trophy.

French pair of Pierre-Hugues Herbert and Nicolas Mahut Clinched the ATP Finals Doubles Crown as they thrashed Raven Klaasen of South Africa and Michael Venus of New Zealand 6-3, 6-4 in the final in London.

MAGAZINE KING

Cup which is the premier international team Championship in women's tennis. Davis Cup is the men's equivalent of the Fed Cup.

Spain Wins Davis Cup, 2019

Spain emerged champion of the Davis Cup tennis title 2019 as it defeated Canada 2-0 in the top sided final on November 24, 2019 in Madrid, bringing huge celebrations to home



Spanish team celebrates its Davis Cup 2019 victory.

crowd. It is Spain's first Davis Cup title since 2011 and the sixth one overall. Roberto Bautista Agut's victory over Felix Auger-Aliassime 7-6(3), 6-3 gave Spain 1-0 lead over Canada in the final. Then Spanish tennis great Rafael Nadal won his rubber in the final against Denis Shapovalov 6-3, 7-6(7) to hand the Davis Cup title to Spain. It was the fourth time Nadal helped Spain clinch the Davis Cup after his success in Spain's 2004, 2009 and 2011 Davis Cup title triumphs.

- Sergi Brugera was the captain of the Champion Spanish team.
- Spain defeated Britain in the semifinal to secure its seat in the Davis Cup final while Canada pipped Russia in another semi-final.

BADMINTON

Hong Kong Open Badminton Championship, 2019

Lee Cheuk Yiu clinched the Hong Kong Open Badminton Men's Singles title, 2019, beating his Indonesian opponent Anthony Ginting 16-21, 21-10, 22-20 in the final on November 17, 2019 in Hong Kong. It was local boy Cheuk Yiu's first major trophy in the BWF Tour.

China's Chen Yufei emerged winner of the Hong Kong Open Women's Singles title as she defeated Ratchanok Intanon of Thailand 21-18, 13-21, 21-13 in the final. It was the sixth title of Yufei this year and second super 500 title of 2019 after her All England open success earlier this year.

In the Men's Doubles, South Korea's Choi Sol-gyu and Seo Seung jae won the title with a 13-21, 21-12, 21-13 victory over the second seeded Indonesian pair of Mohammad Ahsan and Hendra Setiawan. The Women's Double title went to China's Chen Qingchen and Jia Yifan as they registered a three set 21-11, 13-21, 21-15 victory over South Korea's Chang Ye-na and Kim Hye-rin. Japanese fourth seeded pair of Yuta Watanabe and Arisa Higashino went on to lift the mixed doubles trophy of the Hong Kong Open. They beat Chinese combination of He Jiting and Du Yue in the final.

Lakshya Sen Wins Scottish Open Badminton Title

Indian shuttler Lakshya Sen clinched the Scottish Open Badminton Men's Singles title as he prevailed



Lakshya Sen

over Ygor Coclho of Brazil 18-21, 21-18, 21-19 in the summit clash in Glasgow on November 24, 2019. This is Sen's fourth title since September this year as he had previously won Belgian International, Dutch Open and Saorlorlux Open. Sen defeated France's Christo Popov in the semi-final.

Kento Momota and Chen Yufei Retain Their Fuzhou China Open Singles Titles, 2019

Kento Momota of Japan defeated Chou Tien-Chen of Taiwan 21-15, 17-21, 21-18 in the final on November 10, 2019 in Shanghai to retain the Fuzhou China Open Badminton Men's Singles title. It was Kento's 10th title triumph of this year.

Chen Yufei of China successfully defended the Fuzhou China Open Women's Singles title, beating Japan's Nozomi Okuhara 9-21, 21-12, 21-18 in the final.

Indonesian pair of Kevin Sanjaya Sukamuljo and Marcus Fernaldi Gideon scripted history by winning their fourth consecutive Fuzhou China Men's Doubles title as they defeated Japanese duo of Takeshi Kamura and Keigo Sonoda 21-17, 21-9, in the final to lift the title.

Yuki Fukushima and Sayaka Hirota of Japan won the Fuzhou China Open Women's Doubles title, beating Lee So Hee and Shin Seung Chan 21-17, 21-15 in the final.

Chinese pair of Wang Yilu and Huang Dongping won the Mixed Doubles title of the event.

Players' Auction For 5th Premier Badminton League Takes Place

World champion P.V. Sindhu was on November 26, 2019 retained by Hyderabad Hunters for ₹ 77 lakh in the auction for the fifth season of the Premier Badminton League in New Delhi. World number 1 women's singles player Tai Tzu Ying of Chinese Taipei was also bought for joint highest amount of ₹ 77 lakh by defending champions Bengaluru Raptors after a bidding war with the Pune 7 Aces.

Another top Indian player B. Sai Praneeth was also retained by Bengaluru Raptors for ₹ 32 lakh.

Among other Indians who were retained by their respective franchises of the PBL are men's doubles players B. Sumeeth Reddy (₹ 11 lakh by Chennai Superstarz) and Chirag Shetty (₹ 15·50 lakh by Pune 7 Aces).

154 players, including Sai Praneeth, Lakshya Sen, and men's doubles pair of Satwiksairaj Rankireddy and Chirag Shetty, were also part of the auction.

The fifth edition of PBL will see a total of 74 Indian shuttlers in action from January 20 to February 9, 2020.

Seven teams—Awadhe Warriors, Bengaluru Raptors, Mumbai Rockets, Hyderabad Hunters, Chennai Superstarz, North Eastern Warriors and Pune 7 Aces—will compete in the

MAGAZINE KING

21-day event to be played in Bengaluru, Chennai, Hyderabad and Lucknow.

CHESS

Magnus Carlsen Wins Tata Steel Chess India Rapid and Blitz Title

Magnus Carlsen, the Chess great from Norway emerged champion of the Tata Steel Chess India Rapid and Blitz title on November 26, 2019 in Kolkata, by topping the points table with 27 points. He scored 5·5 points in the final 9 blitz games to take his points count to 27. This surpassed his 26·5 point record from the Cote D'Ivoire Rapid and Blitz earlier this year. Carlsen played a draw game with Wesley So of the USA in the 27th round. Hikaru Nakamura of the USA finished runner-up in the event with 23 points.

FORMULA-1 RACE

Lewis Hamilton Emerges Formula One Champion for 2019; Valtteri Bottas Wins US Grand Prix

Mercedes star F1 driver Lewis Hamilton of Britain emerged Champion of the Formula one Driver's World Championship, 2019 when he finished runner-up in the US Grand Prix on November 03, 2019 in Austin to take unbeatable lead in the Drivers' point table. Hamilton clinched his sixth career F1 Driver's championship this year and he is now one title short to match the all-time record holder Michael Schumacher of Germany as the most successful F1 driver. Winning his sixth title Hamilton left behind Argentina's great Juan Manuel Fangio who won five titles in the 1950s.

Hamilton clinched his maiden F1 title with Mclaren team in 2008 while his rest of the titles came with Mercedes team in 2014, 2015, 2017, 2018 and 2019. It was his third consecutive F1 Drivers' championship triumph.

Mercedes' driver Valtteri Bottas of Finland emerged winner of the US Grand Prix, 2019 as he finished the race in 01 hour, 33 minutes and 55·653 seconds, about 04 second faster than his teammate and runner up Hamilton. It was Bottas' fourth victory of the season and seventh victory of his career. He was also the pole position holder in the race.

Top Five Most Successful Formula One Drivers

Name	Titles
Michael Schumacher (Germany)	Seven titles (1994, 1995, 2000, 2001, 2002, 2003, and 2004)
Lewis Hamilton (Britain)	Six titles (2008, 2014, 2015, 2017, 2018 and 2019)
Juan Manuel Fangio (Argentina)	Five titles (1951, 1954, 1955, 1956 and 1957)
Alain Prost (France)	Four titles (1985, 1986, 1989 and 1993)
Sebastian Vettel (Germany)	Four titles (2010, 2011, 2012 and 2013)

Max Verstoppen Wins Brazilian Grand Prix, 2019

Red Bull team's Max Verstappen of the Netherlands emerged winner of the Brazilian Grand Prix at Interlagos, Sao Paulo on November 17, 2019 as he finished the race in 01 hour, 33 minutes and 14·678 seconds, about 06 seconds faster than Pierre Gasly of Toro Rosso team. Gasly of France finished runner-up in the event.

Verstappen dominated the Brazilian GP from pole position to the chequered flag of victory and won the third race of the season after success in Austria and Germany. It is his eighth win of the career.

GOLF

Kim Joo Hyung Wins Panasonic Open Golf Title

Korean golfer Kim Joo Hyung clinched the Panasonic Open golf title with the 13-under 203 score on November 17, 2019 in Gurugram. He received $ 72,000 as prize money.

Indian duo S. Chikkarangappa and Shiv Kapoor finished runner-up spot jointly each falling one stroke short of the victory.

Rory McIlroy Wins WGC-HSBC Golf Championship

Rory McIlroy of Ireland clinched his maiden WGC-HSBC championship-2019 defeating defending champion Xander Schauffele in the playoff on November 3, 2019 in Shanghai. Rory received $1·745 million winner's purse at the event.

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Memorable Points



National

- Which Indian state emerged on top of the India Justice Report, 2019 in large-medium states category for justice delivery ? **→ Maharashtra**
  - Maharashtra emerged on top of the first-ever India Justice Report, 2019, released on November 7, 2019 as the best state in justice delivery in the large-medium Indian States Category. After Maharashtra, Kerala and Tamil Nadu secured top positions respectively on the Report in the large-medium states. Among smaller states, Goa leads the group as the best one on justice delivery. The report has been prepared based on publicly available data of different government entities on the four pillars of justice delivery—Police, Judiciary, Prisons and Legal aid.
- Who has been named PETA India's Person of the year, 2019 ? **→ Virat Kohli**
  - Indian cricket team captain Virat Kohli was on November 20, 2019 named 'People for the Ethical Treatment of Animals' (PETA) India's Person of the year for 2019 for his animal rights advocacy. He has long been active to improve conditions of animals and for their ethical treatment. He also raised voice for 'Malti' an elephant used for rides at Amer Fort, Jaipur. Shashi Tharoor, Bollywood actress and Kohli's wife Anushka Sharma, Sonam Kapoor, Hema Malini, Kapil Sharma, R. Madhvan are some former PETA India Personalities.
- Which film was honoured with the Golden Peacock Award at 50th IFFI, 2019 ? **→ Particles**
  - French-Swiss movie **Particles,** directed by Blaise Harrison was honoured with the Golden Peacock award for best film at the closing ceremony of the 50th International Film Festival of India (IFFI) in Panaji, Goa on November 28, 2019. The award comprises ₹ 40 lakh, a trophy and a citation. 'Particles' director Blaise Harrison and producer Estelle Fialon will equally share the prize money. John Bailey was the chairman of the 50th IFFI International award jury. 'Russia' was the country of focus of this Golden Jubilee edition of the IFFI. Indian megastar Rajinikanth was honoured with the IFFI Icon of the Golden Jubilee honour.
- Who will be the chief guest for the Republic Day celebrations of India in 2020 ? **→ Brazil's President Jair Bolsonaro**
  - Brazil's President Jair Messias Bolsonaro will be the chief guest for the Republic Day celebrations of India in January 2020 as Mr. Bolsonaro accepted Prime Minister Narendra Modi's invitation to it with pleasure on November 13, 2019 in a meeting on the sidelines of 11th BRICS summit in Brasilia. This is the third time a Brazilian President will be chief guest at the Republic Day celebrations in India after Fernando Henrique Cardoso in 1996 and Luiz Inacio Lula de Silva in 2004.
- ISRO successfully launched Cartosat-3 which is a **→ Highly advanced earth observation satellite**
  - ISRO on November 27, 2019 successfully launched its Cartosat-3 satellite alongwith 13 other nano satellites of the USA on board PSLV- C47 launching vehicle from the Satish Dhawan Space Centre, Sriharikota. The 1625 kg Cartosat-3 is the first in the third generation Earth observation satellites with a high resolution imaging capability and the ninth in the Cartosat series. It is ISRO's fifth launch of the year. Cartosat 3 would help large-scale urban planning, rural resource management and infrastructure development, besides providing information for coastal land use and its cover.
- What is India's rank on the IMD World Talent Ranking Report, 2019 ? **→ 59th rank**
  - India was ranked on the 59th position on the International Institute of Management Development's World Talent Ranking Report, 2019, released on November 18, 2019. India slipped 6 places down on the Current Report based on 63 countries at it was ranked 53rd on the 2018 report. The report has been prepared on investment and development, appeal and readiness indicators. Switzerland retained its top spot on the report as the world's top talent hub. Denmark and Sweden secured second and third places respectively on the report.
- Which team retained the Beighton Cup Hockey title, 2019 ? **→ Indian Oil**
  - Indian oil successfully defended its Beighton Cup Hockey title, 2019 as it prevailed over the Punjab National Bank 2-0 in the summit clash on November 12, 2019 at the SAI Complex in Kolkata. Karajwinder Singh and Gurjinder Singh each scored a goal for the champion team in the final. It was the 123rd edition of the Beighton Cup, one of the oldest hockey tournaments in India.
- Where was India's first 'Day-Night' Test organised ? **→ Eden Gardens, Kolkata**
  - The first 'Day-Night' Test in India was organised at historic Eden Gardens in Kolkata between India and Bangladesh when West Bengal Chief Minister Mamata Banerjee and Bangladesh Prime Minister Sheikh Hasina inaugurated the Test by ringing the bell on November 22, 2019. BCCI President Sourav Ganguly and

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many cricketers and others were present in the ceremony. Pink ball was used in this Test. It was India's first Day-Night Test and first of this kind on Indian soil as well. India won the Test in a dominant style by an innings and 46 runs. Virat Kohli was the captain of Indian side.

International

- Who emerged on top of the Fortune's Businessperson of the Year, 2019 list ? **→ Satya Nadella**
  - Microsoft's India-born CEO Satya Nadella emerged on top of the Fortune's Businessperson of the year 2019 list, released in November 2019. He has been at the leading position of Microsoft since 2014. The list is an annual compilation of 20 business leaders who tackled audacious goals, overcame impossible odds, found creative solutions. Fortune magazine list also includes Mastercard CEO Ajay Banga (8th rank) and Arista Networks head Jayshree Ullal (18th spot), the two Indian-origin business leaders.
- Who became the first Hindu Woman Minister in Canadian Cabinet ? **→ Anita Indira Anand**
  - Anita Indira Anand joined the newly-formed Canadian Cabinet led-by Prime Minister Justin Trudeau, as a minister on November 20, 2019 , becoming the first Hindu woman lawmaker to become a minister in Canada government. Elected to the House of Commons for the first time in Canada polls in October, 2019, Anita became the minister of 'Public Services and Procurement' in the 37-member Canadian Cabinet. Born to Indian-origin parents in Kentville, Nova Scotia, Anita had served as a law professor at the University of Toronto. She won the election from Oakville, Ontario.
- Which word was named the word of the year for 2019 by the Oxford Dictionaries ? **→ Climate emergency**
  - Oxford Dictionaries declared 'climate emergency' as its 2019 word of the year, choosing it from an all-environmental shortlist including 'climate action', 'climate denial', 'eco-anxiety', 'extinction' etc. The use of the term 'climate emergency' increased by a hundred fold since 2018. The citation of 'climate emergency' as the word of the year by Oxford highlights the growing environmental crisis across the globe.
- New Zealand cleared a law to cut carbon emissions to net zero by the year **→ 2050**
  - New Zealand Parliament on November 7, 2019 approved a legally binding framework to cut carbon emissions to net zero by the year 2050. New Zealand Prime Minister Jacinda Ardern said that the new law was a legal measure to keep global warming below a rise of 1·5 degree Celsius forecast by the UN. It accords different treatment to methane emissions from animals versus other greenhouse gases, but still targets a cut of 10% in biological methane by 2030 and upto 47% by 2050.
- Who have been honoured with the International Children's Peace Prize ? **→ Greta Thunberg and Divina Maloum**
  - Sweedish environment activist Greta Thunberg and Cameroonian peace activist Divina Moloum were honoured with the International Children's Peace Prize on November 20, 2019 in the Hague. Thunberg got the honour for her efforts against climate change and for environment protection. Divina got the honour for her fight against the Boko Haram Jihadist group. The Dutch KidsRights organisation has been giving the International Children's Peace Prize since 2005.
- Which Indian Wildlife Conservationist became the first recipient of the George Schaller Lifetime award ? **→ K. Ullas Karanth**
  - Noted wildlife biologist K. Ullas Karanth, Director of Centre for Wildlife Studies, Bengaluru was honoured with the George Schaller Lifetime Award in Wildlife Conservation Science for his contribution to the field of conservation. Recipient of Padma Shri (2012), K. Ullas is the first recipient of George Schaller Lifetime honour instituted by the Wildlife Conservation Society (WCS), New York in honour of eminent wildlife scientist George Schaller. K. Ullas had received Sanctuary Asia Lifetime Achievement award and J. Paul Getty honour in 2007 for his wildlife conservation works.
- Which university emerged on top of the QS World University rankings for Asia, 2020 ? **→ National University of Singapore**
  - The National University of Singapore was ranked Asia's best university for the second successive year as it emerged on top of the QS World University Rankings for Asia, 2020 released in November, 2019. It is followed by Nanyang Technological University, again from Singapore in the rankings, comprising 550 universities of Asia. The University of Hong Kong secured third rank on the list. IIT Bombay, the best performing institution from India, secured 34th rank on the list. It is followed by IIT Delhi at 43rd place, the second best Indian institute on the continent's university list. Total 96 Indian universities and institutions featured in the ranking for 2020.
- Who emerged champions of the ATP and WTA Finals Singles Crowns, 2019 ? **→ Stefanos Tsitsipas (ATP Finals) and Ashleigh Barty (WTA Finals)**
  - Stefanos Tsitsipas of Greece emerged champion of the ATP Finals Singles title, 2019 as he defeated Dominic Thiem of Austria 6-7 (6), 6-2, 7-6 (4) in the final on November 17, 2019 in London. With this season-ending title victory, Stefanos claimed the biggest ATP Singles crown of his career so far. Australia's Ashleigh Barty trounced defending champion Elina Svitolina of Ukraine 6-4, 6-3 in the final on November 3, 2019 in Shenzhen to lift the season-ending WTA finals Singles title. It was Barty's fourth title victory in 2019 including the French Open.

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Science & Technology



'Solar Tsunami' Expected to Trigger in 2020

It is believed that the 'solar tsunami', a naturally occurring generator which produces electric and magnetic fields in the Sun, is linked to the production of sunspots. What kick starts the 11-year sunspot is not known. Now a new research published in the journal, *'Scientific Reports'* reveals that a 'solar tsunami' is at work that triggers a new sunspot cycle, after the old one ends.



A solar flare bursts off the Sun in this image captured by NASA's Solar Dynamics Observatory.

The extreme pressure and temperature conditions that prevail some 20,000 km below the Sun's surface cause its materials to form the plasma consisting primarily of hydrogen and helium in a highly ionised state. The plasma is confined with huge magnetic fields inside the Sun. The Sun's toroidal magnetic field, from which sunspots get generated, wraps around the Sun in the east-west direction.

The solar tsunami waves at a speed of 1000 km per hour carry excess plasma to the mid latitudes. There they give rise to magnetic flux eruptions. These are the bright patches that signal the start of the next cycle of eruptions.

A Large Carnivorous Land Mammal Roamed 22 million Years Ago

Simbakubwa Kutukaefrika was one of the largest meat-eater mammals that stalked Africa 22 million years ago, according to a research carried out by Ms. Stevens and Mathew Borths.

Bigger than any carnivorous land mammal alive today–even a polar bear. Simbakubwa's skull was the size of a rhino's, its eight inch (20 cm) canine teeth were as large as bananas. It weighed about a tonne and was 8 feet long (2-1/2) metres) snout to roump.



Lion King : Simbakubwa kutokaafrika was bigger than any carnivorous land mammal alive today.

According to the research published in the *Journal of Vertebrate Paleontology*, the fossils were excavated around 1980 in western Kenva.

The specimen had been collected decades before, and the team that discovered this fossil was more focused on other parts of the fauna, particularly primates, Ms. Stevens said.

Simbakubwa was a member of a group called hyaenodonts that appeared 62 million years ago, 4 million years after the extinction of the dinosaurs paved the way for mammalian dominance, and went extinct 9 million years ago.

Iceland Turns CO_2 to Rock for Cleaner Air

The 21st century alchemists are transforming carbon dioxide into rock for eternity, cleaning the air of harmful emissions that cause global warming. It is happening in Iceland which is a country of volcanoes.

The technology mimics, in accelerated format, a natural process that can take thousands of years, injecting carbon dioxide into porous basalt rocks where it mineralises, capturing it forever.



Solid work : A drill core, held by Sandra Snaebjornsdottir in Iceland, laced with solidifie carbonate produced through the new process.

"With this method we have actually changed the time scale dramatically", says geologist Ms. Sandra Osk Snaebjornsdottir. She has been working on Iceland's Carb-Fix project with researchers and engineers from Utility Company Reykjavik Energy, the University of Iceland, Francis National Centre for Scientific research (CNRS) and Columbia University of USA.

In Iceland, a country of geysers, glaciers and volcanoes, at least half of the energy comes from geothermal sources.

There is a geothermal power plant located on the Hengill volcano in Iceland. The plant pumps up water underneath the Volcano to turbines to provide electricity and heat to the country. Carbon dioxide from the plant is captured from the steam, liquified into condensate, then dissolved in water. This water is injected under high pressure into the rock, 1,000 metres under the ground. Almost all of the injected CO_2 was mineralised within two years.

Apache-Most Advanced Multi-role Heavy Attack Dreadful Helicopter

Indian Air Force induced eight Apache attack helicopters into service at the Pathankot Air Force Station. US made Apache is the most advanced multi-role heavy attack helicopter in the world.

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The Apache will be part of the 125 helicopter unit at Pathankot. Selected aircrew and ground crew had undergone training at the training facilities at US Army base Fort Rucker in Alabama before the arrival of the helicopters in India and these personnel would lead the operationalisation of the Apache fleet.



Cutting edge : The latest generation of the Apache will be part of the 125 Helicopter Unit at Pathankot.

The helicopter is capable of delivering a variety of weapons that include air-to-ground Hellfire missiles, 70 mm Hydra rockets and air-to-air Stinger missiles.

The Apache also carries one 30 mm chain gun with 1,200 rounds as part of an area weapon sub-system and to "add to the lethality of the helicopter" it carries fire control radar, which has a 360 degree coverage and nose mounted sensor suite for target acquisition and right vision systems.

Older than Big Bang

Dark matter could be older than the Big Bang, according to a new study published in *Physical Review Letters*. The researchers present calculations supporting the idea of how dark matter, which forms 80% of matter, could have formed during an era known as cosmic inflation. The rapid expansion during this era resulted in particles like the Higgs boson.



World's Northernmost Settlement Hit by Record 'Arctic Heat Wave'

Temperatures hit a record 21 degree Celsius in Alert, the northernmost permanently inhabited spot on the planet less than 965 km from the North Pole, the Canadian meteorology service reported.

The temperature was recorded at Alert, a permanent military base on the 82nd parallel which intercepts Russian communications and which has been home to a weather station since 1950.



Alert, the northernmost permanently inhabited spot on the planet, has a military base and a weather station.

The previous record of 20 degree Celsius was set on July 8, 1956, but since 2012, there have been several days where the temperature has risen to 19 or 30 degrees Celsius at the base on the shore of the Arctic Ocean.

The Arctic is heating up three times faster than other parts of the Earth.

A recent landmark United Nations report warned that time is running out to avert global disaster and that avoiding climate chaos will require an unprecedented transformation of society and the world economy.

India is home to 1256 Species of Orchid—First Comprehensive Survey

Botanical Survey of India has come up with the first comprehensive census of orchids of India putting the total number of orchid species to 1256.

"Orchids of India A Pictorial Guide", a publication detailing all the species of India, was unveilled by the Union Ministry of Environment, Forest and Climate Change.



(From left) Pleione maculata, an epiphytic orchid; Cymbidium lancifolium, a terristrial orchid; and Aerides odorata, an epiphytic orchid.

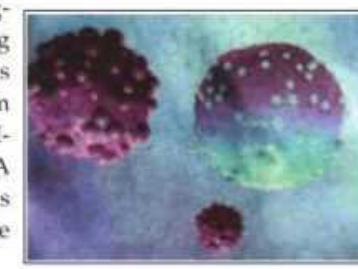
The highest number of orchid species is recorded from Arunachal Pradesh with 612 species, followed by Sikkim 560 species and West Bengal; Darjeeling Himalayas have also high species concentration, with 479 species.

While north-east India ranks at the top in species concentration, the Western Ghats have high endemism of orchids.

There are 388 species of orchids, which are endemic to India, of which about one-third (128) endemic species are found in Western Ghats. The publication points out that Kerala has 111 of these endemic species while Tamil Nadu has 92 of them. Among the 10 bio geographic zones of India, the Himalayan zone is the richest in terms of orchid species followed by Northeast, Western Ghats, Deccan plateau and Andman & Nicobar Islands. "The publication is the result of years of hard and methodical research through careful examination of protologues, literature and voucher herbarium specimens. Every record has been verified from published floras, revisionary works, doctoral thesis and scientific papers.

New Drug May Stop Cancer Causing Gene

Scientists at the Michigan State University, US, are testing a promising drug that may stop a gene associated with obesity from triggering breast and lung cancer, as well as prevent them from growing. The drug, I-BET-762, targets DNA so that the cancerous gene c-Myc cannot be expressed.



Continued on Page 66

Economic Scenario



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- *Two IT Initaitives Launched for Faster Customs Clearance*
- *₹ 25,000 crore for Realty Sector Booster Doze*
- *"Swachh-Nirmal Tat Abhiyaan"*
- *Govt. Accords 'Maharatna' Status to Hindustan Petroleum and Power Grid Corporation*
- *India's External Debt at US $ 557·4 billion on June 30, 2019*
- *'Mana Badi Nadu Nedu' (Our School then and Now) Scheme*
- *Punjab, Haryana Announce ₹2,500 an Acre Incentive to Stop Stubble Burning*
- *SUMAN Scheme*
- *Union Cabinet's Node for Strategic Disinvestment in Five CPSUs*
- *Govt. Lists Activities that will Not Qualify for Lower Corporate Tax Scheme*
- *"State of Aadhaar", Report 2019*
- *Export Promotion Measures*
- *Coal Production in India up by 164·58 MT in 5 Years*
- *Authorised Capital of Food Corporation Increased to ₹ 10,000 Crore*
- *GDP Growth Rate Decelerated to 4·5 per cent in Second Quarter of 2019-20*

WTO Dispute Panel Rules Against India on Export Promotion Schemes

A WTO dispute panel, on October 31, 2019, backed several claims filed by the US against export promotion measures adopted by India and rejected New Delhi's contention that it was exempted from the prohibition on export subsidies under the special and differential treatment provisions of the WTO Agreement on Subsidies and Countervailing Measures (SCM).

The panel, however, rejected the US' claims that the exemption from central excise duty on domestically procured goods under the EOU / EHTP/BTP (Export Oriented Scheme / Electronic Hardware Technology Park/Biotechnology Park) schemes and the exemptions from customs duties on importation under DFIS (Duty Free Import Scheme) are subsidies contingent upon export performance.

As per the recommendations, India needs to withdraw the prohibited subsidies under the EOU/ EHTP/BTP Schemes, EPCG Scheme (Export Promotion Capital Goods Scheme) and MEIS, within 120 days from adoption of the report. Since the withdrawal of tax-related incentives for SEZ units could require amendment to the SEZ Act, the panel recommended a 180-days time-period for the same, after the adoption of the report. For schemes like the DFIS, which can be amended through a notification, a shorter 90-day time-period for withdrawal has been given.

In case India files an appeal against the ruling, the time available for withdrawal will get further extended, especially since the normal functioning of the Appellate Body is likely to get disrupted in December, 2019 with the US continuing to oppose the appointment of new judges.

While the Centre was initially considering replacement of the MEIS scheme (Merchandise Exports from India Scheme) voluntarily by January 1, 2020, with the Remission of Duties or Taxes on Export Product (RoDTEP) scheme—a scheme to remit all input taxes at the State or Central level, which is compliant with WTO norms —the recent fall in India's exports made it consider an extension of the scheme till the end of March 2020 as remissions were higher under it.

The WTO has called out for removal of most of India's export incentives because India's per capita Gross National Income has increased beyond $1000 per annum, which is the threshold beyond which export subsidies are not allowed.

Trade Wrangle

- Under WTO rules, export sub-sidies cannot be offered if a country's per capita Gross National Income crosses $ 1000 for three years in a row.
- In 2017, the WTO notified that India's GNI per capita was $ 1051 in 2013, $1100 in 2014 and $1178 in 2015.
- In March 2018, the US dragged India to the WTO dispute panel that its export subsidies were hurting American firms.
- On October 31, 2019 the WTO dispute panel asked India to withdraw MEIS, EPCG, SEZ and EoU sops in 90-180 days.

India has decided to appeal against a World Trade Organisation dispute panel's verdict which ruled that its popular incentive schemes for exporters such as the Merchandise Export from India Scheme (MEIS) and the Export Promotion Capital Goods (EPCG) scheme flouted multilateral trade norms and should be withdrawn.

Two IT Initaitives Launched for Faster Customs Clearance

Finance Minister Nirmala Sitharaman on November 4, 2019 unveiled two new information technology initiatives for improved monitoring of clearance of the imported goods

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and making it easier for international passengers to arrive in India. These two initiatives are :

(i) **ICEDASH** is an Ease of Doing Business (EoDB) monitoring dashboard of the Indian Customs helping public see the daily Customs clearance times of import cargo at various ports and airports. With ICEDASH, Indian Customs has taken a lead globally to provide an effective tool that helps the businesses compare clearance times across ports and plan their logistics accordingly. This dashboard has been developed by CBIC in collaboration with NIC. ICEDASH can be accessed through the CBIC website.

(ii) With **ATITHI,** CBIC has introduced an easy way to use mobile app for international travellers to file the Customs declaration in advance. Passengers can use this app to file declaration of dutiable items and currency with the Indian Customs even before boarding the flight to India. ATITHI is available on both, iOS and Android.

₹ 25,000 crore for Realty Sector Booster Doze

The government has announced the creation of an Alternate Investment Fund (AIF) with a targeted corpus of ₹ 25,000 crore for the completion of stalled housing projects. The government would inject ₹ 10,000 crore in the fund and institutions like the SBI and the LIC will come up with the rest to take the corpus to ₹ 25,000 crore. Sovereign funds and pension funds will be allowed to invest in the category II AIF, which the govern-ment hopes may take the corpus even higher.

The fund's objective is to address the concerns of distressed homebuyers who have paid an initial amount to builders but due to various reasons haven't received their apartments/flats. The fund aims to finish such housing units in a time-bound manner.

When the fund was announced in September 2019, the government said that only those projects which haven't been categorised as NPAs and are 60 per cent complete can access the fund. In this announcement, the government waived off these two conditions and allowed projects classified as bad debts by banks and also the ones which are at various stages of completion to access the funds.

The only condition that has been kept is that the project should be net worth positive and RERA registered. According to the finance ministry's estimate, there are a total of 1,600 stalled housing projects comprising 4·58 lakh housing units that need immediate help.

The government has identified housing units up to ₹ 2 crore in Mumbai, and ₹ 1·5 crore in Delhi-NCR, Chennai, Kolkata, Bengaluru and Pune as the ones which can avail the facility.

The Alternate Investment Fund offers an opportunity to high net worth individuals and large sovereign funds/pension funds to take part in the distressed assets/real estate projects that have been at various stages of completion. The money will be pooled in the AIF and will be used for timely completion of these projects. The money will be put into an escrow account to be managed by SBI Caps.

"Swachh-Nirmal Tat Abhiyaan"

To strive to make our beaches clean and create awareness amongst citizens about the importance of coastal ecosystems, the Ministry of Environment, Forest and Climate Change (MoEF&CC) are undertaking a mass cleanliness-cum-awareness drive in 50 identified beaches under the "Swachh–Nirmal Tat Abhiyaan", from 11th-17th November, 2019. The identified beaches are in 10 coastal States/Union Territories (UTs) namely Gujarat, Daman & Diu, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, Puducherry, Andhra Pradesh, and Odisha. The beaches have been identified after the consultation with the States/UTs.

The cleaning drives in all beaches are being undertaken, involving school/college students of Eco-clubs, district administration, institutions, volunteers, local communities and other stakeholders. State Nodal Agencies for the Eco-clubs will be facilitating the week long intensive cleanliness drive in all 10 States/UTs. Nodal teachers from the Eco-clubs will be present at the sites during the entire cleanliness drive. MoEF&CC officials have also been deputed to monitor the implementation of the drive.

For beach cleaning activities which will be a duration of two hours on daily basis, a minimum of one Kilometre stretch of the beach shall be identified. Beach sand cleaning machines shall also be deployed at about identified 15 beaches. Thereafter collected waste will be processed as per extant Waste Management Rules, 2016. Environment Education Division of the Ministry and Society of Integrated Coastal Management (SICOM) under the aegis of this Ministry will be responsible for the overall coordination for the drive in 50 beaches. Respective State Governments and Central Ministries will also be actively participating in the beach cleaning drives.

The Ministry has also decided that on completion of the drive, best three beaches will be suitably awarded along with a Certificate of Appreciation for all the participating Eco-clubs.

Govt. Accords 'Maharatna' Status to Hindustan Petroleum & Power Grid Corporation

The government on October 23, 2019 accorded 'Maharatna' status to state-owned Hindustan Petroleum and Power Grid Corporation, thus giving them greater operational and financial autonomy.

HPCL was incorporated in 1974 after the takeover and merger of erstwhile Esso Standard and Lube India through the Esso (Acquisition of Undertaking in India) Act passed by Parliament.

Power Grid Corporation of India Limited is India's largest electric power transmission utility firm. It is a listed company since 2007.

With this number of Maharatna CPSUs has increased to 10, while the number of Navaratna CPSUs is now 14. Besides this, 61 CPSUs have Miniratna-I status and 12 CPSUs have Miniratna-II status.

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List of Maharatna, Navratna and Miniratna CPSEs

(as on October 31, 2019)

Maharatna CPSEs

1. Bharat Heavy Electricals Limited
2. Bharat Petroleum Corporation Limited
3. Coal India Limited
4. GAIL (India) Limited
5. Hindustan Petroleum Corporation Limited
6. Indian Oil Corporation Limited
7. NTPC Limited
8. Oil & Natural Gas Corporation Limited
9. Power Grid Corporation of India Limited
10. Steel Authority of India Limited

Navratna CPSEs

1. Bharat Electronics Limited
2. Container Corporation of India Limited
3. Engineers India Limited
4. Hindustan Aeronautics Limited
5. Mahanagar Telephone Nigam Limited
6. National Aluminium Company Limited
7. NBCC (India) Limited 8. NMDC Limited
9. NLC India Limited 10. Oil India Limited
11. Power Finance Corporation Limited
12. Rashtriya Ispat Nigam Limited 13. Rural Electrification Corporation Limited
13. Shipping Corporation of India Limited

Miniratna Category - I CPSEs

1. Airports Authority of India
2. Antrix Corporation Limited
3. Balmer Lawrie & Co. Limited
4. Bharat Coking Coal Limited
5. Bharat Dynamics Limited 6. BEML Limited
7. Bharat Sanchar Nigam Limited 8. Bridge & Roof Company (India) Limited
9. Central Warehousing Corporation
10. Central Coalfields Limited
11. Central Mine Planning & Design Institute Limited
12. Chennai Petroleum Corporation Limited
13. Cochin Shipyard Limited
14. EdCIL (India) Limited
15. Kamarajar Port Limited
16. Garden Reach Shipbuilders & Engineers Limited
17. Goa Shipyard Limited
18. Hindustan Copper Limited
19. HLL Lifecare Limited
20. Hindustan Newsprint Limited
21. Hindustan Paper Corporation Limited
22. Housing & Urban Development Corporation Limited
23. HSCC (India) Limited
24. India Tourism Development Corporation Limited
25. Indian Rare Earths Limited
26. Indian Railway Catering & Tourism Corporation Limited
27. Indian Railway Finance Corporation Limited
28. Indian Renewable Energy Development Agency Limited
29. India Trade Promotion Organization
30. IRCON International Limited 31. KIOCL Limited
32. Mazagaon Dock Shipbuilders Limited
33. Mahanadi Coalfields Limited
34. MOIL Limited
35. Mangalore Refinery & Petrochemical Limited
36. Mineral Exploration Corporation Limited
37. Mishra Dhatu Nigam Limited 38. MMTC Limited
39. MSTC Limited 40. National Fertilizers Limited
41. National Projects Construction Corporation Limited
42. National Small Industries Corporation Limited
43. National Seeds Corporation
44. NHPC Limited 45. Northern Coalfields Limited
46. North Eastern Electric Power Corporation Limited
47. Numaligarh Refinery Limited
48. ONGC Videsh Limited
49. Pawan Hans Helicopters Limited
50. Projects & Development India Limited
51. Railtel Corporation of India Limited
52. Rail Vikas Nigam Limited
53. Rashtriya Chemicals & Fertilizers Limited
54. RITES Limited
55. SJVN Limited
56. Security Printing and Minting Corporation of India Limited
57. South Eastern Coalfields Limited
58. Telecommunications Consultants India Limited
59. THDC India Limited
60. Western Coalfields Limited
61. WAPCOS Limited

Miniratna Category-II CPSEs

62. Artificial Limbs Manufacturing Corporation of India
63. Bharat Pumps & Compressors Limited
64. Broadcast Engineering Consultants India Limited
65. Central Railside Warehouse Company Limited
66. Engineering Projects (India) Limited
67. FCI Aravali Gypsum & Minerals India Limited
68. Ferro Scrap Nigam Limited
69. HMT (International) Limited
70. Indian Medicines & Pharmaceuticals Corporation Limited
71. MECON Limited
72. National Film Development Corporation Limited
73. Rajasthan Electronics & Instruments Limited

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The grant of Maharatna status to the PSUs empowers their Boards to take financial decisions with more autonomy.

- The Boards of Maharatna CPSEs can make equity investments to undertake financial joint ventures and wholly owned subsidiaries and undertake mergers and acquisitions in India and abroad, subject to a ceiling of 15 per cent of the net worth of the concerned CPSE, limited to ₹ 5,000 crore in one project.
- The Boards can also structure and implement schemes relating to personnel and human resource management and training.
- Maharatna CPSUs can also enter into technology joint ventures or other strategic alliances, among others.
- The holding companies of a 'Maharatna' CPSU are also empowered to transfer assets, float fresh equity and divest shareholding in subsidiaries, subject to the condition that the delegation will only be in respect of the subsidiaries set up by the holding company.

India's External Debt at US $ 557·4 billion on June 30, 2019

At end-June 2019, India's external debt witnessed an increase of 2·6 per cent over its level at end-March 2019, primarily on account of an increase in commercial borrowings, non-resident deposits, and short-term trade credit. The increase in external debt was also contributed by valuation losses resulting from the depreciation of the US dollar against Indian rupee and other major currencies. The external debt to GDP ratio remained at 19·8 per cent at end-June 2019, the same as its level at end-March 2019.

- At end-June 2019, India's external debt was placed at US $ 557·4 billion, recording an increase of US $ 14·1 billion over its level at end-March 2019.
- Long-term debt (with original maturity of above one year) was placed at US $ 447·7 billion (80·3 per cent), recording an increase of US $ 12·8 billion over its level at end-March 2019.
- The share of short-term debt (with original maturity of up to one year) in total external debt declined to 19.7 per cent at end-June 2019 from 20.0 per cent at end-March 2019; the ratio of short-term debt (original maturity) to foreign exchange reserves declined to 25·5 per cent at end-June 2019 (26·3 per cent at end-March 2019).
- Commercial borrowings remained the largest component of external debt, with a share of 38·4 per cent, followed by non-resident deposits (24·0 per cent) and short-term trade credit (18·7 per cent).
- US dollar denominated debt continued to be the largest component of India's external debt, with a share of 51·5 per cent at end-June 2019, followed by the Indian rupee (34·7 per cent), yen (5·1 per cent), SDR (4·7 per cent) and the euro (3·2 per cent).
- Debt service (principal repayments plus interest payments) declined to 5·8 per cent of current receipts at end-June 2019 as compared with 6.4 per cent at end-March 2019, reflecting lower repayments of commercial borrowings.

Table 1. External Debt-Outstanding

(US $ billion)

Component	Oustanding at at end of June 2019
1. Multilateral	59·0
2. Bilateral	26·6
3. IMF	5·5
4. Tarde Credit	7·8
5. Commercial Borrowings	214·1
6. Non-resident Deposits	133·6
7. Rupee Debt	1·1
8. Short-term Debt	109·7
Total Debt	**557·4**
A. Long-term Debt (original matruity)	447·7
B. Short-term Debt (original maturity)	109·7

Table 2. Government and Non-Government External Debt

(US $ billion)

Component	End-June 2019
A. Soverign Debt (I+II)	106·9
(As a percentage of GDP)	(3·8)
I. External Debt on Government Account under External Assistance	70·9
II. Other Government External Debt@	36·0
B. Non-government Debt£	450·5
(As a percentage of GDP)	(16·0)
C. Total External Debt (A+B)	557·4
(As a percentage of GDP)	(19·8)

PR : Partially Revised. P : Provisional.

@ Other government external debt includes defence debt, investment in Treasy Bills/government securities by FPIs, foreign central banks and international institutions and IMF.

£ Includes external debt of Monetary Authority.

India's Key External Debt Indicators

(Per cent, unless indicated otherwise)

End-March	External Debt (US $ billion)	Ratio of External Debt to GDP	Debt Service Ratio	Ratio of Foreign Exchange Reserves to Total Debt	Ratio of Concessional Debt to Total Debt	Ratio of Short-term Debt to Foreign Exchange Reserves	Ratio of Short-term Debt (original maturity) to Total Debt
2017	471·0	19·9	8·3	78·5	9·4	23·8	18·7
2918 PR	529·3	20·1	7·5	80·2	9·1	24·1	19·3
2019 PR	543·3	19·8	6·4	76·0	8·7	26·3	20·0
End-June 2019 P	557·4	19·8	5·8	77·1	8·6	25·5	19·7

PR : Partially Revised. **P :** Provisional.

'Mana Badi Nadu Nedu' (Our School then and Now) Scheme

Government schools in Andhra Pradesh are all set to get a face-lift with the state government on November 14, 2019 launching a new programme to revamp them by providing better infrastructure and amenities at a cost of ₹ 12,000 crore.

Andhra Pradesh Chief Minister YS Jagan Mohan Reddy on November 14, 2019 (Children's Day-birth anniversary of Pt. Jawahar Lal Nehru) launched a mega scheme 'Mana Badi Nadu Nedu' (Our School then and now) at Ongole. Under the scheme, 45,000 government-run schools will undergo a complete makeover at a cost of ₹ 12000 crore in the next three years, bringing them on par with or even better than the ones in private and corporate sectors. The scheme takes nine parameters into consideration—provision of lights, fans, blackboards, furniture and compound walls, construction of

MAGAZINE KING

toilets, repairs and painting of classrooms, providing safe drinking water and provision for English labs. This programme in addition to upgrading teaching and learning skills, introducing English as the medium of instruction from Class 1 to 6 with Telugu or Urdu as a compulsory subject, improving quality of mid-day meals, supply of textbooks, uniforms and shoes to the students on time and maintaining teacher-student ratio is expected to transform the education sector.

Punjab, Haryana Announce ₹ 2,500 an Acre Incentive to Stop Stubble Burning

Following the Supreme Court guideline to incentivise farmers for stopping the burning of paddy crop stubble to check air pollution, the governments of Punjab and Haryana have announced a bonus of ₹ 2,500 an acre for small and marginal farmers who are yet to start such activity. The ₹ 2,500 an acre has been calculated by assuming 25 quintals of paddy is harvested from an acre of land in Punjab and Haryana. In Punjab, to claim the compensation, farmers have to fill a self-declaration proforma with their panchayat office by November 30, 2019. The amount would be directly credited to the bank account of the eligible farmer.

In Haryana, the state government has announced an additional Rs 1,000 an acre incentive for custom-hiring centres and straw baler units, to support their operational costs.

Uttar Pradesh, which also faces the problem of stubble burning has decided to set up biofuel plants in each district, where farmers can sell their waste stubble for generation of electricity.

SUMAN Scheme

Aiming zero preventable maternal and newborn deaths in India, the central government on October 10, 2019 launched the Surakshit Matritva Aashwasan (SUMAN) scheme, under which pregnant women, mothers up to 6 months after delivery, and all sick newborns will be able to avail free healthcare benefits.

The scheme will largely help in bringing down maternal and infant mortality rates in the country. Under the scheme, the beneficiaries visiting public health facilities are entitled to several free services. These include at least four ante natal check-ups that also includes one checkup during the 1st trimester, at least one checkup under Pradhan Mantri Surakshit Matritva Abhiyan, Iron Folic Acid supplementation, Tetanus diptheria injection and other components of comprehensive ANC package and six home-based newborn care visits.

Under the scheme there will be zero expense access to identification and management of complications during and after the pregnancy. The government will also provide free transport from home to health institutions.

There will be assured referral services with scope of reaching health facility within one hour of any critical case emergency and Drop back from institution to home after due discharge (minimum 48 hrs). Under the scheme, the pregnant women will have a zero expense delivery and Cesarean section facility in case of complications at public health facilities.

The government has said it will ensure respectful care with privacy and dignity, with early initiation and support for breastfeeding, zero dose vaccination and free and zero expense services for sick newborns and neonates.

According to government, India's maternal mortality rate has declined from 254 per 1,00,000 live births in 2004-06 to 130 in 2014-16 and further to 122 in 2015-17. Between 2001 and 2017, the infant mortality rate came down from 66 per 1,000 live births to 32.

Union Cabinet's Node for Strategic Disinvestment in Five CPSUs

The Union Cabinet on November 21, 2019 gave in-principle approval for strategic disinvestment of the government shareholding in five public sector enterprises. Strategic disinvestment means offering stake along with control and management of the company. It could be offered to a private company or even to another CPSE.

These five PSUs are :

- Bharat Petroleum Corporation Ltd. (BPCL);
- Shipping Corporation of India;
- Container Corporation of India;
- Tehri Hydro Power Development Corporation (THDCIL), and
- North Eastern Electric Power Corporation Ltd. (NEEPCO).
  - Both THDCIL and NEEPCO will go to NTPC, which will acquire the government's holding of 74·23 per cent and 100 per cent, respectively.
  - In the case of CONCOR, the Centre plans to sell 30.8 per cent while retaining 24 per cent.
  - In the case of BPCL, the government will carve out Numaligarh Refinery and ensure that the refinery will be retained by the government.
  - Based on November 21, 2019's closing price on the BSE, if the government offloads its entire stake in all the three listed companies (BPCL, Concor and SCI), it can earn over ₹ 84,000 crore. As of now, the government holds 53·29 per cent stake in BPCL, 63·75 per cent in Shipping Corporation and 54·8 per cent in Concor.
  - Sale of BPCL will be completed by March 2020. Sale of other two is also expected to be completed soon. Sale of these companies is critical for achieving the disinvestment target of ₹ 1·05 lakh crore, out of which only ₹ 17,364·26 crore has been realised so far and there are only four months to garner the balance.

Govt. Lists Activities that will Not Qualify for Lower Corporate Tax Scheme

The government has listed the items whose manufacture will not allow units to qualify for the 15 per cent corporate tax scheme. The following activities have been exclu-

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ded from the definition of manufacturing :

- Software development,
- book printing,
- mining,
- conversion of marble blocks and
- bottling of gas into cylinders.

Besides, the government has reserved the authority to specify any industry that can be denied the concessional rate of 15 per cent. Further listing the activities that shall not be deemed as manufacturing to claim the reduced rate of 15 per cent, the Act has restricted the benefit. Clarifying that the surcharge of 10 per cent shall apply to those claiming the beneficial rate under the new sections, speculations on that front have also been removed.

This is part of the Taxation Laws (Amendment) Bill introduced by Finance Minister Nirmala Sitharaman on November 25, 2019 in the Lok Sabha, to replace the Ordinance on a lower corporate tax rate, aimed to stimulate growth in a slowing economy. The Ordinance was issued on September 20, 2019 cutting the base corporate tax rate to 22 per cent, from 30 per cent. Following changes have been introduced in taxation laws (mainly the corporation tax) :

- The entities opting for the reduced tax rate of 22 per cent cannot claim any exemption or incentives, including accumulated Minimum Alternate Tax (MAT) credit.
- Under the amended rules, losses/unabsorbed depreciation accruing to a company due to merger shall not be given effect to for availing of the 22 per cent rate.
- Short-term capital losses on non-depreciable assets shall be taxed at 22 per cent.
- Where any conditions are violated, the reduced rate shall not be allowed in that year and any subsequent year.
- A new provision is being inserted in the Income Tax Act to provide that with effect from the current financial year (2019-20), a domestic company may opt to pay tax at 22 per cent plus surcharge at 10 per cent and cess at 4 per cent if it does not claim any incentive/deduction. The effective rate for these companies comes to 25.17 per cent and they are not subject to MAT.

"State of Aadhaar", Report 2019

Consultancy firm Dalberg released "State of Aadhaar Report" 2019 on November 25, 2019. Key findings of the report are the following :

- Thirty per cent of homeless people in India and 27 per cent of third-gender residents do not have Aadhaar.
- 90 per cent of residents of Assam and 61 per cent from Meghalaya do not have the Aadhaar card.
- 95 per cent of adults having Aadhaar and using it on average once a month to avail of some service or the other.
- Seventy-five per cent of children in India have the unique identification card.
- Eight per cent of people do not have Aadhaar, or an estimated 102 million people, 75 million of whom are children
- 90 per cent of those who had Aadhaar incorrectly believed it was mandated by law for bank account.
- 90 per cent of the respondents felt their details are safe with Unique Identification Authority of India (UIDAI)
- 67 per cent were satisfied in spite of being denied essential services in spite of having the card.
- Thirty-three per cent of the respondents who tried to update found the process difficult and one in five did not succeed.
- Four per cent of people currently have errors in the information on their Aadhaar card, while 15 per cent have an error in their linked mobile phone number; an additional 39 per cent have not linked a number at all.
- 92 per cent respondents are satisfied with Aadhaar.
- 80 per cent respondents feel that Aadhaar has made PDS distribution, MGNREGA and Social pension more reliable.

Export Promotion Measures

As per the WTO data released in April 2019, for the year 2018, India's share in global exports for merchandise was 1·7% and in global imports was 2·6%. For the year 2018 for service sector, India's share in global exports was 3·5% and imports was 3·2%.

Government of India is proactively taking a number of steps to boost exports, which inter-alia include the following :

1. Merger of Council of Trade and Development and Board of Trade providing a common platform for addressing stakeholder concerns : This common platform, comprising representatives from industry, export promotion councils, Government of India and state governments and representatives from banking and finance Sector is playing a critical role in addressing export related concerns, with a focus on addressing these on a priority basis.

2. Infusion of funds for Export Support : A capital of ₹ 389 crore has been infused into Export Credit Guarantee Corporation (ECGC) on 21st June, 2019. A Grant-in-aid (corpus) of ₹ 300 crore has been contributed to National Export Insurance Account (NEIA) trust on 21st June, 2019, thereby enhancing its risk taking capacity to support project exports in challenging markets.

3. Agriculture Export Policy : A new Agriculture Export Policy (AEP) was approved in December 2018 to increase agriculture exports from present US $ 30 Billion to US$ 60+ Billion by 2022. Outlay of ₹ 206 crores for 2019-20 has been approved for its implementation.

4. Boost to Gem and Jewellery exporters : Resolution of various issues which inter alia include removal of the requirement of paying IGST on re-import of goods which were exported earlier for exhibition purpose/consignment basis. Allowing partial discharge of bonds executed by nominated agencies/ banks for import of gold to be supplied to jewellery exporters, thereby enabling nominated agencies/banks to release bank guarantee of jewellery exporters who have fulfilled their export obligation.

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Corruption in India Fell 10% in 2019 : Transparency International India

According to the 'India Corruption Survey 2019', conducted by independent agencies Transparency International India (TII) and Local Circles, the percentage of people who had paid bribes fell from 58 per cent in 2018 to 51 per cent this year. In 2017, the figure was 45 per cent. The report states that corruption across 20 states in India dropped by 10 per cent from 2018 to 2019. The survey reveals that people in Delhi, Haryana, Gujarat, West Bengal, Kerala, Goa and Odisha reported low instances of corruption while Rajasthan, Bihar, Uttar Pradesh, Telangana, Karnataka, Tamil Nadu, Jharkhand and Punjab had higher occurrences.

The most amount of bribes are paid to authorities dealing in property registration and land issues (26%), followed by police (19%), municipal corporation (13%), electricity board (3%), transport office (13%), tax department (8%), and water departments (5%), in this order.

When it comes to paying bribes at government offices, most people surveyed said they had done so due to coercion or inefficiencies. The survey has found that bribery persists in government offices despite CCTV cameras and computerisation. Among those surveyed, 16 per cent of the citizens in 2019 paid bribes at government offices which were completely computerised and had functional CCTV cameras, as, compared to 13 per cent in 2018.

Further, most bribes are paid through cash (35 per cent), followed by indirectly, *i.e.*, through an agent (30 per cent) and in kind through gifts of other favours (six per cent). The remaining 37 per cent said they did not need to pay a bribe to get their work done. Most respondents (38 per cent) said paying a bribe was the only way to get work done. At least 26 per cent said they paid a bribe as it would have otherwise taken them a long time to get ahead of the queue. Some one per cent said they indulged in bribery as they were in a hurry and needed to get ahead in the queue.

5. Introducing the scheme for Remission of Duties or Taxes on Export Product (RoDTEP) for promoting exports.

6. Promoting Ease of Doing Business :

(a) Common Digital Platform for Issuance of electronic Certificates of Origin (CoO) for the exporters was launched on 16.9.2019 to improve ease of doing business for exporters.

(b) **Special Economic Zone (Amendment) Bill, 2019 :**

(i) SEZ (Amendment) Bill 2019 became the first legislation of the newly formed Government to be passed by the Parliament. It will enable any entity to set up a unit in SEZs, including Trusts. This would help boost investments and create new export and job opportunities.

(ii) **Better facilities for employees :** SEZ units allowed to create facilities/amenities like crèche, gymnasium, cafeteria etc. for their exclusive use as a measure towards ease of doing business.

Coal Production in India up by 164·58 MT in 5 Years

All India raw coal production increased from 565·77 MT in 2013-14 to 730·35 MT in 2018-19, an absolute increase of 164·58 MT as compared to increase of coal production of 73·01 MT between 2008-09 and 2013-14. Even then, India had to import 234 MT coal last year for which it lost ₹ 1·7 lakh crore foreign exchange.

Authorised Capital of Food Corporation Increased to ₹ 10,000 Crore

The Union Cabinet on November 27, 2019 increased the authorised capital of the Food Corporation of India (FCI) by ₹ 6,500 crore to ₹ 10,000 crore. This will allow the FCI, which is sitting on a huge stockpile of foodgrains, to manage its inventories and procure more. The current paid-up capital of the FCI (₹ 3,500 crore) allowed it to borrow up to 10 times more, that is ₹ 35,000 crore, according to the FCI Act, 1964. The new capital will extend the borrowing limit to ₹ 1 trillion. As of October 1, 2019, the FCI's foodgrain stock was estimated to be 64·23 million tonnes, which is 108 per cent more than the required buffer and strategic reserve norms. It has a storage capacity of almost 75 million tonnes, of which 63 million tonnes (84 per cent) is in proper storage.

GDP Growth Rate Decelerated to 4·5 per cent in Second Quarter of 2019-20

The National Statistical Office (NSO), Ministry of Statistics and Programme Implementation has released the estimates of Gross Domestic Product (GDP) for the second quarter (July-September) Q2 of 2019-20, on November 29, 2019 both at Constant (2011-12) and Current Prices of the GDP.

As was expected GDP growth rate further decelerated to as low as 4·5 per cent during July-September 2019-20 quarter. GDP at Constant (2011-12) Prices in Q2 of 2019-20 is estimated at ₹ 35·99 lakh crore, as against ₹ 34·43 lakh crore in Q2 of 2018-19, showing a growth rate of 4·5 per cent. Quarterly GVA (Basic Price) at Constant (2011-2012) Prices for Q2 of 2019-20 is estimated at ₹ 33·16 lakh crore, as against ₹ 31·79 lakh crore in Q2 of 2018-19, showing a growth rate of 4·3 per cent over the corresponding quarter of the previous year.

The growth in the key sectors of the economy such as 'Agriculture, Forestry and Fishing', 'Mining and Quarrying', 'Manufacturing', 'Electricity, Gas, Water Supply & Other Utility Services' and 'Construction' decelerated significantly and is estimated to be 2·1 per cent, 0·1 per cent, (–) 1·0 per cent, 3·6 per cent and 3·3 per cent respectively during this period. However, 'Trade, Hotels, Transport, Communication and Services related to Broadcasting' 'Financial, Real Estate and Professional Services' and 'Public Administration, Defence and Other Services' registered growth rate of over 4·3 per cent during July- September 2019-20.

- Quarterly GVA at Basic Prices for Q2 2019-20 from 'Agriculture, Forestry and Fishing' sector grew by 2·1 per cent as compared to growth of 4·9 per cent in Q2 2018-19.

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Quarterly Estimates of GVA at Basic Prices in Q2 (July-September) of 2019-20

Industry	Percentage Change Over Previous Year (at Current Prices)				Percentage Change Over Previous Year (at 2011-12 Prices)			
	2018-19		2019-20		2018-19		2019-20	
	Q1	Q2	Q1	Q2	Q1	Q2	Q1	Q2
1. Agriculture, forestry & fishing	6·8	4·2	7·9	7·4	5·1	4·9	2·0	2·1
2. Mining & quarrying	18·7	21·9	5·5	– 4·4	0·4	– 2·2	2·7	0·1
3. Manufacturing	16·4	11·6	2·0	–1·1	12·1	6·9	0·6	– 1·0
4. Electricity, gas, water supply & other utility services	12·6	16·7	8·7	2·3	6·7	8·7	8·6	3·6
5. Construction	14·8	14·0	8·6	4·2	9·6	8·5	5·7	3·3
6. Trade, hotels, transport, communication and services related to broadcasting	13·0	12·6	10·7	6·1	7·8	6·9	7·1	4·8
7. Financial, real estate & professional services	12·1	13·0	6·4	6·5	6·5	7·0	5·9	5·8
8. Public Administration, defence and other services	13·6	14·3	14·0	17·1	7·5	8·6	8·5	11·6
GVA at Basic Price	**12·7**	**12·0**	**7·9**	**6·3**	**7·7**	**6·9**	**4·9**	**4·3**

- Quarterly GVA at Basic Prices for Q2 2019-20 from 'Mining and Quarrying' sector grew by 0·1 per cent as compared to growth of – 2·2 per cent in Q2 2018-19.
- 'Manufacturing' sector is the worst performer with a negative growth rate of (–)1·0 per cent in Q2 of 2019-20 as compared to growth of 6·9 per cent in Q2 2018-19.
- Quarterly GVA at Basic Prices for Q2 2019-20 from 'Electricity, Gas, Water Supply and Other Utility Services' sector grew by 3·6 per cent as compared to growth of 8·7 per cent in Q2 2018-19.
- Quarterly GVA at Basic Prices for Q2 2019-20 from 'Construction' sector grew by 3·3 per cent as compared to growth of 8·5 per cent in Q2 2018-19.
- Quarterly GVA at Basic Prices for Q2 2019-20 from Trade, Hotels, Transport, Communication and Services related to Broadcasting grew by 4·8 per cent as compared to growth of 6·9 per cent in Q2 2018-19.
- Quarterly GVA at Basic Prices for Q2 2019-20 from Financial, Real Estate and Professional Services grew by 5·8 per cent as compared to growth of 7·0 per cent in Q2 2018-19.
- Quarterly GVA at Basic Prices for Q2 2019-20 from Public Administration, Defence and Other Services grew by 11·6 per cent as compared to growth of 8.6 per cent in Q2 2018-19.
- GDP at Current Prices in Q2 of 2019-20 is estimated at ₹ 49·64 lakh crore, as against ₹ 46·79 lakh crore in Q2 of 2018-19, showing a growth rate of 6.1 per cent. GVA at Basic Price at Current Prices in Q2 of 2019-20, is estimated at ₹ 45·09 lakh crore, as against ₹ 42·42 lakh crore in Q2, 2018-19, showing an increase of 6·3 per cent. Growth rates in various sectors are as follows : 'Agriculture, Forestry and Fishing' (7·4 per cent), 'Mining and Quarrying' (–4.4 per cent), 'Manufacturing' (–1·1 per cent), 'Electricity, Gas, Water Supply and Other Utility Services' (2·3 per cent), 'Construction' (4·2 per cent), 'Trade, Hotels, Transport and Communication' (6·1 per cent), 'Financial, Real Estate and Professional Services' (6·5 per cent), and 'Public Administration, Defence and Other Services' (17·1 per cent).

Estimates of GVA at Basic Prices in H1 (April-September) of 2019-20

Industry	Percentage Change Over Previous Year H1 (at Current Prices)		Percentage Change Over Previous Year H1 (at 2011-12 Prices)	
	2018-19	2019-20	2018-19	2019-20
1. Agriculture, forestry & fishing	5·6	7·7	5·0	2·1
2. Mining & quarrying	20·1	1·1	– 0·7	1·6
3. Manufacturing	13·9	0·4	9·4	– 0·2
4. Electricity, gas, water supply & other utility services	14·6	5·4	7·7	6·1
5. Construction	14·4	6·4	9·1	4·6
6. Trade, hotels, transport, communication and services related to broadcasting	12·8	8·4	7·4	6·0
7. Financial, real estate & professional services	12·6	6·5	6·8	5·9
8. Public Administration, defence and other services	14·0	15·6	8·1	10·1
GVA at Basic Price	**12·3**	**7·1**	**7·3**	**4·6**

Quantum and trends of national income data show that the economy could not be revived despite massive doze of fiscal incentives, export promotion and realty sector incentives. Massive cut in key interest rate (Repo Rate : 1·35 percentage point) also did not result in the high investment. The moot question is whether supply side measures are enough to generate growth during the time of recession. The present government thinks so. Many high-frequency economic indicators—the Index of Industrial Production (IIP), the IIP of eight core industries, non-oil imports and flow of commercial credit—have been telegraphing the sharp deceleration in economic activity since July,2019. While the Indian economy has lived through similar weak spells in the past (there were multiple quarters of sub-5 per cent growth in 2008-09 [(era of global

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Wild plants reported to be used for food



Notes: 1. Fernaldia pandurata (ioroco) (Source: Country report of El Salvador, © Eduardo Funes); 2. Vaccinium vitis-idaea (cowberry) (Source: NIBIO, © Michael Angeloff); 3. Aronia melanocarpa (black chockeberry) (Source: Country report of Belarus, © Institute of Food Growing of the National Academy of Sciences of Belarus); 4. Salacca affinis (Source: Country report of Malaysia, © Mohd Norfaizal Ghazalli); 5. Spondias pinnata (wild mango) (Source: Country report of Malaysia, © Mohd Norfaizal Ghazalli); 6. Ficus roxburghii (Source: Country report of Malaysia, © Mohd Norfaizal Ghazalli); 7. Musa sp. (Source: Country report of Malaysia, © Mohd Norfaizal Ghazalli); 8. Garcinia hombroniana (Source: Country report of Malaysia, © Salma Idris); 9. Baccaurea polyneura (Source: Country report of Malaysia, © Khadijah Awang); 10. Irvingia gabonensis (African mango) (Source: Country report of Cameroon, © Oben); 11. Gum product from Senegalia senegalensis (gum acacia) (Source: Country report of Niger, © Idrisa Noma); 12. Dioscorea hispida (intoxicating yam) (Source: Country report of Malaysia, © Mohd Norfaizal Ghazalli).

Inspiring Youth

"Firm will-power, focused hard work, positive thinking and clear vision are the secrets of my success."

Salil Saroj

Topper—Selected as the Executive Officer in the Examination (2017) conducted by Lok Sabha Secretariat

"Pratiyogita Darpan" arranged an exclusive interview with Shri Salil Saroj who has been selected for the post of Executive/Legislative/Committee/Protocol Officer in the examination conducted by Lok Sabha Secretariat. He deserves high admiration and our heartiest congratulations on his shining achievement. This important, thought-provoking and highly inspiring interview is being presented here in its original form.

PD—Achieving top slot in the **Examination for the Post of Executive Officer / Legislative Officer / Committee Officer/Protocol Officer** is no small feat; accept our heartiest congratulations on your splendid success.

Shri Salil—Thank you so much. I would thank God, my family especially my wife who supported me with all her heart and soul so that I could achieve this feat.

PD—Were you confident of your success in this examination and how did you react to this news ?

Shri Salil—Yes, I was, because I did exceedingly well in the mains examination and I made it sure that I answered all the questions. The news was totally a surprise and heart-warming for me.

PD—What preference in services have you opted for and any particular reason for that priority ?

Shri Salil—I preferred the post of Executive Officer.

PD—What were your optional subjects ?

Shri Salil—*Optional Subjects* : Sociology and Public Administration.

PD—In how many attempts have you achieved this success ?

Shri Salil—I achieved this feat in the very first attempt.

PD—You must have read toppers' interviews in newspapers/magazines; what inspired you the most ? Any particular success story which influenced your journey to this result ?

Shri Salil—The kind of perseverance and never giving up attitude really inspired me a lot. That kind of devotion and dedication of toppers really inspired me and till date it has left an indelible mark on my routine.



Deep happiness is always a rebound of hard work.

—Salil Saroj

PD—What was your approach towards General Studies during Prelims preparation ? How long time and how much effort did you divide for each ?

Shri Salil—As I was already preparing for the Civil services Examination and the State Level Competitive Examinations and reading newspaper was in my habit, so, general studies never remained an issue with me. I scored well in general studies in prelims due to more of revisions and test series.

PD—How did you manage to tackle the 'Negative Marking' in Prelims ?

Shri Salil—I tried to mark those questions which I was either hundred per cent sure or I had at least knowledge of eliminating two options. As I revised a lot, so intuition and good guess work also worked in my favour.

PD—The first step is the most difficult; how to prepare ? Which optional subjects to pick-up ? What to read ? How much to read ? Many such questions come to your mind when you really get serious about such Examination ? From where did you get the right advice ?

Shri Salil—As I already mentioned that I was preparing for Civil Services Examination before sitting in this examination and I had attended the Interview of Civils twice and wrote the Mains thrice so I had a vast experience of preparation.

PD—You achieved the desired success in this attempt; how do you visualize your previous attempts ?

Shri Salil—As I achieved this feat in the very first go, so I cannot comment on previous attempts.

PD—While making final choice for optional subject, what's important and what's not ?

Shri Salil—While choosing the optional, interest is the biggest factor.

PD—Give the basis of selecting the optional subject ?

Shri Salil—I opted for sociology because I did my master's degree in this subject and I had already appeared for Civils with this and public administration. As both the subjects somewhere are part of the general studies and essay paper, so it became an added advantage while choosing these two subjects for mains.

PD—What shift did you adopt in your strategy for Mains (Written) ?

Shri Salil—Nothing much. I prepared simultaneously for prelims and mains because I had all the materials ready with me. I had only to revise the things twice and thrice.

MAGAZINE KING

Bio-Data

Name—Salil Saroj

Father's Name—Shri Uma Kant Tarun

Mother's Name—Mrs. Sushila Devi

Date of Birth—March 3, 1987

Educational Qualifications—

10th—2002, CBSE Sainik School, Tilaiya, Koderma, Jharkhand (88·6%)

12th—2004, CBSE, Sainik School, Tilaiya, Koderma Jharkhand (80%)

Graduation—2007, IGNOU, G.D. College Begusarai Bihar (67·5)

M.A. 2015, IGNOU Jesus and Mary College, Chanakya Puri, New Delhi Sociology (63%).

PD—Was there any special effort for effective preparation for Essay Paper ? Which topic did you pick up this time and why did you choose this particular topic ?

Shri Salil—I did not make any special efforts because reading newspapers and magazines kept me abreast of the current topics and the topics that were covered under Sociology. I chose the topics related to my mains optional subject because I had enough points to support my arguments and come to a conclusive end.

PD—'Time-Management' is a key factor while making preparations as well as in writing examination papers, be it Prelims or Main Examination. How did you manage things ?

Shri Salil—To be very frank, I had always luxury of time because I followed my routine and time table very strictly. I tried to utilize every bit of time.

PD—How did you prepare yourself for Interview ? When and which Board did you face ? How did your interview go on, how long time did it last and what were the questions asked during the Interview ?

Shri Salil—I prepared my Bio-data and my work portfolio in the last office well and I also read extensively about parliament and its functions so as to answer every question well. My interview did not last for more than 15 minutes. I was asked questions from my subject—what is sampling, what is good sample. How can the knowledge of your working in the Office of director General of Audit help our institution ? They also asked about my hobbies which went long. Then there were questions on reservation, malpractices in election and so on.

PD—Were you preparing for other career opportunities as well while preparing for this job ?

Shri Salil—Yes, I was preparing for many other Examinations like Banking, IB, AAO Insurance Companies, UGC, NET, State PCS and others examinations held by UPSC.

PD—While the changing economic environment offers immense lucrative career opportunities in various sectors, still what kept you motivated towards this job ?

Shri Salil—This job will give me immense opportunity to understand the functioning of the Parliament and I would get a lot of exposure to meet the officials of various fields and learn from them. This job provides good perks, pay and promotion facilities and enough to keep me motivated to remain in this job.

PD—In your opinion at which Educational Level should one start preparing for this Service and what should be the minimum period of time required to prepare ?

Shri Salil—Ideally, one should start in the last year of graduation. I think one year is enough to crack these kinds of examinations.

PD—What is your opinion regarding the general view that Science subjects have better chance to score than Humanities ?

Shri Salil—I do not think so because I attained the top rank with the humanities optional. I would again say what really matters are thorough understating of pattern and syllabus of examination and insightful learning.

Personal Qualities

Favourite Person—Mahatma Gandhi

Strong Point—Writing skill and my speed.

Weak Point—At times I become too negative to be realistic.

Hobbies—Writing poems in Hindi and in English, participating in debate and essays writing competitions. Watching movies and exploring new places.

List of Books/Magazines

Preliminary Examination

Paper-I (General Studies)

- NCERT
- Lucent
- Pratiyogita Darpan
- The Hindu Newspaper

Main Examination

General Studies

- NCERT
- Pratiyogita Darpan
- The Hindu Newspaper

Optional-I

- Sociology—Anthony Giddens.
- Sociological Theory—George Ritzer.
- Sociology–Haralambos & Holborn.
- Oxford Dictionary of Sociology.
- Sociological Thought—Francis Abraham and John Henry Morgan.
- Political Theory—O. P. Gauba.

Optional-II

- Public Administration—Laxmi-Kanth.
- New Horizons of Public Administration—Mohit Bhattacharya.
- Administrative Thinkers—D.
- Contemporary Debates in Public Administration—Dhameja Alka.
- Indian Administration–Maheswari

MAGAZINE King

PD—What is the importance of medium of examination for such exams ?

Shri Salil—I do feel medium matters while finding the study materials. Otherwise coaching and markets are flooded with materials in any medium now and internet is the final answer to any medium.

PD—Finally, at what point of time did you make up your mind to make career in this service ?

Shri Salil—After the completion of my graduation.

PD—Did you keep in mind some time-frame for the examination preparation and number of attempts ?

Shri Salil—Not really as such but I thought 2 years would be ideal time period and three chances should be enough to bear results.

PD—Was it your planned decision or your parents' wish ?

Shri Salil—It was my planned decision because I always wanted to be in top echelon of Government services.

PD—Does the educational, financial and demographic status of the family of an aspirant have any impact on the preparation ?

Shri Salil—Yes, for a time period it matters because people come from economically backward places and to stay and avail coaching in metropolitan cities which is really costly. But getting materials and test series is now not that costly because everything is available on internet now.

PD—In your opinion what role do the Competition Magazines play when you are preparing for an examination like this ?

Shri Salil—Competition Magazines keep you briefed with the current affairs and with set of questions from other examinations and give you good ideas of preparation.

PD—How do you find Pratiyogita Darpan ? Do you find it close to your expectations ?

Shri Salil—I have been reading Pratiyogita Darpan since my young age and this is really wholesome magazine for those who are preparing for competitive examinations. The language is lucid and presentation is very fine.

PD—Please give your comments on the PD Extra Issues Series on 'General Studies' and a few Optional Subjects ?

Shri Salil—The extra issues of PD are very helpful for preparation of optional subjects and bring the latest informations at one place.

PD—What is the secret of your success ?

Shri Salil—My hard work, focus, determination and never to give up attitude helped me a lot to achieve this success.

PD—To whom would you like to give the credit for your success ?

Shri Salil—To my wife who did everything that could give me enough time to prepare for this examination. The support of my family stood as rock whenever I needed. And the grace of Almighty God led me to this achievement.

PD—Any suggestion/advice you would like to give to the future aspirants.

Shri Salil—I would say never give up. Utilize your resources and energy judiciously. If you are not able to crack big examinations, please go for small one to secure confidence and to become financially independent.

PD—Thank you very much and wishing you all the best for your future endeavours.

PDarpan

Continued from Page 54

New Generation Robots to Repair Satel-lites

NASA has teamed up with the US defence research agency to build robots that cannot only refuel and



repair satellites, but also sabotage enemy spacecraft in the event of space war. These robotic satellites, known as "service stations in orbit", could drastically improve the lifespan of satellites by fixing minor maintenance issues.

PDarpan

Continued on Page 66

financial crisis) and 2012-13], what makes this downturn more worrying is the exceptionally low nominal growth rates, which have halved from 11 per cent in 2018-19 to 6·1 per cent in the Q2 of 2019-20. *As India heads into its so-called demographic sweet spot over the coming decade, it badly needs healthy nominal GDP growth to sustain job and income creation.*

The other striking aspect of the Q2 data is that all three engines that drive the economy appear to be stalling. (i) Growth in GFCF (Gross Fixed Capital Formation), after perking up from 9·3 per cent to 10 per cent between 2017-18 and 2018-19, dwindled to 2·5 per cent in the first half of 2019-20. (ii) PFCE (Private Final Consumption Expenditure) has collapsed from 7-8 per cent growth in the five years to 2018-19, to 4 per cent in the first half of 2019-20. (iii) However, GFCE (Government Final Consumption Expenditure), which had slowed to 9·2 per cent in 2018-19, rebounded to 12·3 per cent in the first half of 2019-20, doing much of the heavy lifting on the GDP. But sustaining this pace of government spending for the rest of the year appears a tall task, given the Centre's struggles with GST collections and recent giveaways on corporate tax. While the concerted decline in economic drivers calls for multi-pronged efforts to arrest it, stimulus measures so far have focussed mainly on an investment revival. Had the consumption slowdown not materialised, the 135-basis point cut in policy rates, generous bank recapitalisation and sharp cuts in corporate tax rates could have decisively kick-started India's private investment cycle. *But with pervasive evidence of demand weakness across both urban and rural India, private investors may now bid their time.*

Experts say that slowdown in GDP growth is largely on account of the slump in consumption expenditure and de-growth in exports. But, for the government expenditure growth, July-September (2019-20) GDP growth would have been much lower. Investment as measured by gross fixed capital formation in any case has been down for last two quarters and again came in at just one per cent. This shows that economy is passing through a declining growth momentum and there is no easy way out.

Sectorwise Quarterly Growth Rates

(in % July-September)

	2019-20	2018-19
Agriculture	2·1	4·9
Industry	0·5	6·7
Services	6·8	7·3
GDP	**4·5**	**7·0**

Growth Projections by Key Agencies

Agency	% Growth Rate
Fitch	5·5
Moody's	5·8
OECD	5·9
World Bank	6·0
RBI	6·1
IMF	6·1
S&P	6·3

PDarpan

MAGAZINE KING

Inspiring Youth

"Target-oriented study, smart work and perseverance are the secrets of my success."

Ajay Kumar

Topper—Bihar Civil Services Exam., 2018 (13th Rank)

"Pratiyogita Darpan" arranged an exclusive interview with Shri Ajay Kumar who has been selected in Bihar Civil Services Exam., 2018. He deserves high Admiration and our heartiest congratulations on his glorious achievement. This important, thought-provoking and highly inspiring interview is being presented here in its original form.

PD—Achieving top slot in the CS Examination is no small feat; accept our heartiest congratulations on your splendid success.

Shri Ajay—Thank you very much. It was like childhood dream to come true for me

PD—Were you confident of your success in this examination and how did you react to this news?

Shri Ajay—Civil Services is one of the most unpredictable examinations in our country. Because of my hard work and dedication for this service, I was confident that someday I will crack it but Clearing it with Rank 13 was like a dream that came true for me.

PD—What preference in services have you opted for and any particular reason for that priority?

Shri Ajay—BAS, BPS, BFS. I always wanted to come into administrative service as it provides a holistic and overall opportunity to become a part of steel frame structure of democracy in the country. Other services are also good but they are specific to a particular area.

PD—What was your optional subject ?

Shri Ajay—*Optional Subject* : Geography

PD—In how many attempts have you achieved this success ?

Shri Ajay—It was my second attempt. In the first attempt, I got selected as Rural Development Officer in 60-62th BPSC.

PD—You must have read toppers' interviews in newspapers/ magazines; what inspired you the most ? Any particular success story which influenced your journey to this result ?

Shri Ajay—Reading Success stories was one of the favourite parts of reading this magazine. Since childhood, I have been reading success stories and it was one of the reasons to purchase this magazine at that time. These success stories in some or other way also consolidated my determination for civil services in childhood itself.

IAS topper of 2006 batch, Mutyala Raju Revu's success story inspired me the most. I had a paper cutting of his picture in my study room.



Genius is the ability to act rightly without precedent.

—Ajay Kumar

PD—What was your approach towards Paper I (General Studies)

Shri Ajay—Firstly I read the syllabus carefully. I prepared notes on all subjects topicwise and did last few years' prelims questions carefully.

PD—How did you manage to tackle the 'Negative Marking' in Prelims ?

Shri Ajay—There is no negative marking in BPSC right now.

PD—The first step is the most difficult; how to prepare ? Which optional subjects to pick up ? What to read ? How much to read ? Many such questions come to your mind when you really get serious about Civil Services Examination ? From where did you get the right advice ?

Shri Ajay—I started civil services preparation only after doing my graduation from NIT, Patna in Mechanical Engineering. All these questions came to my mind and everyone faces such dilemma. For such dilemma, one must take help of seniors who have already cleared such examination.

PD—You achieved the desired success in this attempt; how do you visualize your previous attempts ?

Shri Ajay—After some failures in UPSC,I decided to write State Civil Services as a back up plan. My previous attempts taught me what not to read. I cleared Bihar Civil Services in my very first attempt and got RDO post. This was my second attempt in BPSC.

PD—While making final choice for optional subject, what's important and what's not ?

Shri Ajay—Genuine interest in the subject is the most important criterion for the selection of optional subject. Please don't take optional subject on the basis of others' recommendations only.

PD—Give the basis of selecting the optional subject ?

Shri Ajay—Few things should be kept in mind for taking optional subject. First criteria should be your genuine interest in subject. Second, it should be your graduation subject. In BPSC, one must see the performance of the optional subject like Geography, History, Economics, Literature paper perform well.

MAGAZINE KING

PD—What shift did you adopt in your strategy for Mains (Written) ?

Shri Ajay—I went through the syllabus very carefully. I prepared notes on each topic and sub-topics.

Special focus should be given on current affairs. Solving last few years' questions are a must for predicting and understanding the trend of questions in Mains.

PD—Was there any special effort for effective preparation for Essay Paper ? Which topic did you pick up this time and why did you choose this particular topic ?

Shri Ajay—No specific essay paper in BPSC. Only essay, we had to write is in mandatory Hindi Paper.

Bio-Data

Name—Ajay Kumar

Father's Name–Shri Bal Krishna Yadav

Mother's Name—Mrs. Meena Devi

Date of Birth—February 5, 1991

Educational Qualifications—

10th–2006, CBSE, Bal Vidya Niketan, Jehanabad (90·60%)

12th—2008, CBSE, Patna Central School, Patna (88·80%)

B.Tech–2010-14, NIT, Patna, (86·16%)

Previous Selections—60-62nd BPSC, Rank-280, Rural Development Officer

PD—'Time-Management' is a key factor while making preparations as-well-as in writing examination papers, be it Prelims or Main Examination. How did you manage things ?

Shri Ajay—Time-Management is the key to become successful in Civil services. Being a working professional, I had very less time for preparation. I divided my remaining time into a proper time table. Even I tore and updated my time table 100 times. But one must prepare and follow the time table. It is key to your success. I gave few mock tests at home for managing my time during examination.

PD—How did you prepare yourself for Interview ? When and which Board did you face ? How did your interview go on, how long time did it last and what were the questions asked during the Interview ?

Shri Ajay—Last Year, I had taken help of Khan Sir from KSG, New Delhi, but this time I had limited time as I was going through BIPARD training in my previous selection .I had taken help of Minds Together a voluntary organization of retired bureaucrats. Alongwith that, my fellow trainee BDOs helped me a lot during our mock interviews.

I faced Board chaired by Shri Shishir Sinha Sir and my interview was very smooth and it went on for about 15-20 minutes.

Some questions asked during interview were related to good governance, bringing efficiency in administration, how to control population, hobby etc.

PD—Were you preparing for other career opportunities as well while preparing for your ultimate goal i.e. Career in Civil Services ?

Shri Ajay—Currently I am working as Probationer RDO and before that I was working as Assistant Manager in Research and Development centre of Hero Motor Corp Limited at Jaipur.

PD—While the changing economic environment offers immense lucrative career opportunities in various sectors, still what kept you motivated towards Civil Services ?

Shri Ajay—Yes, Private Sector provides a good job opportunity but I always wanted to do service which could provide an opportunity to go among the people and change their lives by providing the benefits of various government initiatives. Civil services provide the best opportunity for this.

PD—In your opinion at which Educational Level should one start preparing for Civil Services and what should be the minimum period of time required to prepare for Civil Services Examinations?

Shri Ajay—From Graduation, one should start the preparation of civil services. It will provide ample time for covering the syllabus in a holistic manner. At least, two years of serious study with complete dedication and devotion is required for its preparation.

PD—What is your opinion regarding the general view that Science subjects have better chance to score than Humanities ?

Shri Ajay—It is not true in BPSC. In BPSC, Arts subjects perform equally as science subjects. I have done graduation in Mechanical engineering but took Geography as my optional subject.

PD—What is the importance of medium of examination for exams like CSE ?

Shri Ajay—As far as BPSC, examination is concerned, there is no partiality or bias in the medium of examination.

Personal Qualities

Favourite Person—APJ Abdul Kalam and Sachin Tendulkar.

Strong Point—Strong Determination, Dedication and Optimistic in nature.

Weak Point—A bit emotional in nature.

Hobbies—Playing Cricket and Badminton, Helping needy persons.

PD—Can you recall the exact moment when you realized the importance of Civil Services ?

Shri Ajay—It was my childhood dream but serious thought came only after doing my graduation.

PD—Finally, at what point of time did you make up your mind to make career in 'Civil Services' ?

Shri Ajay—When I was working in the Corporate industry, I felt the lack of doing direct service to the people by being among them. From there, I made up my mind for this examination.

PD—Did you keep in mind some time-frame for the examination preparation and number of attempts ?

Shri Ajay—No, I wanted to do it as early as possible in first few attempts.

PD—Was CSE your planned decision or your parents' wish ?

Shri Ajay—My parents always wanted me to be a civil servant but it was my decision to go for it.

PD—Does the educational, financial and demographic status of the family of an aspirant have any impact on the preparation ?

Shri Ajay—All above mentioned things can create obstacles only up to a certain extent but with strong dedication, determination and devotion one can overcome these hurdles.

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MAGAZINE KING

Inspiring Youth

"Dreaming high, staying focused and constant hard work are the secrets of my success."

Akanksha Tiwari

Topper—Uttar Pradesh Judicial Services Exam., 2019 (1st Rank)

"Pratiyogita Darpan" arranged an exclusive interview with Ms. Akanksha Tiwari who has been selected in Uttar Pradesh Judicial Services Examination, 2019. She deserves high appreciation and our heartiest congratulations on her marvellous success. This important, thought-provoking and highly inspiring interview is being presented here in its original form.

PD—Achieving top slot in the Judicial Services Examination is no small feat; accept our heartiest congratulations on your splendid success.

Ms. Akanksha—Thank you so much sir. Much obliged.

PD—Can you recall the exact moment when you realized the importance of Judicial Services ?x

Ms. Akanksha—During my college days I realized that corporate JOB is not my cup of tea.

I wanted to connect and relate with law on a much more ground level. Also Judicial Service is not merely a job but a living profession All this inspired me to work hard in this direction.

PD—Finally, at what point of time did you make up your mind to make career in 'Judicial Services' ?

Ms. Akanksha—During my LL.B. only I was very clear in my thoughts to become a judicial officer.

PD—You must have read toppers' interviews in newspapers/ magazines; what inspired you the most ? Any particular success story which influenced your journey to this result ?

Ms. Akanksha—Surprisingly I never have read any interview, but during my preparation my mentor Mr. Alok Kumar Ranjan sir and my friend Gaurav used to share the stories of various t oppers, which inspired me and kept me motivated that one should trust the process and must have faith in oneself.

PD—Was JSE your planned decision or your parents' wish ?

Ms. Akanksha—Coming from a non-law family background, I never knew about JSE till my graduation. It was final year of my B.Sc. when I got in touch with my school senior who happened to be an advocate in Delhi. Since then, I was inclined towards this direction.



Perseverance is the purest essence of human soul.

—Akanksha Tiwari

PD—Did you keep in mind some time-frame, for the examination preparation and number of attempts ?

Ms. Akanksha—It was my first attempt only so had not thought much about timeframe.

But yes, I had in my mind that I had to clear JSE really soon.

PD—Were you confident of your success in this examination and how did you react to this news of your success ?

Ms. Akanksha—During my preparation I was not thinking of the result at all. I started with a thought that I have to give my best. I had 24 days to prepare for my mains so I had no time to think about the result. I am really happy and elated that I got first rank.

PD—In how many attempts have you achieved this success ?

Ms. Akanksha—This was my first UPPSC J attempt. It was absolutely planned attempt with decent preparation and I was clear that I would take my first attempt with full preparation and confidence.

PD—What was your first step when you were really serious about making a career in Judicial Services ?

Ms. Akanksha—I knew the importance of JSE from the very beginning of my law graduation and that judicial services will provide me an opportunity by which I could contribute a bit to our country. Thus it was always my serious choice and not an option. I was serious since the beginning of my law career; but, the actual preparation I started when I joined Ambition Law Institute in November 2017.

PD—Were you preparing for other career opportunities as well while preparing for your ultimate goal *i.e.*, Career in Judicial Services ?

Ms. Akanksha—For the time being, I was only focusing on Judiciary preparation.

PD—While the changing economic environment offers immense lucrative career opportunities in various sectors, still what kept you motivated towards Judicial Services?

Ms. Akanksha—The charm and respect which judicial services hold with it always kept me motivated in this direction only. Thus the corporate jobs never attracted me.

PD—What has been your preparation-Plan ? Share your thoughts and opinions about your preparation journey.

MAGAZINE

Ms. Akanksha—Having a good mentor and friends around is very important; I was blessed with both my mentor Alok Kr. Ranjan Sir who always guided me to stay away from all kinds of distractions and follow the strategy and techniques taught there and keep your hard work on, success is bound to follow.

Then, having a good company is very important as it keeps you motivated and positive. The group discussions and revision unknowingly help you a lot. One must keep one's preparation limited *i.e.*, instead of referring to many books, one should revise from limited source and should apprise oneself with current legal and other issues.

Reading newspaper regularly will definitely give you an edge while framing answers.

Stay away from negative thoughts and negative people. Commit mistakes and learn from them.

Bio-Data

Name—Ms. Akanksha Tiwari

Father's Name—Mr. Shiv Poojan Tiwari

Mother's Name—Mrs. Saraswati Tiwari

Date of Birth—December 27, 1990

Educational Qualifications—

10th—2007, CBSE, DAV Public School, Sreshtha Vihar (90·6%)

12th—2009, CBSE, DAV Public School, Sreshtha Vihar (72·8%)

B.Sc. (H)—2012, D.U., Moti Lal Nehru College (68·78%)

LLB—2016, CCS University, Mewar Law Institute (71·3%)

PD—'Time Management' is a key factor while making preparations as well as in writing examination papers. Did you come across such a problem during this period ? If yes, then how did you manage things ?

Ms. Akanksha—Yes, time-management is one major thing which plays a great role while one prepares for competitive examinations. In this case my friends really helped me. They shared strategies and guided me how much time I should be giving to major subjects as we had very limited days for our Mains Examination. We also had a session with our sir for time management.

PD—List some of the Magazines, Newspapers, Books etc. which you read for 'General Studies' preparation.

Ms. Akanksha—Pratiyogita Darpan, Mohit sir Class Notes, study Iq education (Garg sir) current affairs, Ghatna Chakra (All Volumes). For quick revision of latest amendments and bills, I referred to GK Today.

PD—About Interview Boards, many candidates have set impressions. Do you consider such thoughts help or hinder one's performance in Interview ?

Ms. Akanksha—The main purpose of interview is to get insight into your personality. We should never prepare for interview with any preconceived notion. Trust yourself and be confident. You will do wonders.

PD—How did you prepare yourself for Interview ? When and which Board did you face ? How did your interview go on, how long did it last and what were the questions asked during the Interview ?

Ms. Akanksha—For me Interview Guidance Program offered by my Institute helped me. It was really important as it was going to be my first interview.

My UP PCS-J interview was scheduled on 24th June, 2019. I was interviewed by Dr. R. Prakash Vaidya Board.

My interview went well. They made me comfortable by asking me to sit and further adding from where I had come, followed were few questions like from where I did my LL.B. when did I pass, what I did after my graduation etc. Few of the questions which they asked were from law, socialism, defamation *vs* insult, defamation in constitution, civil and criminal defamation, nature of evidence act, latest judgement on article 19, few questions from appeal and revision. There were few questions which I couldn't recall or I didn't know; so, for them I simply replied sorry sir I cannot recall or sorry sir I don't remember. It went for 15 minutes. At last they asked me to have water. After that I got up, greeted them and left the room.

PD—What is the importance of medium of examination for exams like JSE ?

Ms. Akanksha—I had written the exam in English as I can articulate better in English than Hindi. Medium doesn't matter if you have good command on your language. In my opinion, Hindi is much more difficult than English.

Personal Qualities

Strong Point—My writing skills

Weak Point—We should trust ourselves and I think I lack somewhere.

Hobbies—Cooking and playing outdoor sports.

PD—Does the educational, financial and demographic status of the family of an aspirant have any impact on the preparation ?

Ms. Akanksha—What all an aspirant needs from his or her family is constant support. In my case I have a humble background. My father is a businessman at Ghaziabad and we are middle class family and I have studied at DAV school and then at Law College at Ghaziabad & even then I topped it. So, it speaks all about it.

PD—How did you find Pratiyogita Darpan, the largest read Career & Competition magazine; how useful has it proved to be ?

Ms. Akanksha—I and my friends highly relied upon Pratiyogita Darpan for our GS Portion. Thus, constant and regular reading will definitely give you an edge and results.

PD—What is the secret of your success ?

Ms. Akanksha—My teachers, my family, my friends and definitely my hard work.

PD—To whom would you like to give the credit for your success ?

Ms. Akanksha—Everyone in the process is creditworthy of this success. I am really grateful, to everyone of them.

PD—Any suggestion/advice you would like to give to the future aspirants.

Ms. Akanksha—Never doubt yourself. Start preparing now. Nothing is impossible.

PD—Thank you very much and wishing you all the best for your future endeavours.

MAGAZINE KING

Focus 1

India Innovation Index 2019 : An Initiative to Measure Innovations Across the States/UTs

—Dr. S.S.S. Chauhan

NITI Aayog with **Institute for Competitiveness** as the knowledge partner released the India Innovation Index (III) 2019. This Index has been developed on the pattern of Global Innovation Index. It examines innovation ecosystems of Indian States and Union Territories. The objective of the III 2019 is to help policymakers design policies aimed at deriving innovation across regions. India is a vast country with diverse resource endowments and climatic variations along with huge diversity in socio-cultural milieu. So the state of innovation should be understood at regional level for effective policy formulation. Any unified policy designed at national level is neither just nor advisable. Each state needs to design its own policy based on its unique resource endowments, human capital, and strengths as well as challenges.

III 2019 has been formulated with the intent of better understanding innovation landscape across India and drawing regional insights to derive data based decision making. The study examines the innovation ecosystem of Indian states and union territories. The aim is to create a holistic tool which can be used by policymakers across the country to identify the challenges to be addressed and strengths to build on when designing the economic growth policies for their regions. The states have been bifurcated into three categories: major states, north-east and hill states, and union territories/city states/small states.

Recognizing the role of innovation as a key driver of growth and prosperity for India, **NITI Aayog with Institute for Competitiveness** as the knowledge partner has released the India Innovation Index 2019. The study is an outcome of extensive research and analysis, which looks holistically at the innovation landscape of India by examining the innovation capabilities and performance of Indian states and union territories.

The index attempts to create an extensive framework for the continual evaluation of the innovation environment of 29 states and seven union territories in India and intends to perform the following three functions :

(1) Ranking of states and UTs based on their index scores.
(2) Recognizing opportunities and challenges.
(3) Assisting in tailoring governmental policies to foster innovation.

The India Innovation Index 2019 is calculated as the average of the scores of its two dimensions–Enablers and Performance.

Enablers are the factors that underpin innovative capacities such as institutions and policies, human capacity, infrastructure, technological adoption, and business markets and capital. Enabler pillars define aspects of environment instrumental in fostering innovation within a State/UT. Together these pillars measure the degree to which a state/UT has created an environment conducive for innovation, which represents the core components that allow innovation to thrive in states. The enablers have been grouped in five pillars :

(1) Human Capital : The level and quality of education and research capability are important determinants of the innovation capacity of that region

(2) Investment : Public and private funding of development initiatives through deep rooted research gauges the financial standing of the state/UT.

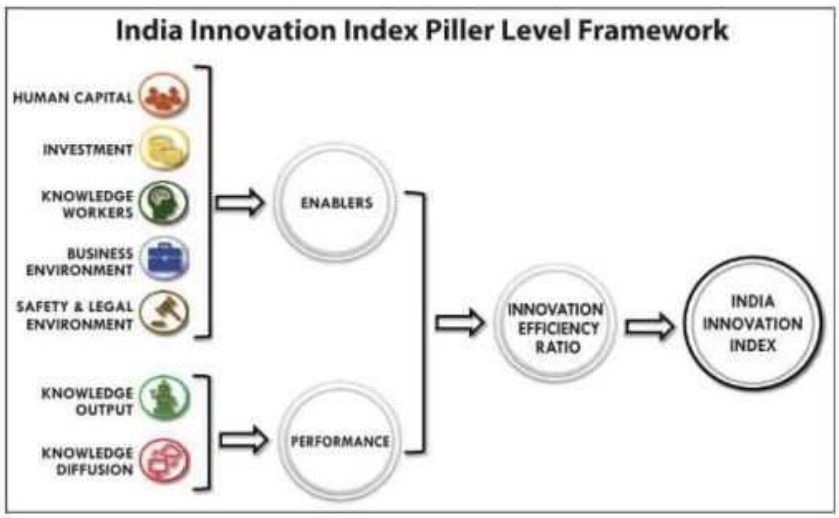
(3) Knowledge Workers : Business strengthens their productivity, competitiveness, and innovation potential through the employment of highly skilled professionals.

(4) Business Environment : It assess the business environment in Indian State/UTs by considering ease of doing business ranking and governmental technological adoption.

(5) Safety and Legal Environment : Governments which enact and enforce fair and open procedures, protect property rights, regulate markets efficiency, and lower the burden of regulations are more likely to see higher levels of innovative entrepreneurial activity.

Performance dimension captures benefits that a nation derives from the inputs, divided in two pillars :

(6) Knowledge Output : As companies and individuals invest in R&D and develop innovative products and services offering better value, their appeal increases across markets



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India Innovation Ranking 2019			
States	III Rank	Enablers Rank	Performance Rank
Major States			
Karnataka	1	3	1
Tamil Nadu	2	5	2
Maharashtra	3	1	3
Telangana	4	9	4
Haryana	5	2	7
Kerala	6	4	8
Uttar Pradesh	7	15	5
West Bengal	8	11	6
Gujarat	9	6	9
Andhra Pradesh	10	8	10
Punjab	11	7	13
Odisha	12	10	11
Rajasthan	13	12	12
Madhya Pradesh	14	13	14
Chhattisgarh	15	14	17
Bihar	16	16	15
Jharkhand	17	17	16
NE and Hill States			
Sikkim	1	1	11
Himachal Pradesh	2	2	5
Uttarakhand	3	4	1
Manipur	4	3	4
Jammu & Kashmir	5	5	3
Tripura	6	6	9
Arunachal Pradesh	7	7	6
Assam	8	11	2
Nagaland	9	9	7
Mizoram	10	8	10
Meghalaya	11	10	8
Union Territories/City States/Small States			
Delhi	1	3	1
Chandigarh	2	2	2
Goa	3	1	5
Puducherry	4	5	6
Andaman & Nicobar Islands	5	4	7
Daman & Diu	6	7	3
Dadra & Nagar Haveli	7	8	4
Lakshadweep	8	6	8

(7) Knowledge Diffusion : It reflects the degree to which a state can develop and apply knowledge to increase the value added components in product and services, as well as more general move towards an innovation driven economy Knowledge pillar manifests itself particularly in hi-tech and manufacturing exports, commercialisation of intellectual property and handicraft, handloom and Geographical Indication sales in the states/UTs.

Ranking of States/UTs in III, 2019

The states have been bifurcated into three categories : major states, north-east and hill states, and union territories / city states / small states. Karnataka is the leader in the overall rankings in the category of major states. Karnataka's number one position in the overall ranking is partly attributed to its top rank in the Performance dimension. It is also among the top performers in Infrastructure, Knowledge Workers, Knowledge Output and Business Environment.

Among the category of major states, Maharashtra performs the best in the dimension of Enablers. This implies that it has the best enabling environment for innovation, even though the state comes in at the third position in the overall innovation index.

The index presents the latest findings and highlights the regional catalysts and caveats for promoting innovation readiness. The Report offers a comprehensive snapshot of the innovation ecosystem of 29 states and seven union territories. It also includes a section on state profiles covering 33 indicators looking at the different facets of innovation in India. The index shows that the innovation ecosystem of the country is strong in south and western parts of India. In fact, three of the top five major states are from southern India. Delhi and Haryana seem to be an exception to this rule and seem to be doing well on the Index. Thus, there seems to be a west-south and north-east divide across the country.

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- **Karnataka** is the most innovative major state in India.
- Tamil Nadu, Maharashtra, Telangana, Haryana, Kerala, Uttar Pradesh, West Bengal, Gujarat, and Andhra Pradesh form the remaining top ten major states respectively.
- The top ten major states are majorly concentrated in southern and western India.
- **Sikkim and Delhi** take the top spots among the north- eastern & hill states, and union territories/ city states/small states respectively.
- **Delhi, Karnataka, Maharashtra, Tamil Nadu, Telangana,** and **Uttar Pradesh** are the most efficient states in translating inputs into output.

The broad level learnings and some policy imperatives at the national level include increasing the spending on research and development, improving the capability of top rung educational institutions in the country to produce greater innovation outputs. There is also a need for

Continued on Page 81

Focus 2

Initiatives for Mitigation of Air Pollution

—Dr. Punit Mishra

Air quality in many parts of northern India—particularly in National Capital Region Delhi—started deteriorating from second week of October and turned hazardous within weeks because of wintry weather, Diwali fireworks, burning of harvest residue in Punjab and Haryana and calming down of wind after the monsoon. In the backdrop of rising air pollution and heavy smog in and around National Capital Region Delhi the Government is taking all efforts for the mitigation of air pollution in the country. Central Government has taken a number of regulatory measures for prevention, control and abatement of air pollution in the country.

Action Plans for Improvement of Air Quality

(1) The Central Government has launched **National Clean Air Programme (NCAP)** under the Central Sector "Control of Pollution" Scheme as a long-term, time-bound, national level strategy to tackle the air pollution problem across the country in a comprehensive manner with targets to achieve 20 % to 30 % reduction in PM_{10} and $PM_{2.5}$ concentrations by 2024 keeping 2017 as the base year for the comparison of concentration.102 non-attainment cities mostly in Indo-Gangetic Plains have been identified based on ambient air quality data for the period 2011–2015 and WHO report 2014/2018. The city specific Action Plans have been approved for all 102 non-attainment cities for implementation on ground.

(2) **Comprehensive Action Plan :** The Central Government notified a Comprehensive Action Plan (CAP) in 2018 identifying timelines and implementing agencies for actions identified for prevention, control and mitigation of air pollution in Delhi and NCR.

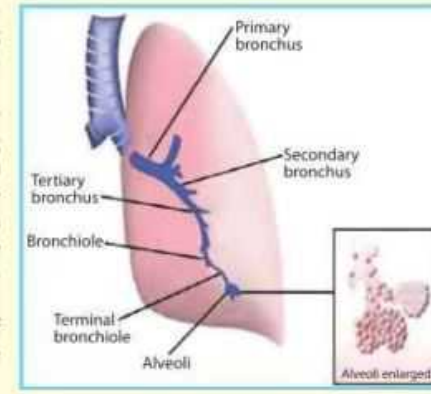
- As the heap of dust is gradually enveloping the sky over the Delhi-NCR, the environment ministry has introduced a Comprehensive Action Plan (CAP) to combat air pollution in the long-run. The plan will work in collaboration with the Graded Response Action Plan (GRAP) which comes into effect when air quality degrades. While its draft notification of the plan was put in place by the Centre in March, the ministry released the final plan.
- Keeping in mind the two major changes recommended by the Supreme Court-mandated Environment Pollution (Prevention and Control) Authority (EPCA), the plan focusses on the necessity for a strict parking policy in Delhi-NCR and on upgradation of the public transport system. The government has fixed sector-wise deadlines including air quality monitoring, traffic management, crop burning, and emission control.
- The Comprehensive Action Plan (CAP) has asked the agencies concerned to ensure strict compliance of shift to BS VI by 2020, expand CNG network across NCR, an introduction of battery-operated vehicles and install vapour recovery systems. Moreover, the plan asks for better traffic management and mentioned a need to improve the frequency of the metro while introducing more buses into the system. The plan also requires NCR to work on diverting transit truck traffic and checking overloading. CAP calls for a parking policy that will physically demarcate legal parking areas and penalise people for illegal parking.

(3) **Graded Response Action Plan (GRAP)** was notified on January 12, 2017, for prevention, control and abatement of air pollution in Delhi and NCR. It identifies graded measures and implementing agencies for response to four AQI categories, namely, Moderate to Poor, Very Poor, Severe and Severe + Emergency.

Health Effects of $PM_{2.5}$ and PM_{10}

Health studies have shown a significant association between exposure to particle pollution and health risks, including premature death. Health effects may include cardiovascular effects such as cardiac arrhythmias and heart attacks, and respiratory effects such as asthma attacks and bronchitis. Exposure to particle pollution can result in increased hospital admissions, emergency room visits, absences from school or work, and restricted activity days, especially for those with pre-existing heart or lung disease, older people, and children.

The size of particles is directly linked to their potential for causing health problems. Fine particles ($PM_{2.5}$) pose the greatest health risk. These fine particles can get deep into lungs and some may even get into the bloodstream. Exposure to these particles can affect a person's lungs and heart. Coarse particles ($PM_{10-2.5}$) are of less concern, although they can irritate a person's eyes, nose, and throat.



PM10 particles are so small that they effectively act as a gas. When breathed in they penetrate deep into the lungs. Exposure to high concentrations of PM10 can result in a number of health impacts ranging from coughing and wheezing to asthma attacks and bronchitis to high blood pressure, heart attack, strokes and premature death. The young and old and persons with existing medical conditions are most likely to be adversely affected by exposure to high PM10 concentrations.

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Graded Response Action Plan (GRAP) to Combat 'Poor' Air

Under the emergency plan called Graded Response Action Plan (GRAP), stringent actions are implemented based on the air quality of the city. The plan enforces following actions based on the quality of air, as informed by an official :

- **If the air quality lies in moderate to poor category :** Measures like stopping garbage burning in landfills and other places, and enforcing all pollution control regulations in brick kilns and industries, would be implemented.
- **If the air quality falls in the very poor category :** Additional measures of stopping use of diesel generator sets, enhancing parking fees 3-4 times and increasing frequency of metro and buses would be implemented.
- **If the air quality falls in the severe category :** Measures like increasing frequency of mechanised cleaning of roads, sprinkling of water on roads and identifying road stretches with high dust generation would be implemented.
- **If the air quality falls to severe plus emergency category :** Measures like stopping entry of trucks into Delhi (except essential commodities), stopping construction activities and appointment of task force to take decision on any additional steps, including shutting of schools, would be implemented.

Other Measures to Keep the Air and Environment Clean

Several steps have been taken for creating awareness amongst the general population. These steps are as follows :

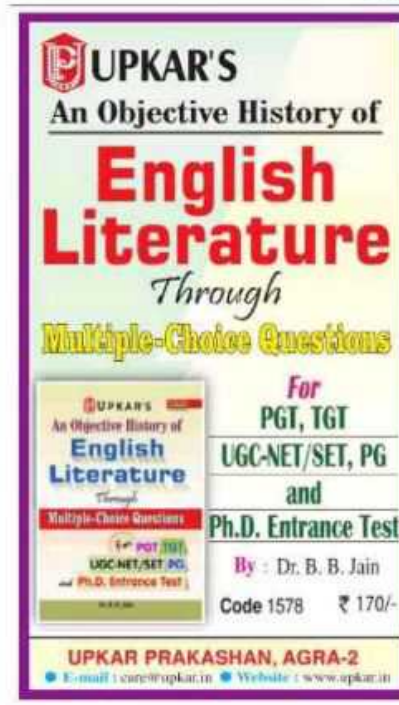
- **SAMEER** app, developed by the Society for Applied Microwave Electronics Engineering & Research (SAMEER), has been launched wherein air quality information is available to public along with provision for registering complaints against air polluting activities.
- Air quality information collection and dissemination are done from a centralized location. It provides real time air quality status to all stakeholders.
- A dedicated media corner, Twitter and Facebook accounts have been created for access to air quality related information and to provide a platform for lodging complaints by general population.
- Crowd sourcing of innovative ideas / suggestions / proposals from public is done through CPCB website to strengthen efforts for improving air quality in Delhi-NCR.
- The Ministry of Environment, Forest and Climate Change is implementing Environment Education, Awareness and Training Scheme with the objective to promote environmental awareness among all sections of the society and to mobilize people's participation for conservation of environment. Under the National Green Corps (NGC) programme of the Ministry, about one lakh schools have been identified as Eco-clubs, wherein nearly thirty lakh students are actively participating in various environment protection and conservation activities, including the issues related to the air pollution.
- Ministry is promoting peoples' participation and awareness building among citizens for environmental conservation that focus on promotion of cycling, saving water and electricity, growing trees, proper maintenance of vehicles, following of lane discipline and reducing congestion on roads by car pooling etc.
- For field feedback on air polluting activities in Delhi and major NCR towns, 46 teams of Central Pollution Control Board have been deployed since October 7, 2019.
- The initiatives taken by the Government for the abatement and control of air pollution in Delhi and NCR since 2016 have bone good results. As per Continuous Ambient Air Quality Monitoring Stations (CAAQMS) data, the number of 'Good', 'Satisfactory', and 'Moderate' days has progressively increased to 159 in 2018, as compared to 152 in 2017 and 106 in 2016, and the number of 'Poor', 'Very Poor' and 'Severe' days has reduced to 206, compared to 213 in 2017 and 246 in 2016. In Delhi, reduction in PM2·5 levels in 2018 is 7·3% over 2017 and 14·8% over 2016. In Delhi, reduction in PM10 levels in 2018 is 8·6% over 2017 and 16·5% over 2016.

But, the situation in NCR-Delhi turned so grim in October-November 2019, that, a Supreme Court Bench, headed by justice Arun Mishra, remarked on November 25, 2019 that the life span of millions of citizens has shortened and people are 'suffocating' due to pollution in Delhi-NCR. Calling the capital a 'nark' (hell), the Appex Court remarked, "Can you treat people like this and permit them to die due to pollution ? We cannot let any government reduce the life span of people."

The Supreme Court asked Punjab Government to pay compensation for not being able to stop stubble burning. The court remarked, "Why are people being forced to live in gas chambers ? It is better to kill them all in one go, get explosive in 15 bags in one go. Why should people suffer all this ? In Delhi blame-game is going on."

Stopping stubble burning in Punjab, Haryana, Uttar Pradesh or in any other part of the country has some deep rooted issues. The issue is related to politically more powerful farmers who do not have any other better or eco-friendly alternative to clear their fields in the shortest possible span between harvesting of rice and sowing of wheat. None of the governments in these states wants to displease the farming lobby which may cost dearly during the election.

PDarpan



Focus 3

Scrap Recyling Policy, 2019

—Dr. Rupesh Dixit

The Centre has notified on November 8, 2019 a scrap recycling policy to promote circular economy in the steel sector and utilise scrap emanating from vehicles and white goods that have reached their end of life.

Objectives of the Policy

- To promote circular economy in the steel sector.
- To promote a formal and scientific collection, dismantling and processing activities for end of life products that are sources of recyclable (ferrous, non-ferrous and other non-metallic) scraps which will lead to resource conservation and energy savings and setting up of an environmentally sound management system for handling ferrous scrap.
- Processing and recycling of products in an organized, safe and environment friendly manner.
- To evolve a responsive ecosystem by involving all stakeholders.
- To produce high quality ferrous scrap for quality steel production thus minimizing the dependency on imports.
- To decongest the Indian cities from ELVs and reuse of ferrous scrap.
- To create a mechanism for treating waste streams and residues produced from dismantling and shredding facilities in compliance with Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016 issued by MoEF & CC.
- To promote 6Rs principles of Reduce, Reuse, Recycle, Recover, Redesign and Remanufacture through scientific handling, processing and disposal of all types of recyclable scraps including non-ferrous scraps, through authorized centers/facility.

Key Components of the Scrapping Policy

- Ministry of road transport and highways (MoRTH) and the department of heavy industry would work towards "extended producer responsibility" by requiring vehicle manufacturers to incentivise scrapping of unfit vehicles in exchange for price discounts for purchase of new vehicles. "This too shall provide for the required feed to the scrapping centres.
- MoRTH may formulate an Automobile Fitness Certification Policy to prevent plying of unfit and polluting vehicles. This would facilitate establishment of fitness centres in the private sector by providing supporting policy framework.
- The OEMs and / or its dealers would facilitate collection of old vehicles / ELVs (end of life vehicles) / recyclable spare parts of old automobiles either through a take back scheme or by setting up scrapping centres of their own or through tie-ups with such facilities, thereby acting as an aggregator for the collection of vehicles.
- Unfit vehicles, according to the voluntary decision of the owners, would be considered as the feed material for the steel scrapping centres.
- Scrap processing units would be set up which could use the new corporate rate structure notified on September 20, 2019 offering domestic company incorporated on or after October 1, 2019 and making fresh investment in manufacturing, an option to pay income-tax at the rate of 15 per cent.
- Department of Revenue (Ministry of Finance) might examine the proposal regarding the exemptions under section 35 AD of Income Tax Act to scrap processing units.
- Vehicle manufacturers should shoulder responsibilities to use an increased quantity of recycled material in vehicles and other products, (provided they do not give rise to safety or environmental hazards), thereby creating a market for recycled products, and the percentage use of such recycled materials in vehicles should be periodically audited to ensure compliance.
- Additionally, vehicle and white good manufacturers would be required to provide dismantling information for each type of new product within six months of the launch and should assist / guide the recycling centres to expand the technological know how for segregation and recycling.
- The policy would involve a formal and scientific collection, dismantling and processing activities for end of life products that are sources of recyclable (ferrous, non-ferrous and other non-metallic) scraps.
- High quality ferrous scrap for quality steel production would be produced.

Shot in the Arm for Recycling

The scrapping policy seeks to ensure availability of quality scrap for the steel industry.

Current supply	25 mn tonnes (mt)
Import	7 mt
Infrastructure Needed	
Scrap-processing centres	70, each with capacity of 100,000 tonnes
Collection and dismantling centres	300#
Jobs potential	2,800

These should be set up near highways, industrial corridors, railway sidings, and in the proximity of the Sagarmala project.

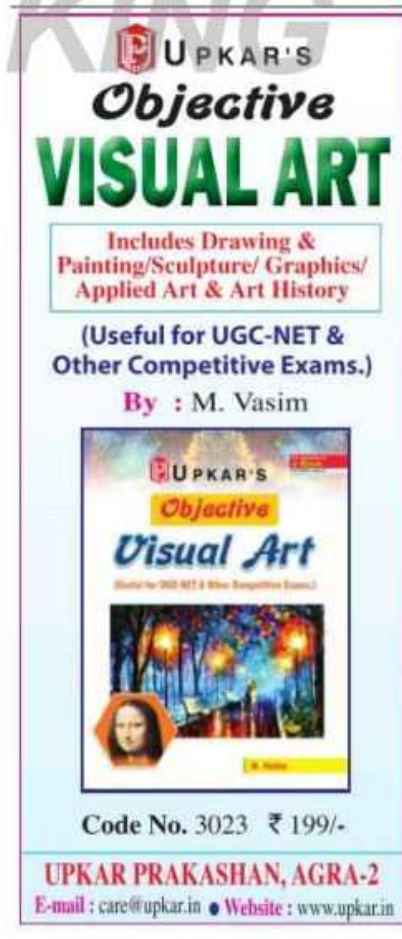
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- To address the issue of collecting such end of life products for increasing scrap generation in India and also to structure the informal recycling sector based on environmental and scientific fronts, a hub and the spoke model has been promulgated.
- The collection / dismantling centre and/or scrap processing centre must issue a certificate of destruction (COD) or proof of scrappage to the owner. Records of the same must be maintained and it should be available for scrutiny by the authority concerned.
- The collection and/or dismantling centre should either set up by or be associated with a scrap processing center.
- They should handover the depolluted/dismantled ELVs, white goods and other scraps without any legal liabilities or encumbrances to the authorized scrap processing centre.
- These centres would be set up near highways, industrial corridors, railway sidings and in the close proximity to the Sagarmala project which would help in development of multimodal logistics parks.
- The increased production of vehicles and increased use of consumer durable white goods in the last two decades and their rapid obsolescence shall generate large quantities of end of life products. This shall result in generation of continuous flow of large ferrous scrap for recycling in steel production.
- It would be put in place a mechanism for treating waste streams and residues produced from dismantling and shredding facilities in compliance with Hazardous & Other Wastes (Management & Trans-boundary Movement) Rules, 2016 issued by the ministry of environment.
- An inter-ministerial coordination committee has been set up with steel secretary as convener and secretaries of Ministry of Road Transport and Highways, Department of Heavy Industry, Ministry of Environment, Forest & Climate change, department of revenue and ministry of labour & employment as members. The mandate of the committee is to look into policy changes required for creating an organized steel scrapping ecosystem.
- A 4+1 hub and spoke model is envisaged, where four collection and dismantling centres cater to one scrap processing centre. There would be 70 units producing a total of 7 MT of scrap; the potential for employment generation would be of 2,800 persons.

The availability of scrap was a major issue in India and the deficit was 7 million tonnes in 2017. This was imported at the cost of more than ₹ 24,500 crore in 2017-18. The gap between demand and supply can be reduced in the future and the country may be self-sufficient by 2030. This is mainly because with the increase in consumption of steel in the recent past and ELVs, the generation of scrap is likely to be increased considerably. This scrap has to be channelized so that the same can be utilized for steel production in an environmentally friendly manner.

The scrapping policy seeks to ensure availability of quality scrap for the steel industry. The current supply of scrap is 25 MT from the domestic unorganized scrap industry and 7 MT from import of scrap. There is potential to harness this 7 MT of scrap that is currently being imported from the domestic market itself. This shall require adequate collection centres; the dismantling centres shall work in a hub-spoke model and feed the scrap processing centres. To produce 7 MT more of scrap, the country shall require 70 scrap processing centres each with the capacity of 100,000 tonnes; this is without disturbing the existing dismantling centres. The 70 scrap processing centres shall require about 300 collections and dismantling centres on the presumption that 4 collecting and dismantling centres cater to scrap processing centre.

The best part of the Scrap Recycling Policy is this that now the Vehicle manufacturers will soon have to take the onus of ensuring scrapping old vehicles. The MoRTH will identify unfit vehicles, through an appropriate testing system, which do not meet the road worthiness standards, for scrapping. MoRTH will take necessary steps to ensure effective enforcement of Pollution and Fitness Regulations by State and Central Agencies. Further, MoRTH is to ensure that the authorized vehicle scrapping centres shall have access to the *Vahan* Portal to de-register vehicles that are to be scrapped either voluntarily or statutorily. It will help the authorities to keep old and unfit vehicles out of the roads which are unable to bear the load of rising number of vehicles. In the transport sector major thrust has so far been on attaining higher growth rate in automobile manufacturing sector. No attention was paid to keep the old vehicles out of the road. Uncontrolled and unbalanced growth of automobile sector resulted in the growing number of motorised vehicles. It fuelled the problem of vehicular pollution, parking problem in cities, and increase in fatal accidents. Now ,this is the most opportune time to make it mandatory for the owners of the motorised vehicles to get their vehicles scrapped after the completion of stipulated time–say 10 or 15 years.



World Panorama



BRICS : Breaking New Ground

—Arunoday Bajpai

BRICS or Brazil, Russia, India, China and South Africa, is a group of five emerging economies. It represents 40 per cent of the total global population as it has two most populous countries of the world—India and China. The BRICS members also contribute to one-third of global GDP output. However, their intra-BRICS trade is just 15 percent of the global trade. Now BRICS appears to address this aspect and harness their potential for trade investment and development by increasing scope of mutual cooperation among member states. The leaders of BRICS nations held their 11th Summit on 14 November, 2019 in Brasilia, Brazil. In order to focus on economic issues, the theme of the 11th Summit was *"BRICS : economic growth for an innovative future"*.

The Brasilia Declaration

The leaders of BRICS discussed many issues of mutual and global importance. They reaffirmed their fundamental commitment to the principle of sovereignty, mutual respect and equality and to the shared goal of building a peaceful, stable and prosperous world. These concepts, values and objectives provide a solid foundation and clear guidance for our mutually beneficial and pragmatic cooperation. The leaders adopted a 73 point Brasilia Declaration, which among other things, emphasizes the following points :

A. Strengthening and Reforming the Multilateral System

(1) They expressed their commitment to multilateralism, cooperation of sovereign States to maintain peace and security, advance sustainable development and ensure the promotion and protection of human rights.

In order to address the challenges currently facing multilateralism, they supported the central role of the UN in international affairs.

(2) The leaders reiterated the urgent need to strengthen and reform the multilateral system, including the UN, the WTO, the IMF and other international organizations, to make them more inclusive, democratic and representative.

(3) While recalling the 2005 World Summit Outcome document, they reaffirmed the need for a comprehensive reform of the UN, including its Security Council, with a view to making it more representative, effective, and efficient, and to increase the representation of the developing countries so that it can adequately respond to global challenges.

(4) They expressed commitment to sustainable development in its three dimensions—economic, social and environmental in a balanced and integrated manner and called for the timely implementation of the 2030 Agenda for Sustainable Development. They called on developed countries to fully implement their Official Development Assistance (ODA) commitments and to provide developing countries with additional development resources.

(5) They also called for the effective implementation of the Paris Agreement adopted under the principles of the United Nations Framework Convention on Climate Change (UNFCCC), including the principle of common but differentiated responsibilities and respective capabilities.

(6) The leaders condemned terrorism in all its forms and manifestations, which should not be associated with any religion, nationality or civilization, and recognize terrorist acts as criminal and unjustifiable, regardless of their motivations whenever, wherever and by whomsoever committed. They urged for concerted efforts to fight against terrorism under UN auspices in accordance with international law. They also called for an expeditious conclusion and adoption of the Comprehensive Convention on International Terrorism within the UN framework. They appreciated the Fourth Meeting of the BRICS Counter-Terrorism Working Group, and decided to establish thematic sub-working groups and the holding in Brasilia of the Seminar "BRICS Strategies for Countering Terrorism".

(7) They affirmed their commitment to tackling the misuse of ICTs for criminal and terrorist activities, and combating illicit financial flows (IFFs). They underlined the importance of an open, secure, peaceful, stable, accessible and non-discriminatory environment for information and communications technologies (ICTs). BRICS leaders expressed concern about the possibility of an arms race in outer space and reaffirmed the need to carry on activities in the exploration and peaceful uses of outer space in accordance with international law.

(8) They called for implementing the outcomes of Conference of Parties (COP 14) of UNCCD (United nations Convention on Combating Desertification) with an aim to achieve SDG 15·3 by 2030 to combat desertification, restore degraded land and soil, and strive to achieve a land degradation-neutral world. The UNCCD conference was held in India in September, 2019. India has established the Centre for Sustainable Land Restoration for capacity building, exchange of database and information regarding the Land Degradation Neutrality Target Setting Programme. They acknowledged the New Delhi Declaration on *"Investing in Land and Unlocking Opportunities"* and the Ordos Declaration. The leaders also supported the development of the Post-2020 Global Biodiversity Framework. The 15th Meeting of the Conference of the Parties to the Convention on Bio-

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logical Diversity is scheduled to be held in Kunming, China, in 2020, which will evolve the post-2020 Global Biodiversity Framework.

B. Economic and Financial Co-operation :

(1) In view of the weak global economic growth and trade tensions, the leaders recalled the importance of open markets, fair, just and non-discriminatory business and trade environments, structural reforms, effective and fair competition, promoting investment and innovation, as well as financing for infrastructure and development.

(2) They found that continued implementation of structural reforms will enhance our growth potential. Trade expansion among BRICS members will further contribute to strengthening international trade flows. They advocated continued use of fiscal, monetary and structural policies to achieve strong, sustainable, balanced and inclusive growth.

(3) They demanded a strong, quota-based and adequately resourced IMF at the center of the global financial safety net. They supported protecting the voice and representation of the poorest members in the IMF and called upon the IMF to start work on quota and governance reform on the basis of the principles agreed in 2010.

(4) They reiterated the fundamental importance of a rules-based, transparent, non-discriminatory, open, free and inclusive international trade with WTO at the centre. They criticized WTO members for adopting unilateral and protectionist measures, which run counter to the spirit and rules of the WTO.

They pleaded for necessary WTO reform to ensure the effectiveness and relevance of the Organization and its capacity to better address current and future challenges.

(5) They decided to promote and facilitate investments in productive sectors, e-commerce, MSMEs, infrastructure and connectivity, which will help to promote economic growth, trade and job creation. They also appreciated the role of the New Development Bank (NDB) in infrastructure and sustainable development financing.

(6) They appreciated the functioning of the Contingent Reserve Arrangement (CRA) and decided to establish the BRICS Local Currency Bond Fund to facilitate among members in their local currency.

(7) They applauded the progress made in the implementation of the BRICS Action Agenda on Economic and Trade Cooperation which aims at policy sharing, information exchange, trade and investment facilitation and promotion, and development of trade studies. They welcomed the holding of the BRICS Business Forum and acknowledged the efforts of the BRICS Business Council (BBC) in promoting trade and investment among its members.

C. Regional Situations

While affirming their commitment for peaceful settlement of disputes through political and diplomatic means, the leaders addressed some of the pressing regional issues like political resolution of Syrian conflict with commitment to her sovereignty, independence, unity and territorial integrity; need for new and creative diplomatic efforts for achieving a just and comprehensive settlement of the Palestinian-Israeli conflict, addressing humanitarian crisis in the Republic of Yemen and a peaceful Yemeni-led resolution to the conflict, under the auspices of the United Nations; the resolution of the existing disagreements in Gulf region (Iran and the US) through negotiations and diplomatic engagement; reaffirming support for a process of peace and reconciliation that is Afghan-owned and Afghan-led; and a peaceful, diplomatic and political solution to the situation in the Korean Peninsula, as well as for its complete denuclearization.

The BRICS leaders also praised the efforts of the African Union and sub-regional organizations in addressing regional issues and managing conflicts in the interest of peace and security in the continent and reiterated the importance of collaboration between the United Nations and the African Union. The leaders also congratulated the Sudanese people for the signing on 17 August, 2019 in Khartoum of the Political Agreement and Constitutional Declaration, which we consider an important step towards the stabilization of the political situation in Sudan.

D. Intra-BRICS Cooperation

(1) The leaders expressed satisfaction over the ongoing continuous exchange of views on major global political, security, economic and financial issues of common concern and on ways to strengthen BRICS cooperation.

(2) The leaders welcomed the results of the 7th Meeting of the BRICS Science, Technology and Innovation Ministers and cooperation initiatives which have been fostering collaboration among researchers, young scientists and government bodies and bringing closer together our innovation ecosystems. They also decided to set up the Digital BRICS Task Force (DBTF) for expanding cooperation in the field of communication.

(3) They recognized the New Industrial Revolution (NIR) as a critical development opportunity from which all countries must benefit equally. They appreciated the Johannesburg Summit decision to commence the full operationalization of PartNIR, which involves, among other things, establishing BRICS industrial and science parks, innovation centers, technology business incubators and enterprises network.

(4) The leaders underlined the crucial role of energy in promoting social and economic development, as well as environmental protection. For the diversification of energy sources they decided to continue to pursue the efficient use of fossil fuels and to increase the share of renewable energy in our economies, including biofuels, hydro, solar and wind. The BRICS Energy Research Cooperation Platform aims to strengthen cooperation among members in the energy sector.

(5) The leaders also emphasized promoting new scientific, technological and innovative approaches to tackle the TB burden and other health issues. They desired collective action in promoting research and development of medicines and diagnostic tools to end epidemics, to combat communicable diseases and to facilitate access to safe, effective, quality and affordable essential medicines, as well as activities to strengthen non-communicable diseases prevention.

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They also welcomed the creation of the BRICS Network of Human Milk Banks.

(6) They noted with satisfaction the ongoing development of cooperation on financial issues. The leaders also stressed the importance of enhancing BRICS financial cooperation to better serve the real economy and address the development needs of our populations. They called for enhanced intra-BRICS cooperation at relevant multilateral fora, including in trade facilitation, law enforcement, use of advanced information technologies and capacity building. They called for early conclusion of BRICS Customs Mutual Administrative Assistance Agreement.

They noted that under-invoicing has a negative impact on trade and needs to be addressed. They called for early signing and ratification of the Multilateral Convention on Mutual Administrative Assistance in Tax Matters which will help in the prevention of tax base erosion and profit shifting, exchange of tax information, and needs-based capacity building for developing countries. They decided to adhere to global standards on transparency and exchange of information and the minimum standards against Base Erosion and Profit Shifting (BEPS).

(7) They called for expanding cooperation among member countries on matters such as investment, e-commerce, micro, small and medium enterprises (MSMEs) and intellectual property rights in cooperation with specialized BRICS IP Offices. They reiterated that the expansion of trade can help boost global growth, but the demand deficit in the global economy requires additional sources of growth, which could include infrastructure investment, including in digital infrastructure, skills development, particularly for young people, sustainable investment, investment in local basic services, and outward investment to areas of high potential growth, including on the African continent.

(8) The leaders affirmed their commitment to fight corruption, inter alia, through the strengthening of appropriate domestic legal frameworks and by strengthening a culture of intolerance towards corruption. The members decided to strengthen efforts on anti-corruption measures.

(9) The other areas identified for cooperation among member states are : urban environmental management, agriculture including science based agriculture, labour issues, cultural cooperation, parliamentary cooperation, and people-to-people exchanges.

Conclusion

The basic idea behind BRICS is that its members have the potential for economic growth to the extent that it would surpass the present leading economies of the US and other Western countries. The idea of BRIC was given by Goldman Sachs economist Jim O'Neil in 2003. However, taking a clue from the idea given by Jim O'Neil, these countries organized under the banner of BRIC in 2008. Its first Summit was held in 2009 at Yekaterinburg in Russia. It became BRICS following South Africa's induction in the organisation in 2010. Besides strengthening cooperation among its members, the group also envisages to evolve a multilateral and inclusive global order for global peace and prosperity. India is the founder member of BRICS. In one decade BRICS has come a long way. Though its members have multiple political and strategic differences, they have cultivated a meaningful partnership in economic sphere, science and technology and cultural cooperation. Due to its sheer economic and population base, BRICS has come to play a major role in the global economic affairs.

NAM in Search of New Identity

The Non-Alignment Movement (NAM) is the most versatile and important forum of developing countries. The NAM has its genesis in the post World War II global politics, in which the world was divided into two opposite blocs led by two superpowers—America and the Soviet Union. The newly independent nations of Asia, Africa and Latin America wanted to remain away from the military tensions of the superpower politics, so that they can vindicate their hard won independence and concentrate on socio-economic development. It was in this context that the Non-Align Movement took shape in early 1960s. The background of unity among the developing countries of Asia and Africa was already laid during Bandung Conference in 1955 in Indonesia. With the pioneering role of India, Egypt and Yugoslavia, the first NAM summit was held in 1961 in Belgrade, (Yugoslavia), where 25 nations participated in the event. So far 18 NAM Summits have been held. The 18th Non-Aligned Movement Summit was held in Baku, Azerbaijan on 25-26 October, 2019. The 18th Summit was attended by 30 member states' Heads of States and Governments and Vice-Presidents, all 120 member countries' Deputy Prime Ministers and Foreign Ministers, 17 observer countries' representatives and representatives of 10 observer organizations.

The Baku Summit was held under the theme *'Upholding the Bandung Principles to ensure concerted and adequate response to the challenges of the contemporary world'*. The theme of the NAM Summit underlines the relevance of Nam principles in facing the challenges of the contemporary world. During the 18th Summit of the Non-Aligned Movement in Baku, total four Documents were adopted which are : Baku Final Act, Baku Political Declaration, the Palestinian Declaration and the document of gratitude and solidarity to the government and people of Azerbaijan.

Baku Political Declaration

The Baku Political Declaration, issued on 26 October, 2019 is the main document of the Summit, which focuses on the pressing issues faced by the member countries. It highlights the following points :

(1) The declaration calls for increasing the movement's effectiveness by further developing NAM as a dynamic and effective mechanism to represent, coordinate and promote all the member countries' interests and priorities.

(2) Members reiterated their resolve to strengthen its role for

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making the movement relevant in the current context of the geo-political scenario, by promoting and upholding its basic principles, which continue to be as much valid and relevant as originally conceived.

(3) The NAM member states pledged to remain united and steadfast against emerging threats and challenges to international peace, security and development.

(4) The members decided to consolidate their positions in order to advance the interests of the developing world, build a fair, inclusive, transparent and effective system of global governance. "The member states shall support multilateralism with the United Nations at its core and give a boost to the central role of the United Nations in the institutional and legal framework of global governance,"

(5) The declaration stressed the need to revitalize the UN General Assembly and strengthen its authority as the most democratic, accountable, universal and representative body of the organization, including in the area of international peace and security.

(6) It affirmed members' commitment to make efforts to strengthen NAM's solidarity in combating terrorism in all its forms and manifestations in accordance with the principles of the Charter of the United Nations, international law and relevant international conventions.

(7) The members expressed concern about "the increased adverse impacts of climate change, particularly on developing countries, which are severely undermining their efforts to eradicate poverty and achieve sustainable development".

(8) The declaration also stressed that the UN Peacekeeping Operations are carried out with strict adherence to the principles and purposes enshrined in the Charter of the United Nations, and emphasized that that the respect for the basic principles of peacekeeping; namely, consent of the parties, impartiality, and non-use of force except in self-defense and defense of the mandate, is essential for the success of peacekeeping operations.

(9) The declaration condemned the promulgation and application of unilateral coercive measures against Member States of the Movement. It demanded the repeal of such measures, which affect human rights and prevent the full economic and social development of the peoples subjected to them.

(10) The NAM member states also urgently called for serious, collective efforts to bring a complete end to the Israeli occupation of the Palestinian territory occupied since 1967, including East Jerusalem, in accordance with and in full respect of international law.

(11) They reaffirmed that the South-South Cooperation is an expression of solidarity and cooperation among the peoples and countries of the South. They also stressed on ensuring the full enjoyment of all human rights, including the right to development so as to build collective and sustainable peace and prosperity across the world.

(12) The member states also reaffirmed and underscored the validity and relevance of the Movement's principled positions concerning the right to self-determination of peoples under foreign occupation and colonial or alien domination.

(13) The declaration also recognized the Member States' primary responsibility to promote durable solutions for internally displaced persons in situations of armed conflict, including their voluntary return in safety and with dignity, as well as to ensure respect, protection and fulfilment of their human rights.

(14) The declaration called that all States shall respect the territorial integrity, sovereignty, the sovereign equality, political independence and inviolability of international borders of other States, and comply with the principles of non-intervention in the internal affairs of other countries.

(15) They also reaffirmed the centrality of development dimensions in trade negotiations and maintained that a successful conclusion of the Doha Development Round, launched in 2001, in the manner which reflects the interests of developing countries is necessary.

The member-states also underlined that the effective implementation of the NAM Baku Summit Outcome Document and the documents of the previous NAM Summits and Ministerial Meetings requires the highest commitment and determination of all NAM Member States.

Conditions for Membership of NAM

The five conditions for joining the membership of NAM were decided in 1961 during the preparatory meeting of NAM. These Criteria are :

1. The aspiring member should follow an independent policy in international relations.
2. The country should oppose colonialism and espouse the cause of freedom struggles of colonized people.
3. The country should not be the member of any military alliance.
4. The concerned nation should not have signed ANY military treaty with other nations in the context of super power military rivalry.
5. The country should not have allowed the establishment of foreign military bases in her territory.

Though these conditions have been in existence since the time of inception of NAM, they have not been followed in letter and spirit in all cases. However, Pakistan could not become the member of Nam in 1961 as she was the member of America led military alliances like CENTO and SEATO. However, Pakistan joined Nam in 1979 when these military alliances were dissolved.

India and NAM

India is one of the founder members of the Non-aligned movement. India is also the first country to adopt the principles of NAM as the basic element of her foreign policy in the post-World War era. India has been in the forefront of the Nam's fight against colonialism, apartheid, interference in the internal affairs of small and weak states. India also stood firm in the promotion of global peace, disarmament and South-South Cooperation. Indian Prime Minister Nehru defined non-alignment as the 'independence of foreign policy', which has now become the basis of India's principle of 'strategic autonomy'. But of late in last few years, India appears to have downgraded its participation in the Nam activities. For example during the 18th Nam Summit at Baku in 2019, India was represented by the Vice-President Venkaiah Naidu and the Foreign Minister of India.

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Speaking at the Non-Aligned Movement Summit, Venkaiah Naidu called terrorism as a single most destructive threat which continues to expand its tentacles with impunity. He named Pakistan as the epicenter of terrorism. The only way to fight this menace is to strengthen and implement, without exception, all international instruments and mechanism to combat terrorists and their enablers.

He said the Nam should re-focus to remain an influential grouping and find solution to global challenges like terrorism, global governance reforms, sustainable development and south-South Cooperation.

Globalization and unprecedented technological advancement are shaping the 21st century in unpredictable and often disruptive ways. As we strive to ensure inclusive and sustainable growth and better future for our people, we must think that our destinies are linked closely as never before.

This is the second time in a row that the Indian Prime Minister missed the NAM Summit. Indian PM also did not participate in the 17th Summit held in Venezuela in 2016. Indian is the founder member of NAM and it has been the highest priority in Indian foreign policy since its first summit in 1961. India hosted the 7th NAM Summit in 1983 during the heyday of cold war. The only other time when Indian PM could not participate in NAM summit was in 1979 (Havana Summit), when India was faced with political uncertainties and the Prime Minister Chaudhary Charan Singh could not attend the NAM summit. Some observers feel that downgrading of India's participation in NAM Summits in last two occasions will have a negative impact on India's long term interests as India needs the support of developing countries in her aspiration to become the permanent member of UNSC and the NAM is a group of 120 such countries. In fact, outside the UN, NAM is the biggest forum of developing and poor countries. Also, NAM continues to have relevance in the post cold war conditions.

Relevance of NAM in the Post-Cold war Era

The NAM was created during the peak of cold war after the World War II, when the world was divided into two opposite camps (American-led Capitalist Bloc and the Soviet Union-led Communist Bloc). After the disintegration of the Soviet Union in 1991 and the end of cold war, the relevance of NAM has been questioned. But NAM continues to have relevance in the post-cold war era due to the following reasons :

1. Keeping away from the power politics of cold war period was just a realistic posture of NAM and, it was the core feature of NAM. The independence of foreign policy is the fundamental characteristic of NAM, which needs to be protected even in this globalized world. The political and economic pressures to the independence of foreign policy of the developing countries have not diminished rather they have increased.
2. There are new and challenging global issues and problems like climate change, international trade negotiations, terrorism, human rights, reform of international financial institutions, and the UN etc. which affect the vital interests of the poor and developing countries. NAM needs to be revitalized to face these challenges and to protect the interests of developing countries. The UN launched the Sustainable Development Goals in 2015, which are mainly concerned with socio-economic changes in the developing countries.
3. NAM, along with G-77 and other such bodies provide an international forum, where the developing countries articulate their viewpoints and collective stand. The 120 members of NAM represent the 55 per cent of global population. NAM can articulate the viewpoints of the developing countries with respect to such matters as trade negotiations, climate change or human rights and Sustainable development. As the developed countries are moving towards greater protectionism, the NAM members may plead for multilateralism. This is one of the main points of the Baku declaration of NAM, outlined in 2019.
4. In the present era of globalization and blind market competition, NAM may provide a viable mechanism to re-launch and strengthen the process of South-South Cooperation, which appears important for their growth and prosperity. The majority of the African countries and some Asian countries are still under the category of Least Developed Countries and are deprived of the potential benefits of globalization. South-South Co-operation is also the important ingredient of India's foreign policy.

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greater coordination and collaboration between the industry and educational institutions for enhancing innovation capability. A collaborative platform consisting of all the stakeholders of innovation innovators, researchers, and investors from the industry should be developed. This will help in strengthening the industry-academia linkages and will ease the process of technology transfer by providing a platform for innovators to showcase their inventions.

At the state level, broad level key learning includes forming policies at the state level that seek to improve the innovation and entrepreneurial ecosystem. Cluster development programs are also an area in need of greater coordination and can benefit from a more open collaborative approach. Also, the industrial policies at the state level should focus more on innovation. At present only a few policies exist for innovation even in the most innovative states and union territories.

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Courtesy is the Hallmark of Cultured Personality

—I.M. Soni

"To cultivate kindness is a valuable part of the business of life," says Samuel Johnson.

The words of the literary dictator of the 18th century have as much relevance and value today as they had at the time of their coinage.

Many in search of green pastures of life, tend to overlook the importance of the habit of the soft-word. They come off as abrasive and offensive in language, use harsh words, hurting others feelings, making enemies and then wondering why people are hostile or indifferent to them.

The soft word is, therefore, of utmost importance to the young and the go-ahead men and women. Whereas hostility, anger and violence tear at the fabric of life, the soft word acts like a golden glue.

The soft word blunts the edge of the harsh word of others. It produces its own image in mind. It serves as balm and comforts the hearer. It shames him out of his sour feelings.

Thinker Locke has put it like this: soft words prevent a good deal of that perverseness which rough and imperious usage often produces in minds. Win hearts and have people's hands and purses at your disposal !

There are other advantages. Some people never seem to grow old. They have the look of youth. We wonder what their secret is. When we ask them we get all sorts of replies, "Oh, plenty of sleep. Careful eating. No smoking, drinking. Lots of exercise," and so on.

Their secret is actually never divulged, simply because they are probably unaware of it themselves – for it's really the reflection of their inner response to life.

Such people are kind and it is their kindness which illumines their features with what seems to be perpetual youth.

Once we realise it is the happiness that springs from a soft heart which is their secret.

If we are truly kind something more of the life-force within us is released and not only do we look younger but we feel younger in body and spirit. Such an attitude to life sets that tone of one's character and creates harmony.

In a way, it is a secret, but everyone can unlock it for himself. Some have done it by the way they live. We too can fathom it for ourselves, if we so wish.

Once we have reoriented ourselves, people are drawn to us, because we have become more attractive to others.

Our friendships are enriched and business contacts improved. This is good provided we keep our balance, because it adds to our self-confidence and that in turn imparts extra ability to do whatever we wish to do. We may find ourselves doing we have previously fought shy of, for we have become fuller and more developed personalities then before.

We realise more of our potentialities, at home and at work. Others seek our advice and guidance, thus opening up for us new channels. We find doors opening and experience a deeper understanding of life and living.

When we wish to help those around us, power to do so comes to us. It may come spontaneously or after a little effort or perhaps after an appeal to our subconscious minds.

The response may come in the form we need it, or we may be inspired to consult certain books or to seek those better informed than ourselves.

In some way, however, it will come, as all knowledge comes from within. We may not be able to get just what we want at once, but as we practise the art of "looking within" the more we shall realise the real existence of this hidden reservoir.

If we ask in faith, we shall not be disappointed. And when we can do that, we have truly attained a valuable degree of self-realisation.

As a practical start, let us try for one day to seek out every opportunity of showing kindness and courtesy to all. Confucius pleaded for the same. "Good manners," said he "should be the outward and visible sign of inner goodness."

Life has become almost too much of a rush for the showing of courtesy. A "thank you" or a moment's pause for some small act of kindness may cause us to miss our bus or train. There seems to be no time for these fineries though it takes only a fraction of a second to do it.

But there it is. Just try it and see. If occasions for goodwill occur which mean missing our train or comfort, then let us miss them but not the opportunities presented.

People are impressed by such acts. Like all sweet words or gestures, they travel a long way and have lasting effects.

It is worth trying, even for just the few, for as you give so you receive though perhaps in different ways.

Courtesy is a facet of kindness though we do not get so many chances to show it. We need it to-day more than ever. It smoothens others and enriches ourselves, helping us a bit towards that moment when we finally experience a deeper sense in life.

A single act of kindness on our part may be the turning point in another person's life. Kindness is an inner radiance and like the sun, it sheds its warm rays upon all.

Such is the magic power of good deeds and words that it gives our features that secret look of youthfulness the outward and visible expression of an inner bliss that is the halo we see around the saint.

In social life, it is by little acts of kindness occurring daily which lend warm to existence. Poet Nida Fazli says it : Ghar se masjid hai bahut door, chalo yun kar lein kisi rote hue bacche ko hasaya jaye. Opportunities of kindness if sought for are forever starting up—it is by words, by tones, by gestures, by looks.

Life is made up, not of great sacrifices, or duties and deeds but of little things in which smiles given habitually without selfishness work wonders in life. Courtesies are the hallmark of a cultured and developed personality.

India's Employment Challenges : Policy Agenda to Meet

—Shrawan Kumar Singh

Employment is one of the chronic issues India has been facing. Economic growth is meaningful only as long as it creates new jobs, particularly in non-agricultural sector. Job growth leads to an increase in consumer demand which has the effect of sustaining GDP growth and reducing volatility in the output growth rate. The employment situation is becoming increasingly acute as demographic transition pulls young people into the work force at an accelerated pace. India's biggest concern is a paucity of enough jobs to provide gainful employment to people who join the labour force every year. Well over half of the population is dependent on agriculture, which gets some 14 per cent of national income, a clearly discriminatory situation.

Conceptual Framework of Key Employment and Unemployment Indicators

Broadly speaking, the NSSO surveys divide the entire population into three categories :

Category 1 : consists of people who were involved in economic activity (or work) during the reference period of the survey. These individuals are labelled as 'Employed' and Category 1 can be subdivided into categories such as self-employed, salaried employees, and casual labourers.

Category 2 : consists of people who were not engaged in any economic activity during the reference period of the survey, but were looking for work if work was available. These individuals are labelled as 'Unemployed'. Taken together, categories 1 and 2 form the country's 'labour force'.

Category 3 : Consists of people who are neither engaged in work nor available for it. This category—labelled as "Not in the labour force"—would have a large number of people, including those who have retired, those studying, those unable to work due to disability, and those attending 'only' to domestic duties

Problem of getting authentic employment data : Labour bureau conducts two major surveys on employment scenario—Annual Employment-Unemployment Survey (AEUS) and Quarterly Employment Survey (QES). The AEUS was later replaced by Periodic Labour Force Survey (PLFS) being conducted by ministry of statistics and programme implementation (MoSPI). PLFS was initiated by the NSSO beginning April 2017. This initiative followed the recommendations of the Task Force on Improving Employment Data. The PLFS would not only have annual data on employment-unemployment on rural sector but will also have quarterly data on employment-unemployment on urban sector based on larger sample size. Therefore, the corresponding AEUS data set would be comparable. Besides, the Employees Provident Fund Organization (EPFO) has started releasing monthly payroll data.

Employment scenario : It is commonly believed that India needs to provide 10 to 12 million jobs for its expanding labour force. The employment elasticity in India has declined from 0·44 in the first half of the decade 1999–2000 to 2004–05, to as low as 0·01 during second half of the decade 2004–05 to 2009–10. The similar trends have been witnessed at the sectoral level, namely agriculture, service, and manufacturing sectors. **The negative employment elasticity in agriculture indicates movement of people out of agriculture to other sectors where wage rates are higher. This migration of surplus workers to other sectors for productive and gainful employment is necessary for inclusive growth.** However, the negative employment elasticity in manufacturing sector is a cause of concern.

A recent study commissioned by PM-Economic Advisory Council has highlighted the broad trends for employment in India between 2004 and 2018. A key feature of this study is that instead of focusing on unemployment, it focuses only on the 'employment' data. It does so by looking at three comparable surveys conducted by the National Sample Survey Organization (NSSO) relating to Employment-Unemployment Surveys (EUS) of 2004-05, 2011-12, and 2017-18.

On the whole, the total employment in the country grew by 4·5 crore in the 13 years between EUS 2004-05 and PLFS 2017-18. This represents a growth of just 0·8 per cent which is less than half the rate at which the overall population grew, which was 1·7 per cent. Of the 4·5 crore increase in employment, 4·2 crore happened in the urban areas while rural employment either contracted (by 0.01 per cent between 2004 and 2011) or was stagnant (grew by 0·18 per cent between 2011 and 2017). Over the 13 years, male employment grew by 6 crore but female employment fell by 1·5 crore. In other words, while there were 11·15 crore women with jobs in 2004, only 9·67 crore were employed 13 years later. Women's share in employment has fallen from an already low level of 27·08 per cent in 2004 to 21·17 per cent in 2017. Labour force participation rates for women have declined largely because now more women are attending school and college.

The rate of employment growth in the organized sector—that is, in firms that are registered with regulatory authorities and are bound by a variety of labour laws has been the fastest, and its share in the total employed has risen from 8·9 per cent in 2004 to 14 per cent in 2017. The unorganized sector, too, has grown. In fact, while its rate of growth has been slower, its overall share in the economy has gone up from 37·1 per

cent in 2004 to 47·7 per cent in 2017. However, the pace of growth of the unorganized sector has moderated since 2011. Both these sectors have grown at the expense of the agri-cropping sector, where employment has fallen from 21·9 per cent in 2004 to 17·4 per cent in 2017. *In essence, the results show that those who are poor, illiterate, and unskilled are increasingly losing out on jobs.* This is summarized in table below :

Organised Sector Increasingly Prefers Non-Contractual Labour

(All Numbers in Crore)

Sector	Without Contract	With Contract
2004 :		
Unorganised	6·33	0·4
Organised	1·31	2·28
2011 :		
Unorganised	8·9	0·46
Organised	2·44	2·65
2017 :		
Unorganised	10·9	0·48
Organised	3·61	2·8

Source : 2004 and 2011 numbers from the EUS of 2004-05 and 2011-12 respectively; 2017 numbers from the PLFS 2017-18.

The presence of a contract makes all the difference when it comes to job security, minimum wages, equal pay for equal work, safe working conditions, etc. Without a contract, even a worker employed in the organized sector would not have any means of seeking recourse for any injustice. Non-contractual labour earns less in general than contractual labour. That is why the unorganized sector almost entirely employs workers on a non-contractual basis. However, the NSSO data show a sustained trend of even the organized sector in India preferring to employ workers without a contract. Indeed, between 2011 and 2017, this resulted in the organized sector coming to employ more people without a contract. That firms—whether organized or unorganized—prefer non-contractual employment is bad news for India's bid to make the economy more formal. In all likelihood, firms are doing so to cut the extra costs that come with complying with inflexible and stringent labour laws. This is more likely to be the case when firms are stressed for money and struggling to grow.

Factors contributing to unemployment in India : Some factors are as under :

(i) The rising population.

(ii) Some people don't take jobs which are below their grades. They find it difficult to work at the below qualification level job.

(iii) Many big industries look for the skilled candidates only, for their company. They give preference to the experienced candidates only and not the freshers.

(iv) Not enough or new jobs in the government (*sarkari naukri*). Number of new government jobs is decreasing every year. Because of corruption some people get the job by giving the bribe, even though the candidate is not that qualified.

(v) Advanced technology has cut off the employment of many.

(vi) Suitable investment not coming in at the rate required for the number of jobs to increase.

(vii) Many other factors such as : slow business expansion, education is not employment oriented and makes young ones unemployable. There is the dearth of vocational and technical education leading to skill mismatch in the job market.

There is a widely-held view that India's rapid economic growth has been failing to bring about rapid improvement in employment conditions mainly because the organized sector, which has been leading the growth process in India's dual economy, has been a rather poor performer in terms of job creation. The creation of fewer jobs between 1991 and 2013 was largely because of the nature of growth the Indian economy experienced. It was mostly services-led growth with low employment intensity. Many of the jobs being created in the organized sector are informal and rather poor-quality (not much better than many jobs in the unorganized sector). India has an employability problem. While the services can rather easily recruit skilled white-collar workers (IT engineers, English-speaking people for the call centres, etc.), the industry cannot transform peasants into factory workers so quickly.

Government initiative to promote job creation : The government has taken a number of initiatives for job creation. Some of them are as under :

(i) Good beginning has been made in skills training programme for young people under the National Skill Development Mission. Towards that goal, the *Pradhan Mantri Kaushal Vikas Yojana*, skill loan scheme and the national policy for skill development and entrepreneurship 2015 were launched. In all, 25 organizations including key ministries are currently involved in the daunting task of skilling youth for jobs.

(ii) The government has put in place several schemes to help generate employment. These include the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), MUDRA Yojana, Prime Minister's Employment Generation Programme and Pradhan Mantri Rojgar Protsahan Yojana. Additional initiatives aid job creation through providing skill development, easing access to credit and addressing sector specific constraints. The government also made the EPFO premium portable so that workers can change jobs without fear of losing their provident fund benefits.

(iii) The Ministry of Commerce is customizing incentives for labour-intensive export sectors.

(iv) The Stand-Up India scheme, Scheduled Castes, Scheduled Tribes and women entrepreneurs will get support such as free pre-loan training and facilitating loan and marketing.

Creating suitable architecture for jobs : Jobs elude deft economic handling. The government wants to create jobs, not the environment in which job-creation flourishes. While creating jobs is not the Government's primary responsibility, it should act as a facilitator by moulding an environment that enables rapid economic growth, new investments and expansion of jobs. The following *four 'what to dos'* is important for policy :

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(i) Promote the growth of stronger clusters and networks of small enterprises;
(ii) Promote the growth of a 'life-long learning' system;
(iii) Develop better social security systems; and
(iv) Promote the rapid use of technology as an enabler,

And three '*how to dos*' to accelerate the generation of more jobs and enterprises :

(i) A 'whole of government' approach is necessary to create jobs;
(ii) Job creation must be a principal goal; and
(iii) Apply best methods for consultative policy development and implementation.

Areas for more gainful employment : *The McKinsey Global Institute report* (June 2017) suggests three ways to create opportunities for more gainful employment. These are :

(i) more appropriate statistical measurement of employment,
(ii) targeted government programmes, and
(iii) removing hurdles that stand in the way of investment and innovation.

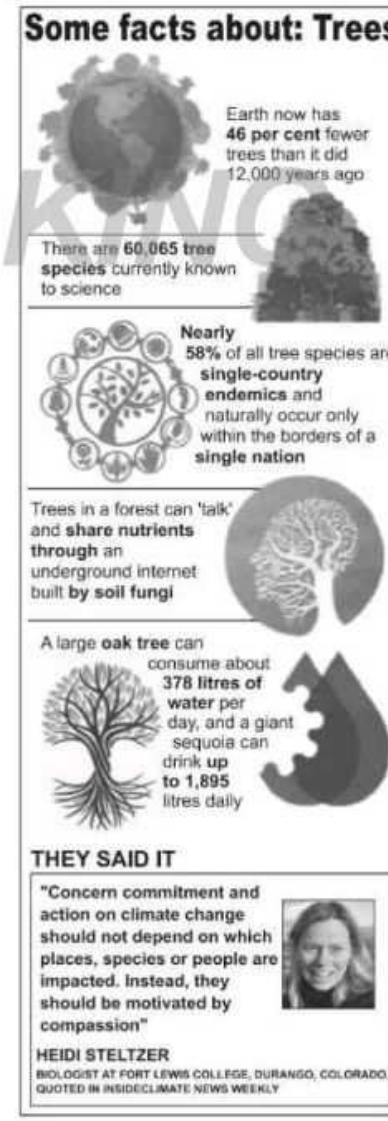
The report emphasized that building industrial townships, focusing on manufacturing, and the development of tourist circuits, all through government programmes, could create more opportunities for gainful employment. Government should focus on economic policies to support sectors of economic activity that are likely to generate the most employment. There are various sectors which can create sizable job opportunities. Some of them are :

(i) Construction.
(ii) Focus on agro-based industries in rural areas.
(iii) Technology should be used to connect specialist expert hubs at state capitals and urban centres with facilities at the district level and below, creating new employment opportunities.
(iv) Telecom expansion.
(v) Expansion of e-commerce and logistics companies to small towns creates new jobs. Logistics and transportation would throw up large numbers of new jobs.
(vi) Health sector has huge potential to create jobs, given the shortage of nurses and health care workers such as lab technicians and surgical assistants.
(vii) Strengthening of education and training is needed because India needs to expand people's skills. Nano degrees that give relevant training and re-training linked to clear standards set in industry, with government help where industry bodies are unable to do so, are essential.
(viii) Jobs by startups and self-employments is the biggest source of new jobs. The conditions government is creating to create a level playing field are obvious.
(ix) To increase employment, especially in the rural sector, the improvement in road connectivity should lead to better role of *village, cottage and micro enterprises* (VCME). To encourage VCME, the government could consider tax incentives, facilitate financing, provide interest subsidy and address issues related to technology absorption.
(x) To improve job opportunities in **tourism**, the policy would have to consider specific location of areas, climate zone and connectivity with city, airport or seaport.
(xi) There is also opportunity and scope for international collaboration on **medical tourism**. Foreign collaboration with insurance companies, hospitals and global pharmaceutical companies, especially in the US, UK and Europe, would ensure high volume of medical tourists. Interestingly, yoga tourism, which has gone global, mainly due to the International Yoga Day, could also be explored.

Conclusion

One must recognize that perceptions about earnings and jobs are changing fast in the wake of rapid technological advances. The true meaning of being a worker is shifting towards having stable, productive and remunerative employment. This aspect must be captured both at the stage of collection of labour data, and while interpreting and analyzing the same for evidence-driven policy-making. Investing in employment data will enable more appropriate policy, fiscal decisions, and monetary policy. India has a lot of catch-up to deliver decent work. Government does need to speed up establishing skilling institutes to tackle the problem of providing qualitative employment, rather than just the numbers. Employment is not the bigger issue; meaningful employment is. The extent of job creation in India has always been subject to debate.

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Environmental Article

Acid Rain in Atmosphere

Acid Rain

Acid rain is the result of air pollution. Any type of fuel that is burnt produces chemical. The smoke from fire, fumes from a car exhaust contain lots of invisible gases that can be even more harmful to our environment. Power stations, factories and cars all burn fuels and therefore they all produce polluting gases. Some of these gases *e.g.*, Nitrogen oxides and Sulphur dioxide react with the tiny droplets of water in clouds to form sulphuric and nitric acids. The rain from these clouds then falls as very weak acid known as acid rain.

Acid rain was first observed in southern Scandinavia in late 1950's. It was then that people began to realise that the origins of this pollution were far away in Britain and Northern Europe; reason for this was the industrial air pollution coming from very tall chimneys, because wind carries the pollution away many hundreds of miles where it eventually falls as acid rains. It is due to this that Britain has contributed 16% of the acid rain in Norway. The west European polluters are Germany, U.K., Poland and Spain. Now Govt. thinks that acid rain is a serious environmental problem and many countries are trying to reduce the emission of sulphur & nitrogen.

Acidity of Acid Rain

Acidity is measured by using the pH scale which ranges from 0 to 14.0 is most acidic and 14 is most alkaline (opposite to acidic) Its pH value is 7, it will be called neutral which means neither it is acidic nor it is alkaline. A very strong acid, if touches your skin, will burn it, even it can destroy metals, but acid rain is much weaker than this acid.

But rain is always slightly acidic because it mixes with naturally occurring acids in the air. Unpolluted rains have a pH value between 5 and 6. When the air becomes more polluted with nitrogen acids and sulphur dioxide the acidity can increase to pH value 4. Same rain has been recorded as being pH value 2.

The Effects of Acid Rain

Acid rain is carried great distances in the atmosphere, not only in between countries but also from continents to continents. It (acid rain) can also take the form of snow, mists and dry dusts. The rain may fall many miles from the source of pollution but whenever it falls it can have a serious effect on soil, trees, buildings and water.

Forests all over the world are dying, fish are dying. In Scandinavia, the dead lakes with crystal clear water, contain no living creatures or plant life. Many of Britain's freshwater fish are threatened; there have been reports of deformed fish being hatched; causing fish eating birds and animals being also affected. Acid rain is responsible for all this. Scientists have been doing a lot of research into how acid rain affects the environment.

Forests

The view is that acid rain can cause trees to grow more slowly or even to die but scientists have found that it is not the only cause. As acid rain falls on a forest, it trickles through the leaves of the trees and runs down into the soil below. Some of it finds its way into streams and then into rivers and lakes. Some types of soil can help to neutralise the acid they have what is called a "buffering capacity".

Other soils are already slightly acidic and are particularly susceptible to the effects of acid rain.

Acid rain may effect trees in several ways *e.g.*, (1) Dissolve and wash away the nutrients and minerals in the soil which help the trees to grow. (2) Cause the release of harmful substances such as aluminium into the soil (3) Wear away the waxy protective coating of leaves, damaging them and preventing them from being able to photosynthesise properly.

A combination of these effects weakens the trees means that they can more easily be attacked by diseases and insects or injured by bad weather. It is not just trees that are effected by acid rain, but other plants may also suffer.

Lakes and Rivers

Aquatic habitats are also affected by acid rain. Acid rain runs off the land and ends up in streams, lakes and marshes the rain also falls directly on these areas.

As the acidity of a lake increases, the water becomes clearer and the number of fishes and other water animals decline. Some species of plants and animals are better able to survive in acidic water than others. Fresh water shrimps, snails, mussels are mostly attacked by acidification followed by fish such as minnows, salmon and roach. The roe and fry (eggs and young) of fish are the worst affected, the acidity of the water causes deformity in young fish and can prevent eggs from hatching properly.

The acidity of water also causes toxic substances like aluminum to be released into the water from the soil harming fish and other aquatic animals.

Lakes, rivers and marshes each have their own fragile, ecosystem with many different species of plants and animals all depending on one another to survive. If a species of fish disappears, the animals which feed on it will gradually disappear too. If the extinct fish used to feed on a particular species of large insect that insect population will start to grow; this in turn will affect the smaller insects or plankton on which the larger insect feeds.

Building

By the effect of climate, every type of material will become eroded sooner or later. The water, wind, ice and snow all help in erosion process but unfortunately, acid rain can help

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Ecological Article

Aspects of Environmental Management : its Concept and Scope

Though nature itself maintains the stability of ecological balance and ecosystem, yet due to emergence of modern industrial era, ecological balance has been disturbed through heavy industrialization, technological revolution, faster growth of means of transport, rapacious exploitation of resources and unplanned urbanization.

In other words, it can be said that the anthropogenic activities of modern man who use the technology, have disturbed the harmonious relationships between the environ-ment and human beings. Clean environment may be achieved through check on destructive activities of man, conservation, protection, regulation and generation of nature.

The process of management is related to the rational adjustment of man with nature involving judicious exploitation and utilization of natural resources without disturbing the ecosystem balance and ecosystem equilibrium.

If natural resources are over exploited, it will affect socio-economic development of a nation. Thus environmental management must take into consideration the ecological principles and socio-economic needs of the society *i.e.*, it involves socio-economic developments on one hand and maintenance of environmental quality on the other hand.

Thus, it is clear that environmental management has two major aspects—

1. Socio-economic development.
2. Stability of biosphere in general and of individual ecosystems in particular.

Scope and Aspects of Environmental Management

Environmental management has very wide scope and it includes all the technical, economic and other aspects of environment. It includes the following aspects :

1. To identify the environmental problem and to find its solution.
2. To restrict and regulate the exploitation and utilization of natural resources.
3. To regenerate degraded environment and to renew natural renewable resources.
4. To control environmental pollution and degradation.
5. To reduce the impact of extreme events and natural disaster.
6. To make maximum utilization of natural resources.
7. To assess the impacts or proposed projects and activities on environment.
8. To review the existing technologies and make them ecofriendly.
9. To formulate laws for the implementation of environmental protection and conservation programmes.

The components of environmental management are based on following five fundamental aspects.

1. Environmental perception and public awareness : This aspect considers the following points :

(A) Sources of environmental perception and public awareness.
(B) Level of environmental perception.
(C) Role of environmental perception in environmental planning and management.

2. Environmental education and training : At university, college and school level the environmental education and training should be given.

3. Resource management : This aspect covers the following points :

(A) Classification of natural resources.
(B) Survey and evaluation of ecological resources.
(C) Preservation of resources.
(D) Conservation of resources.

4. Control on environmental degradation and pollution :

(A) Control on environmental degradation and pollution.
(B) Adopting suitable preventive mechanisms to reduce natural hazards and disaster.
(C) Regeneration of degraded environment.

5. Environmental impact assessment :

(A) Appraisal of existing environmental conditions.
(B) Appraisal of existing and proposed production methods.
(C) Methodology and procedures.
(D) Probable impacts of existing and proposed projects.
(E) Review of technology and required improvement.

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to make this natural process even quicker. Statues, buildings, vehicles, pipes and cables all suffer. The worst affected things are those made from limestone or sandstone as these type of rocks are particularly suspectible and can be affected by air pollution in gaseous form as well as by acid rain.

To reduce the acid rain, we should do following efforts :

(1) Burning fossil fuels is still one of the cheapest ways to produce electricity. So people are now researching new ways to burn fuels which don't produce so much pollution.
(2) Govt. should spend more money on pollution control.
(3) Sulphur may also be washed out of smoke by spraying a mixture of water and powdered limestone into the smoke stacks.
(4) Cars can be fitted with catalytic converters which remove three dangerous gases.
(5) Solar energy and wind mills will be useful.

Pdarpan

Political Article

The Making of Indian Constitution

—A. Bajpai

The Constitution of a country is the fundamental law which defines the relationship between the three organs of the government on the one hand and relationship between the citizens and the government on the other. It is fundamental in the sense that no other law or executive order of the land can supersede the Constitution. The principle of Supremacy of the Constitution emanates from this fundamental nature of the Constitution. It is also fundamental as it lays down the basic principles of governance.

In modern times, the Constitutions are written documents framed by a designated body called Constituent Assembly. The British Constitution is the only unwritten Constitution in the world which has evolved in the course of many centuries. Indian Constitution was framed by the Constituent Assembly, adopted on November 26, 1949 but enforced on January 26,1950.

However, many of the principles of the Indian Constitution were either evolved during British rule or upheld and espoused by Indian leaders as a result of experience gained during national movement. Thus, Indian Constituent Assembly did not begin in vacuum but had rich background of constitutional practices and wide experience of Indian leaders.

Demand for Constituent Assembly

As the national movement advanced as a popular movement, the demand for a Constituent Assembly or the right of Indians to frame their own Constitution was asserted. As early as 1922, Gandhi claimed, "Swaraj will not be a free gift of British Parliament, it will be a declaration of India's full self-expression. That it will be expressed through on Act of Parliament is true but it will be merely a courteous ratification of the declared wish of the people of India even as it was in the case of Union of South Africa."

The Background of Constitution Making

Many of the principles of Indian Constitution were in practice before the Constituent Assembly gave them the present form. The parliamentary form of government along with related principles and institutions like bureaucracy, rule of law, judiciary etc. were gradually introduced by British rulers. The Government to India Act, 1858 provided for the transfer of power from the company to the British government and laid the foundation of a centralised administrative structure with secretary of state in England responsible to the British Parliament and Governor-General in India as head of the administration. The beginning of parliamentary system in India can be traced to the Indian Councils Act. 1861 which provided for certain additional members in G.G. Executive Council for transacting legislative business. Similar, provisions were made in the provinces also. The subsequent modification in this legislative body moved in three directions during the British rule—(i) increasing the number of members of this body, (ii) gradually increasing the proportion of elected members and (iii) finally enhancing the powers of Legislative Council to promote responsible government.

Thus, by the Indian Councils Act, 1892, the clement of indirect election was introduced to select non-official members of the legislative council. The non-official members were nominated by Bengal Chambers of Commerce and provincial legislative council. The council was given power to discuss the annual budget.

The clement of direct election was introduerd by the Indian Councils Act, 1909, popularly known as Morle-Minto reforms. The communal representation in favour of Muslims was adopted by this Act for the first time. In this system of communal representation certain. Seats in legislative Assembly were reserved for Muslims and only Muslim voters were allowed to elect their representatives.

The Government of India Act, 1919, also known as Montague-Chelmsford Report provided for bicameral legislature at the centre and dyarchy at the provinces. In the system of dyarchy, certain subjects were earmarked for which ministers were responsible to the provincial legislative cuundls, while other subjects were under the direct responsibility of the Governor, who was not responsible to the legislative council.

The Government of India Act, 1935 was a mini Constitution with far reaching provisions. It introduced full responsible government at the provinces, and it was known as provincial autonomy. Further, it provided for a federation for India but it could not be implemented before the independence. Similarly emergency' provisions were also incorporated in the Act. It is said that the Act of 1935 had the most singular impact on the Constitution of India. It should be noted that though parliamentary-form of government was gradually implemented, it was not based on universal frenchanse, as majority of people did not have voting rights to elect their representatives.

Besides the constitutional development encouraged by the British government, the Indian leaders of national movement led by the Congress in course of time espoused certain principles of modern governance such as universal franchise, rule of law, independence of judiciary, fundamental rights to citizens, special provisions in favour of weak and marginalised sections of society etc. These principles were reiterated by Indian leaders from time to time through their speeches and actions For example, the Nehru Committee Report 1928 incorporated fundamental rights of liberty, equality, freedom of religion and non-discrimination on the ground of religion, caste etc. The resolution of Karachi Congress, 1931 included certain economic and social rights in favour of deprived sections. The Faizpur vision of Congress led by Nehru espoused the idea of socialism. Nehru declared that the only solution to the world's problems and India's problems lay in socialism. Similarly, Gandhian idea of Swaraj was based on the principles of special provisions in favour of the poor, removal of untouchability, decentralisation and strengthening of Gram Panchayatv. Thus, the vision and mission held by Indian leaders deeply influenced the framing of the Constitution of Independent India.

VISION LEARNING

The Secretary of State Birkenhead challenged in 1928 that Indians are not capable of framing their own Constitution. In response to this, Nehru Committee 1928 framed the Constitution of India which was rejected by the British Government. After the failure of Simon Commission, 1928, Round Table Conferences and enactment of Government of India Act, 1935, the National Congress, officially for the first time demanded a Constituent Assembly in 1935 only. The demand of the Congress was articulated by Nehru in the following words :

"The National Congress stands for independence and a democratic state. It has proposed that the Constitution of free India must be framed without outside interference, by a Constituent Assembly elected on the basis of adult franchise. This is the democratic way and there is no other way short of revolution which can bring the needed result."

The demand for a popularly elected Constituent Assembly was reiterated by the working committee of the Congress in 1939. However, the British Government did not accept the demand till the outbreak of Second World War. The British Government, for the first time, accepted the demand for Constituent Assembly in principle through the August offer made on August 8, 1940 by the Viceroy Linlithgow. The August offer stipulated that after the end of the war, a body representative of principal elements in India's national life will be set up to devise the framework of the new constitution. This offer was rejected by the Indian National Congress.

In order to seek the cooperation of Indians in its war efforts, the British Government sent the Cripps Mission in March 1942, which interalia, proposed the transfer of power after the end of the war and to set up an elected body in India charged with the task of framing the new Constitution with the condition that every province which does not accept the new Constitution thus framed shall have the right to retain its present position. However, the Cripps proposals were rejected by all political parties in India.

After the failure of the Cripps Mission, the future events like Quit India Movement, failure of Shimla Conference 1944, victory of Britain in war, assumption of office by Labour Party Government in Britain 1945 led to fresh thinking on the transfer of power and the setting up of Constituent Assembly. To grapple with the Indian problem the new Labour Government proposed a Cabinet Mission in 1946 which visited India in March 1946 and after interacting with different leaders and parties made important proposals on May 16, 1946 regarding Indian Union, Interim Government and formation of Constituent Assembly. The Cabinet Mission proposals were accepted by the Indian parties with some reservations which paved the way for the formation of Constituent Assembly. The Cabinet Mission plan advocated the formation of Constituent Assembly to frame the Constitution of India without further delay. As for the composition of the Constituent Assembly the plan suggested to allot to each province total seats in proportion to its population in the ratio of one delegation to a population of 10 lakh. Further, it proposed to divide the seats in each province in proportion to the population of each community. The members allotted to each community shall be elected by its members in provincial Legislative Assembly. The Constituent Assembly was constituted on the basis of above provisions.

Nature and Composition of Constituent Assembly

It should be noted that Constituent Assembly was not a popularly elected body. Its members were elected by the members of provincial legislative councils according to the total number of seats allotted to each province. The elections of provincial Assemblies were held in 1945 as per the provisions of Government of India Act, 1935. The elections of the members of Constituent Assembly were held in July 1946, in which members of Legislative Assemblies (Total 1585 members) elected their representatives to the Constituent Assembly.

Out of the total 389 members of Constituent Assembly, 292 were elected by provincial Assemblies, 93 were nominated by princely states and remaining 4 members were nominated from Chief Commissioner areas. Out of 292 elected members, Congress party won 208 seats. The Muslims League won all but 7 of the seats reserved for Muslims in all provinces. Thus, for all practical purposes, it was a Congress Majority Assembly. All the seats allotted to provinces were divided into three categories, Muslims, Sikhs and General. Thus, seats were reserved for only two communities—Sikhs and Muslims. After the partition of the country, as per the Mountbatten Plan 1947, the 86 members belonging to territories held by Pakistan did not participate in the proceedings of Constituent Assembly and the effective strength of Indian Constituent Assembly was reduced to 299 besides the delegates of Chief Commissioners areas.

The sovereign nature of the Constituent Assembly is challenged on two counts. First, it was contended that the Constituent Assembly was not a sovereign body as it was constituted by the British Government which could also abolish it. M.R. Jaykar questioned the sovereign nature of the Assembly in the first session itself as it was subject to the limitations imposed by the statement of Cabinet Mission, 1946. Jaykar's argument was countered by N. Gopalswamy Iyyangar and Alladi Krishaswamy Aiyer by assertion that the Constituent Assembly had full residuary power to undertake the task of constitution making. Whatever is not said, but necessary for the accomplishment of our task, said Iyenger, is within our power to regulate. The Congress also asserted that the Constituent Assembly was a sovereign body as it had the right to frame its own rules of procedure.

The second contention against the sovereign nature of the Constituent Assembly is based on the claim that it had not been elected by the people of India directly on the basis of universal adult franchise. On this ground a member, Maulana Hasrat Mohani, moved a motion demanding a new Assembly elected on the basis of adult franchise. The motion was rejected by the house in total. Besides legal wranglings, it should be emphasised that it was not pragmatic and

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practical to elect the members of Constituent Assembly on the basis of adult franchise given the time constraints and the circumstances prevailing at that time. The popular nature of the Assembly was vindicated by the results of the first General Elections, 1952 as majority of its members won by convincing majority and those which questioned its sovereignty were marginalised in the elections. Thus, the Constituent Assembly, though elected indirectly, was for all practical purposes a fully representative body and the Constitution it framed was the expression of popular will.

Working of Constituent Assembly

The first meeting of the Constituent Assembly was held on December 9, 1946 but members belonging to Muslim League did not participate in the meeting. The senior most member Sachchidananda Sinha was made the pro tem President of the Assembly who presided over its first meeting. In its first meeting, the members elected Dr. Rajendra Prasad as its permanent President.

After the transfer of power and independence of India through the Independence of India Act, 1947, the Constituent Assembly became fully sovereign body as all British controls came to an end after August 15, 1947.

In order to perform the task of Constitution making in a smooth and systematic manner, the Assembly at the early stage adopted and framed the rules of procedures, generally followed in the transaction of legislative business. Thus, the provision of draft Constitution was taken as bills and passed through three readings. The procedure was democratic as it allowed ample scope for debate on each provision of the proposed draft.

The Constituent Assembly transacted its business through various committees for preparation of the draft of the Constitution. In total 22 Committees were formed out of which 10 committees were on procedural matters and 12 Committees were on substantive affairs including the drafting Committee, the most important among all the committees.

The Committees on procedural affairs included rules of Procedure Committee, Finance and Staff Committee, Credential Committee, House Committee, Press Gallery Committee, Steering Committee, Order of Business Committee, Hindi Translation Committee, Urdu Translation Committee and Committee to examine the effects of Indian Independence Act.

The Committees on substantive affairs are : Committee for negotiation with states, Advisory Committee with five sub-committees on important issues such as fundamental rights, minority problem etc., Union Powers Committee, Union Constitution Committee, Provincial Constitution Committee, Drafting Committee, Financial Provisions Committee, Committee on Chief Commissioners, Provinces, Draft Constitution examination Committee, National Flag Committee, Supreme Court Committee and Linguistic Provinces Committee.

The drafting committee charged with the responsibility of drafting the Constitution was headed by Dr. B. R. Ambedkar. Most of the Committees on substantive affairs were headed either by Nehru or Patel. Six other members of the drafting committee are given below :

1. N. Gopalswami Ayyangar
2. Alladi Krishnaswami Ayer
3. K. M. Munshi
4. Mohammad Saadullah
5. B.L. Mitter who was shortly replaced by N. Madhav Rao
6. D.P. Khaitan, who died in 1948 and was substituted by T.T. Krishnamachari.

B.N. Rao was appointed the Constitutional Advisor to the Constituent Assembly. The process of Constitution framing was conducted in five stages. First, the committees prepared and presented the reports on the basic issues assigned to them. Second, the constitutional advisor framed the initial draft on the basis of reports of the committees. Third, the drafting committee refined the draft Constitution and circulated for discussion among people. Fourth, the draft Constitution was discussed in the Assembly and amendments proposed and disposed. And finally Constitution was accepted and adopted by the Assembly. During discussion in the Assembly, the procedure of **Three Readings** of the draft was adopted. The same Three Reading procedure is being followed in India for framing of laws by the state and central legislatures.

The Preamble of the Constitution owes its genesis to objective resolution moved by Nehru on December 13, 1946, which was debated for a week and finally adopted by the Constituent Assembly in its next session held in January 20-22, 1947. The objective Resolution embodies the basic philosophy and principles of the Constitution and is included as the preamble of the Constitution. Nehru drafted the objective Resolution, which was approved by the working committee of the Congress. In fact, unofficially, Congress Assembly party played an important role as it debated and discussed each provision outside the proceedings of the Assembly before it reached the floor of the House.

Dr. Ambedkar with his rich knowledge of principles of leading Constitutions and working of Government of India Act, 1935 presented underlying principles of each provision in a convincing manner. Mostly, he replied to the criticism of the draft Constitution during debates and discussion.

The Constituent Assembly of India had a cosmopolitan character. Many experienced and knowledgeable personalities were nominated for election in the Assembly by the Congress to make Constitution making a viable exercise. Many expert members contributed richly in their designated fields. For example, Alladi Krishnaswami Ayer contributed in the provisions related to fundamental rights and Supreme Court and High Courts. The provisions related to administrative matters were elaborated and refined by N. Gopalswamy Iyyangar. K.M. Munshi was instrumental in framing the rules of procedure. T.T. Krishnamachari contributed to the provisions relating to federal system, finance, and inter-state trade and commerce. Dr. Rajendra Prasad conducted the proceedings of the Assembly in the dignified and impartial manner. Surdar Patel was instrumental in solving problems of minorities and princely states. Similarly, many others made their expert advice and contributed richly in debates and discussion.

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Energy Article

Access to Affordable, Reliable, Sustainable and Modern Energy for All

—Dr. Vivek Sharma

Future of 'Industry 4·0'—the ongoing era of fourth industrial revolution—rests upon the cheap, clean and uninterrupted flow of energy. The entire world—developed and developing—draws its success through the use of modern sources of energy, which are neither clean nor sustain-able. Thermal power houses, major source of electricity, generate huge amount of carbon dioxide and carbon particles in the air. Likewise motorised vehicles, running on fossil fuels, generate large quantity of green house gases. Access to modern energy is fundamental for development and poverty reduction, yet many countries in Asia and the Pacific are struggling to ensure affordable, reliable, sustainable and modern energy resources to meet their increasing energy demand. This poses significant economic, environmental, and social challenges. Affordable and clean energy services are a crucial input to supporting the provision of basic needs such as food, lighting, use of appliances, water, sanitation, essential health care, education, communication and transport as well as the modern technology of production. They are also a necessary input into income generation and productive activities such as agriculture, industry as well as poverty alleviation, and reduction of inequality.

Recognition of the synergies between energy and many facets of development is increasing along with the demand for more sustainable energy production, distribution and use. The Sustainable Development Goals (SDGs), have set global targets for energy development that, if achieved, will serve to increase and expand socio-economic benefits while reducing environmental impacts.

India is committed to supporting the States in defining sustainable development priorities within the scope of energy and to contributing to the implementation of *Sustainable Energy for All and the 2030* Agenda for Sustainable Development, particularly Sustainable Development Goal 7.

Energy Transition

Tackling the multiple energy-related challenges necessitates a transition in the way energy is generated, transmitted and consumed. Major components of this transition are enhanced energy efficiency, increased renewable energy in the energy mix, improved energy access and better connectivity across the region. While the energy sector in many countries is slowly being transformed, the pace of the change needs to accelerate.

Energy transition is not only essential to reach the targets of SDG7, but indeed, many of the other SDGs can benefit from the spillover effects of affordable, reliable, sustainable, and modern energy for all. Moreover, fulfilling the commitments made in the Paris Agreement requires a rapid energy transition in the Asia-Pacific region. The energy transition has the potential to contribute to energy security; it can reduce energy poverty, leading to a wide range of social benefits and it can drastically reduce environmental and health hazards.

Report on Regional Cooperation for Sustainable Energy 2017 analyses a number of considerable challenges in the Asia-Pacific region and its efforts to accelerate the energy transition to achieve Sustainable Development Goal 7 (SDG7). The Energy Transition Pathways for the 2030 Agenda: Regional Trends Report 2018 identifies the gap between the baseline and the 2030 targets to demonstrate the additional efforts and resources that would be needed to achieve the SDG7 targets.

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United Nations Sustainable Development Goal 7

Energy has been recognized as necessary pre-requisite for development of societies and for them to flourish. Access to energy enables people to augment their income and improve their productivity, enhancing their access to healthcare, water and education, and improving their overall well-being. Goal 7 aims to ensure universal access to affordable, reliable, and modern energy services by the year 2030. As per the commitments towards UN SDG 7.

The targets to be achieved by 2030 are as follows :

- **7·1 :** By 2030, ensure universal access to affordable, reliable and modern energy services.
- **7·2 :** By 2030, increase substantially the share of renewable energy in the global energy mix.
- **7·3 :** By 2030, double the global rate of improvement in energy efficiency.
- **7·a :** By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.
- **7·b :** By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support.

Facts and figures

- One in five people still lack access to modern electricity
- 3 billion people rely on wood, coal, charcoal or animal waste for cooking and heating
- Energy is the dominant contributor to climate change, accounting for around 60 per cent of total global greenhouse gas emissions
- Reducing the carbon intensity of energy is a key objective in long-term climate goals

Energy Access

Electrification : Electricity is a fundamental input to socio-economic development. It is an essential input to the daily life for the majority of the global population. At the household level, electricity is critical for basic functions, such as lighting and the operation of appliances. It is needed to support livelihoods, education and well-being. With electricity, men and women are increasingly engaged in productive activities and public lighting in communities increases safety at night, particularly for women. Yet, the level of service (hours per day with electricity, etc.) is not fully captured in the current metrics – largely due to the lack of adequate data. Roughly 1 billion people in the world live without electricity. Sub-Saharan Africa and South Asia continue to have the largest access-deficit. About 80 per cent of those without access to electricity live in top 20 largest access-deficit countries whose progress has a major influence on global outcomes. According to a global report, if current population trends continue and progress on electrification remains unequal, about 674 million people will continue to live without electricity in 2030.

All India Installed Capacity of Power (in MW)

(As on October 31, 2019)

1. Thermal Power :	229401·42
• Coal Based	197694·50
• Lignite Based	6260·00
• Gas Based	24937·22
• Diesel Based	509·71
2. Nuclear Power	6780·00
3. Hydro Power	45399·22
4. Renewable Energy Sources	83379·50
Total	**364960·14**

PM Narendra Modi launched the ₹ 16,320 crore Pradhan Mantri Sahaj Bijli Har Ghar Yojana or Saubhagya scheme on September 25, 2017 to ensure last-mile connectivity to willing households to help achieve the goal of giving every household the access to electricity by December 31, 2018. On April 28, 2019 when Leisang, a tiny hamlet in Manipur, was connected to the grid, Prime Minister Narendra Modi tweeted that it would be "remembered as a historic day in the development journey of India" as India has achieved 100 per cent electrification. India's expanding economy and population put it on the track to be the biggest driver of global energy demand through 2040, the Paris-based International Energy Agency said in a report on the country in 2015. Its grid connections are growing by 5 per cent a year, a development that, along with rising incomes, means its power system needs to quadruple in size by 2040 just to keep pace.

Clean Cooking : Access to clean fuels and technologies shortened here to 'clean cooking' is essential to modernize energy services, support public health, reduce gender inequality, and mitigate environmental impacts, particularly the poorest segments of the population. The use of traditional biomass in the form of wood, charcoal, and dung in open fires or inefficient stoves for cooking and heating compromises indoor air quality. Indoor smoke contains a variety of pollutants, with adverse health effects. To mitigate the adverse impacts, switching to clean cooking technologies and fuels, such as biogas, advanced biomass cookstoves, electricity, LPG and solar cooking, is necessary. However, the logistical challenges associated with achieving the goal make it more difficult than electrification and, hence, it is largely off track compared to the target.

Renewable Energy

Increasing the use of renewable energy supports the development of energy and other sectors. It offers social, economic, and environmental benefits. To meet energy demand and to reduce import dependencies that raise vulnerabilities to global market shifts, some economies are pushing the use of renewables to balance their energy mixes with indigenous resources. Renewable energy also offers options for energy access through decentralized applications. On-grid and off-grid renewable energy markets are expanding as private sector participation increases.

Renewables are a key component for decarbonizing economies. Under the Paris Agreement, countries have pledged to reduce carbon emissions from the use of fossil fuels. In 2014, the Asia and the Pacific region was responsible for 55·2 per cent of global emissions from fuel combustion, 66 per cent of which were from coal. Decarbonizing the energy sector by shifting to renewable energy, thus, supports efforts to achieve climate objectives, including nationally determined contributions.

To ensure that the world truly achieves universal access to energy, renewables will have to play a crucial role. 'On-grid' population in India and other countries need to look at off-grid solutions as a sustainable way of taking electricity to the last mile where power supply is currently unreliable. If countries want to provide uninterrupted power supply to the people, potential of decentralised renewable energy solutions such as mini-grids and rooftop solar needs to be tapped.

Energy Efficiency

Energy efficiency is key to the realization of sustainable development objectives that pertain to the energy sector, as well as to other sectors. Increased energy security is supported through energy savings and reduction in investment needs for capacity additions, reliance on energy imports and vulnerability to fluctuations in energy prices. While energy efficiency for importing countries can boost currency reserves, energy efficiency for exporting countries increases their energy resources available for export.

Energy efficiency is closely tied to the realization of universal access targets by enabling higher levels of energy services at lower consumption rates and costs. Synergies between efficiency and renewable energy are also strong, as lower overall energy demand contributes to efforts aimed at meeting renewable energy targets by making it easier to increase the share of renewable energy in the energy mix.

Energy intensity is the best available proxy measure for energy efficiency. It is being used to monitor progress as in achieving the objectives set out in SE for All initiative and Sustainable Development Goal 7. Energy intensity is measured in units of energy per dollar of GDP, in which high numbers indicate more energy consumption per dollar of economic output and declines in energy inten-

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sity are a proxy for efficiency improvements. The Asia-Pacific region has experienced a steep decline in regional energy intensity, from 9·1 MJ/2011 PPP $ in 1990 to 6·0 MJ/2011 PPP $ in 2014 heading towards the global average. With the further decoupling of GDP growth and total final energy consumption during the period 2012-2014, the region achieved a short-term annual average energy intensity reduction of 3.0 per cent, outpacing other global regions.

India's Major Leap Towards Clean Energy on Sustainable Basis

India is pushing for adoption of clean and efficient energy sources and end-use technologies at the household level. The Saubhagya scheme has extended electricity connections to 26 million homes and Ujjwala has provided 80 million LPG connections. Significant efforts are also being made to increase awareness and adoption of LED bulbs, energy efficient appliances, electric vehicles, and rooftop solar. These efforts along with increase in incomes, urbanisation, and rapid advances in technology are expected to change the household energy consumption patterns substantially.

The household electrification : India has shown strong intent and performance towards household electrification. 99·92% Indian villages (619289) were electrified, as on March 31, 2019. Chhattisgarh was the only state in the country, with 519 villages yet to be electrified. As on March 31, 2019, 214473043 Households were electrified in the country (99·99%).

Clean cooking fuel : As per the latest report of Pradhan Mantri Ujjwala Yojana, 95 per cent of the Indian households use clean cooking fuels. In contrast to these claims 76th round of National Sample Survey, released by National Statistics Office says that about 61 per cent of total households in India used liquefied petroleum gas (LPG) for cooking in India in 2018. There is a significant divide between rural and urban households, with only 48·3 per cent of rural households using clean cooking fuels compared to 86·6 per cent urban households. The LPG usage by households was low in major states such as Odisha (32·6 per cent), Jharkhand (32·9 per cent), West Bengal (42·8 per cent), Rajasthan (48·1 per cent), Madhya Pradesh (48·3 per cent), and Uttar Pradesh (50·2 per cent).Goa at 84·1 per cent and Delhi at 97·7 per cent are the best performing among States and UTs respectively.

Renewable energy : Renewable energy sources are 22 per cent of the total installed electricity generating capacity of India. Among the installed electricity sources of utilities, renewables grew at the highest rate during 2006-07 and 2018-19. Wind power has the highest share among all renewable power sources (March, 2019). Renewable sources constitute 100 percent of total installed generating capacity of electricity in three States and four UTs. As on October 31, 2019 total installed capacity of renewable energy was 83379·50 MW in the country. Out of this 37090·02 MW was from wind power, 31696.26 MW was from solar power, 9806.31 MW was from Bio Mass Power/ Cogen, 4647·11 MW was from small hydro power and 139·80 MW was from Waste to Energy.

Government of India Initiatives

India aims to achieve the dual objective of affordable and clean energy by providing access to energy for all at affordable prices and by laying emphasis on de-carbonisation through improved energy efficiency and shift towards renewable energy.

- The Government of India has prepared the National Electricity Plan and the National Energy Policy which aim to chart a clear roadmap to meet these ambitious targets in the energy domain. The Government of India has launched various schemes which are aimed at creating awareness, making clean energy accessible to all, and sustainable usage by reducing wastage.
- **The National Solar Mission** has set the ambitious target of deploying 20,000 MW of grid connected solar power by 2022, aimed at reducing the cost of solar power generation in the country. Dedicated **Green Energy Corridor** has been constructed in the country to improve inter-State transmission system to evacuate approximately 20,000 MW of large scale renewable power.
- The **Off-Grid and Decentralized Solar PV Applications Programme** was launched with the objective to demonstrate and promote off-grid applications of solar photovoltaic (SPV) systems for meeting lighting and electricity requirements of individuals, institutions, communities, commercial and industrial establishments.
- The **National Biogas and Manure Management Programme** was started with the objective of providing fuel for cooking purposes and organic manure to rural households through family type biogas plants. It aims to mitigate the drudgery of firewood collection by rural women, reduce the pressure on forests and accentuate social benefits of improved sanitation in villages by linking toilets to biogas plants.
- To achieve 100 per cent electrification in India, the ***Pradhan Mantri Sahaj Bijli Har Ghar Yojana- Saubhagya*** (Prime Minister's Programme for Easy Electricity for Each Household) was launched to provide electricity connections to all households in rural and urban areas.
- The **LPG subsidy, under PAHAL**, aims at reducing the cost of LPG by providing subsidy on the gas cylinders through Direct Benefit Transfer to poor households.
- The ***Deen Dayal Upadhyaya Gram Jyoti Yojana*** scheme focuses on providing continuous power supply to rural households and to agricultural consumers.
- The high dependency of nearly 40 per cent of India's population on biomass for cooking has been a key challenge, which has been sought to be corrected by the ***Pradhan Mantri Ujjwala Yojana*** that aims at providing Liquefied Petroleum Gas (LPG) connections to 50 million women from poor families over a 3-year period (2016-19). So far, 80 million LPG connections have already been provided and the target has been achieved.

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Agriculture Related Article

Integrated Development of Horticulture

—Dr. R.S. Sengar

Horticulture (a Latin word 'Horticulture' means **Hortus** = Garden + **Culture** = Cultivation) has emerged—as the vital component of Indian Agriculture in the last **two** decades with spectacular performance in terms of area expansion, production and productivity. Horticulture contributes 30 per cent to GDP of Agriculture from nearly 13 per cent of the total cropped area and support nearly 20 per cent of the Agricultural labour force. India is the **Second** largest producer of fruits and vegetables in the world, after China with contribution of 11·84 and 13·36 per cent in the total world production of fruits and vegetables respectively. In 2016-17, production of Horticulture crops comprising fruits, vegetables and spices touched a record high of 300 million tonnes, surpassing the production of foodgrains for the fifth year in a row. Trends of Horticulture growth are continuously on higher trajectory and India is expected to see a new record of Horticulture production in 2017-18. According to the **first** advance estimate of the Agriculture Ministry for the year, the total production is expected to be 305·4 million tonnes-nearly 5 million tonnes more than the production in 2016-17. Higher production is mainly attributed to increase in productivity as sown area under the horticulture crops has increased only marginally over the years. Farmers continue to have inclination in Horticulture production due to higher returns. Total cultivated area had increased from 24·50 million hectares in 2015-16 to 24·85 million hectares in 2016-17 and further to 24·92 million hectares in current crop year (July-June). Simultaneously, the productivity level of the Horticultural crops has also increased by 3·45 per cent in 2016-17 in comparison to the year 2015-16.

Mission for Integrated Development of Horticulture (MIDH)

Mission for Integrated Development of Horticulture (MIDH) is a **'Centrally Sponsored Scheme'** for the holistic growth of the Horticulture sector covering fruits, vegetables, root & tuber crops, mushrooms, spices, flowers, aromatic plants, coconut, cashew, cocoa and bamboo. Under MIDH, Government of India (GOI) contributes 60%, of total outlay for developmental programmes in all the States except States in North-East and Himalayas, 40% share is contributed by State Governments. In the case of North-Eastern States and Himalayan States, GOI contributes 90%. In case of National Horticulture Board (NHB), Coconut Development Board (CDB), Central Institute for Horticulture (CIH), Nagaland and the National Level Agencies (NLA), GOI contributes 100%. MIDH also provides technical advice and administrative support to State Governments/State Horticulture Missions (SHMs) for the Saffron Mission and other Horticulture related activities Rashtriya Krishi Vikas Yojana (RKVY)/NMSA.

Strengths of Horticulture Sector

The area under fruit crops during 2015-16 was 6·4 million ha with a total production of 91·4 million metric tonnes (MT). During the period, production of fruits increased by about 39 per cent, while the area increased by about 7 per cent. Over the last decade, the area under Horticulture grew by about 3 per cent per annum and annual production increased by 5·4 per cent. India was the **second** largest fruit producer in the World. The country is **first** in the production of fruits like mango, banana, sapota, pomegranate and aonla. After China India was the **second** largest producer of vegetables. India is a leader in production of **vegetabtes** like; peas and okra Interventions for better production technologies in Horticulture in the country, have led to an increase in per capita availability of fruits from 133 gm/person/ day in 2004-05 to 200·6 g/person/day in 2016-17. Similarly, per capita availability of vegetables has increased from 264 g/person/day in 2004-05 to 355 g/person/ day in 2015-16. Vegetables are important crops in horticulture sector, occupying an area of 9.6 million ha during 2015-16 with a total production of 166·6 million MT with average productivity of 17·4 tonnes/ha. Infact, vegetables constitute about 59 per cent of horticulture production. Spices are an important component of horticulture and India is the largest producer, consumer and exporter of spices and spice products. Total production of spices during 2015-16 was 6·4 million MT from an area of 3·26 million MT. In monetary terms, total value of output of horticultural crops is ₹ 3,70,500 crores.

Recent Policy Initiatives

The budget for 2018-19 clearly reflects the commitment of the Government towards Agriculture and farmers' welfare as well as the Government's resolve to double farmers' income by 2022. In year 2017-18 the budgetary allocation for Agriculture and Farmers' Welfare Ministry was from ₹ 51,576 crore to ₹ 58,080 crore. Central Government has taken major initiatives in 10th and 11th Five Year Plans for accelerating the growth of Horticulture in the country. A NHM started in 2005-06 as sponsored through Central Government Scheme to promote whole growth of Horticulture through an area-based regionally differentiated strategies. It is during this period that three flagship Schemes namely, National Horticulture Mission, Horticulture Mission for NE and Hilly Areas and Rashtriya Krishi Vikas Yojana having impact on Horticulture development were implemented simultaneously. Success of these Schemes prompted the Central Government to launch **'Mission for Integrated Development of Horticulture (MIDH)'** during XII Plan (w.e.f. 2014-15) for growth of the Horticulture sector covering fruits, vegetables, root and tuber crops, mushrooms, spices, flowers, aromatic

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plants, coconut, cashew, cocoa and bamboo. Sikkim **(NER)** State is the Organic Agriculture/Farming in the Country; therefore, Horticulture products would be beneficial for sales.

Food Processing and Value Addition

The budget for 2018-19 proposes to set up state-of-the-art facility in 42 mega food parks which are in different stages of functioning. Ministry is working significantly on a comprehensive policy covering issues to promote export of Agricultural commodities like; tea, coffee, fruits and vegetables. This scheme has been designed for higher price for farmers from their produce, creation of high quality food processing infrastructure, reduction in food wastage, and creation of an efficient food supply chain, among others. For the projected growth in the Food Processing Industry, it is expected that the requirement of human resource would be about 17·8 million in 2022.

Scope and Importance of Post Harvest Technology (PHT) in Horticultural Crops in India, Scope in India/Future prospects in India

1. Magnitude of pH losses in fruits and vegetable is still to be minimized by proper cultural operations, harvesting, transportation and storage facilities.
2. Establishment of cold storage at the growers and retailers level is a greater scope for fruit and vegetable processing industry. Presently mango, pineapple, citrus, cucumber, grapes, peas, tomatoes, potatoes, are being processed on a major scale.
3 There are about 4000 small and large scale processing units in the country which process only about 2·5% of the total fruit and vegetable as against 40-85% in developed countries (*e.g.*, Malaysia–83%, Philippines–78%, Brazil and USA–70%).

Importance of Post Harvest Technology

1. Proper handling, packaging, transportation and storage reduces the post harvest losses of fruits and vegetables. Every one per cent reduction in loss will save 5 million tons of fruit and vegetable per year.
2. Processing and preservation technology helps to save excess fruit and vegetable during the glut season (off season).
3. The technology has become a necessity to improve the food safety and strengthen nation's food security.
4. The technology helps to boost export of Agricultural commodities in the form of preserved and value added products.
5. Presently mango, pineapple, citrus, grapes, tomatoes, peas, potato and cucumber are being processed on a large scale.

Emphasis on Better Post-Harvest Handling and Cold Chain Facilities

In India, there is a need to upgrade cold chain logistics for better post-harvest handling of the Horticultural produce. The present capacity of cold storage is estimated at around 32 million tonnes in the country. Ministry of Food-Processing Industries has launched 'Pradhan Mantri Kisan Sampada' Yojana for Integrated Cold Chain and Value Addition Infrastructure, for which expression of interest is invited from time to time. The Ministry is providing financial assistance in the form of grant-in-aid of maximum ₹ 10 crore per project for setting up integrated cold chain and preservation infrastructure facilities without any break from the farm gate to the consumer. The integrated cold chain and preservation infrastructure can be set up by individuals, groups of entrepreneurs, cooperative societies, Self Help Groups, Farmer Producer Organizations, Non-Government Organizations, Central/State PSUs, etc. The projects set up under the Schemes of this Ministry are granted financial assistance at a higher rate in difficult areas and North-East Region (7' sisters of India) as compared to general areas.

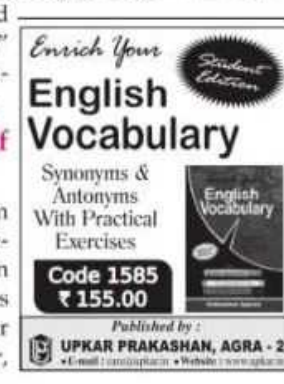
Better Pricing of Crop Harvest

Marketing system also need strengthening and modernization in realizing better prices for the crop produce for the farmers. Last year, the coverage of National Agricultural Market (e-NAM) was expanded from the current 250 markets to 585 APMCs. This year, ₹ 2,000-crore fund has been provided for the development of agri-markets. This initiative will help upgrading Agricultural marketing infrastructure in the 22,000 Grameen Agricultural Markets (GrAMs) and 585 APMCs. To have a crop specific approach, 'Operation Greens' has been launched for some important vegetable crops like tomato, potato and onion with an allocation of ₹ 500 crore.

Strengthening of Irrigation Potential : According to a recent concept paper of NITI Aayog, out of 160 million hectares of cultivable land in India, only about 65 million hectares or 41 per cent are covered under irrigation. Further, just 8·6 million hectares are currently covered under micro-irrigation compared to a potential 69·5 million hectares. The Central Government continues to invest in irrigation and this year ground water irrigation scheme under Prime Minister Krishi Sinchai Yojana-Har-Khet-ko-Pani will be taken up in 96 deprived irrigation districts where less than 30 per cent of the land holdings gets assured irrigation presently, with budget provision of ₹ 2600 crores.

Development of Technology-based Precise Crop Production Packages

There is need to make use of Space Technology in making a weather-based and soil-characteristics based profile of the cultivable land in different parts of the country. The Agriculture Ministry is working on a project called **CHAMAN** (Co-ordinated Horticulture Assessment and Management using geoinformatics), which is making use of satel-





lites and remote sensing technology. CHAMAN project will help in accurate forecasting of area and production of seven major crops in about 185 districts across India. The study will be taken up in Eight States namely, Maharashtra, Andhra Pradesh, Karnataka, Tamil Nadu, Gujarat, Madhya Pradesh, Haryana and Himachal Pradesh. Under the project, the Ministry will use remote sensing and geo-informatics data to integrate information on weather, soil, land-use, and crop mapping to prepare horticulture development plans. The project is being implemented by the Delhi-based **'Mahalanobis National Crop Forecast Centre'** and is likely to be completed by March. The idea is to use space technology to identify crops suitable to different areas and raise production of Horticulture crops.

High-tech Crop Production Demonstrations

The Central Government has taken initiatives to establish Centres of Excellence for different Horticultural crops for motivating the farmers and adoption of modern technologies of horticultural production. So far, 20 Centres of excellence are functioning in different states and **five** more are ready to start. Among these Centres, for vegetables it is in Karnal (Haryana); for mangoes in Dapoli (Maharashtra); for citrus fruits in Nagpur (Maharashtra), both in Maharashtra and one for pomegranates in Bassi (Rajasthan). Some State Governments have also taken such noble initiatives to boost the Horticulture production.

Priority Issues for the Future

Quality Planting Material : Availability of quality planting material is the basic need for expansion of truthful Horticulture industry. However, unorganized sector is the source of more than 60 per cent planting material. Further, most of the nurseries in production of Horticulture planting material are engaged in ornamental plant production and are concentrated in the vicinity of towns and cities. As per the star-rating programme of the National Horticulture Board (NHB) Gurgaon, Haryana, of the 689 nurseries rated none was 5-star rated and only 25 were 4-star rated.

High Density Planting (HDP) : High density planting accompanied with assured irrigation and higher application of essential nutrients can be an important technological intervention for increasing the productivity in important fruit crops. HDP increases the plant population per unit area which results in higher yield of fruit crops. HDP technology has been successfully tried in banana, apple, papaya, mango, guava and citrus with development of their package and practices. In Himachal Pradesh, a World Bank aided project of ₹ 1134 crore is in operation where HDP in approximately 18000 ha area is one of the important components for productivity enhancement in apple. In J&K also, the Government has launched HDP scheme in apple with 50 per cent subsidy to the farmers. In 2017, more than one lac plants were planted in 110 orchards in J&K which were imported from Italy and Netherlands.

High-tech Protected Cultivation : Protected cultivation is high-tech cultivation which results in 5 to 12 times higher output than cultivation in the open field. Greenhouse crop production is spread over an estimated 405,000 ha of greenhouses in more than 55 countries in the world on a commercial scale and it is continuously growing at a fast rate internationally. In India, protected cultivation under poly houses is done in approximately 25,000 hectares which is negligible in comparison to some of the leading countries in the field of protected cultivation. In Haryana, National Horticulture Mission (NHM) has joined hands with Israel to rope in farmers in protected cultivation in vegetable farming. Under this programme, Indo-Israel Centre for Excellence in Vegetables has been established at Gharaunda near Karnal and the project is spread over 15 acre and doing a business of ₹ 55 lakh per annum. On an average, setting up a green house or poly house on one acre of land requires around ₹ 40 lakh (₹ 900 per sq m) and in one year it gives a minimum return of around ₹ 60 lakh.

Strengthening of Logistics for Better Post-harvest Handling of Crop Harvest : Presently, we lack in adequate and proper infrastructure for handling and transport of the Horticultural produce. Such facilities are essential to increase our exports to the other countries. As majority of Horticultural produce is perishable in nature, there is need for setting up international air cargo services and cold storage facilities at all the major airports. As Bengaluru Airport has already been equipped with such facilities, it has resulted in the boosting of the floriculture sector in and around Bengaluru.

Need to Streamline Marketing of Crop Harvest : Our system of marketing also needs major technology and capital intervention to modernize and unify the marketing network in different parts of the country. Such interventions will help to raise the income of the farmers, reduce the post-harvest losses in the crops and will also help in moderating the prices of the different commodities. Marketing system can be unified through online agri-trade in which Karnataka has done exemplary work. The state has integrated 55 mandis with trade to the tune of ₹ 8,500 crore. The Centre's proposed Online National Agriculture Market (NAM) will adopt many of the best practices from this model but also look at similar reform initiatives in other states to incorporate the same into its design. 'NIAM' (National Institute of Agriculture Marketing), Jaipur (Raj.) is playing a good role in Agriculture Marketing Sector activities.

Conclusion

Horticultural crops are giving more output per unit of land in terms of production and income. This is an important factor for making farming viable and attractive. Budgetary support and infusion of new technologies in the production of Horticultural crops can give a phenomenal boost to the Agriculture economy. Thus, Horticulture can act as catalyst in achieving the target of doubling the income of the farmers by 2022. The message of Mahatma Gandhi (1915) "Agriculture is the Soul of India" has to be adopted in '21st' century in the country, so as to provide food, fruits, flowers etc. for fast growing population of the country, which has now crossed over 130 million people.

Maternal Mortality in India on Declining Trend in 2015-17

Reduction of mortality of women is an area of concern for the Governments across the globe. The International Conference on Population and Development in 1994 had recommended reduction in maternal mortality by at least 50 per cent of the 1990 levels by the year 2000 and further one half by the year 2015.

The Office of the Registrar General, India, apart from conducting Population Census and monitoring the implementation of Registration of Births and Deaths Act in the country, has been giving estimates on fertility and mortality using the Sample Registration System (SRS). SRS is the largest demographic sample survey in the country that among other indi cators provides direct estimates of maternal mortality through a nationally representative sample. Verbal Autopsy instruments are administered for the deaths reported under the SRS on a regular basis to yield cause-specific mortality profile in the country. The First Report on maternal mortality in India (1997-2003)—Trends, Causes and Risk Factors was released in October, 2006. The present Bulletin, which provides only the levels of maternal mortality for the period 2015-17, is being brought out as a sequel to the previous Bulletin (2014-16). With this, the maternal mortality data from SRS is available for a period of 21 years.

In order to understand the maternal mortality situation in the country better and to map the changes that have taken place, specially, at the regional levels, States have been categorized into three groups namely, "Empowered Action Group" (EAG) States comprising Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Odisha, Rajasthan, Uttar Pradesh & Uttarakhand and Assam; 'Southern' States which include Andhra Pradesh, Telangana, Karnataka, Kerala and Tamil Nadu; and 'Other' States covering the remaining States/UTs as was done in respect of Maternal Mortality Report (1997-2003) and also in the Maternal Mortality Bulletin (2014-2016). It is heartening that the Maternal Mortality Ratio of India has declined from 130 in 2014-2016 to 122 in 2015-17. The decline has been most significant in EAG States & Assam from 188 to 175. Among the Southern States, the decline has been from 77 to 72 and in the Other States from 93 to 90.

Maternal Mortality Ratio (MMR), Maternal Mortality Rate and Life Time Risk; India, EAG & Assam, South and Other States, 2015-17

India & Major States	Maternal Mortality Ratio	Maternal Mortality Rate	Lifetime Risk (%)
India	**122**	**8·1**	**0·3**
Assam	229	15·2	0·5
Bihar	165	16·9	0·6
Jharkhand	76	6·1	0·2
Madhya Pradesh	188	17·5	0·6
Chhattisgarh	141	11·0	0·4
Odisha	168	11·1	0·4
Rajasthan	186	16·8	0·6
Uttar Pradesh	216	20·1	0·7
Uttarakhand	89	5·9	0·2
EAG AND ASSAM SUBTOTAL	**175**	**14·6**	**0·5**
Andhra Pradesh	74	3·6	0·1
Telangana	76	3·8	0·1
Karnataka	97	7·3	0·3
Kerala	42	1·9	0·1
Tamil Nadu	63	4·8	0·2
SOUTH SUB-TOTAL	**72**	**4·2**	**0·1**
Gujarat	87	6·0	0·2
Haryana	98	7·7	0·3
Maharashtra	55	3·3	0·1
Punjab	122	6·8	0·2
West Bengal	94	5·0	0·2
Other States	96	4·7	0·2
OTHER SUB-TOTAL	**90**	**5·1**	**0·2**

The key statistics presented in the Bulletin is the Maternal Mortality Ratio (MMR). This is derived as the proportion of maternal deaths per 1,00,000 live births reported under the SRS. Besides, the 95% Confidence Intervals (95% CI) of the estimates based on the calculated Standard Error (SE) have also been presented. In addition, estimates of Maternal Mortality Rate *viz.* maternal deaths to women in the ages 15-49 per lakh of women in that age group, and the life time risk have been presented. The life time risk is defined as the probability that at least one woman of reproductive age (15-49) will die due to child birth or puerperium assuming that chance of death is uniformly distributed across the entire reproductive span and has been worked out using the following formula :

Life Time Risk = 1 - (1-Maternal Mortality Rate/100000)[35]

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Compendium

Indian Polity and Constitution

★ The Vice-President of India shall be ex-officio chairman of the Council of States (the Rajya Sabha) under the **—Article 64**

★ 'Right to Constitutional Remedy' was termed the 'Soul of the Constitution' by **—Dr. B.R. Ambedkar**

★ Primary function of the Finance Commission of India is

—To distribute revenue between the Centre and the States

★ 'National Voters Day' is celebrated on

—January 25

★ Article 17 of the Constitution of India abolishes the evil of **—Untouchability**

★ Which Schedule of the Constitution of India deals with the distribution of powers between the Union and the States under the Union, State and Concurrent lists ? **—Seventh Schedule**

★ The President of India is an integral part of the

—Parliament

★ Who have been placed on fourth rank on the table of rank and precedence of the persons of India ?

—Governors of States within their respective states

★ Who addresses both Houses of Parliament assembled together at the first session after each general election to the Lok Sabha ?

—The President of India

★ Who administers the oath of office to the Speaker of the Lok Sabha ?

—No oath required for the post of Speaker

Indian National Movement

★ 'An Old Man's Hope' was a pamphlet published by

—A.O. Hume

★ In September 1932, Mahatma Gandhi started a fast unto death in Yervada jail against

—The Communal Award of Ramsay MacDonald

★ Sarojini Naidu called two leaders as the 'Mahatmas'. Who were those leaders ?

—Mahatma Gandhi and Lord Irwin

★ Which Round Table Conference did Mahatma Gandhi attend in London as the sole representative of the Indian National Congress ?

—Second Round Table Conference

★ Which anti-British movement witnessed the 'Parallel Governments' by Indians in 'Balia', 'Tamulak', 'Satara' and 'Talcher' ?

—Quit India Movement, 1942

★ Which Indian leader was associated with the 'Mooknayaka' and 'Bahishkrit Bharat' newspapers ?

—Dr. B.R. Ambedkar

★ Which Indian leader was the founder of the 'Bombay Chronicle' paper before independence ?

—Pherozeshah Mehta

★ Which two Indian leaders founded the Indian National Association and the Indian National Conference before the emergence of the Indian National Congress ?

—Ananda Mohan Bose and Surendranath Banerjee

★ Who was the British Governor-General in India at the time of foundation of the Indian National Congress in 1885 ? **—Lord Dufferin**

★ Which Indian leader played a key role in the foundation of the Punjab National Bank ?

—Lala Lajpat Rai

History and Culture of India

★ Razia Sultana, the first Muslim woman ruler of Delhi Sultanate, was the daughter of

—Sultan Iltutmish

★ Who sent Megasthenese as the ambassador to the Court of Chandragupta Maurya ?

—Seleucus Nicator

★ Who was the author of 'Mahavibhasha Sastra', a commentary on the Tripitaka of the Buddhists ?

—Vasumitra

★ Which Mauryan ruler was known as 'Amitrochates' ?

—Bindusara

★ Magadha ruler Ajatshatru was also known as

—Kunika

★ Which Mughal prince was the author of the books 'The Safinat-ul-Auliya' and 'The Sakinat-ul-Auliya' ?

—Prince Dara Shikoh

★ The tomb of Emperor Akbar is situated at

—Sikandra (Agra)

★ 'Chachanama' presents a detailed historical description of the **—Sindh region**

★ Who was the founder of the Lodi dynasty in Delhi ?

—Bahlol Lodi

★ Who led the British forces in the Battle of Buxar in 1764 AD

—Major Munro

Economic Affairs of India

★ What is India's rank on the Global Hunger Index, 2019 ? **—102nd rank**

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★ Two state-owned companies got the status of Maharatna companies in October, 2019. Those companies are
—Hindustan Petroleum and Power Grid Corporation

★ Who has been appointed the new Chairman of the Indian Banks' Association ? **—Rajnish Kumar**

★ What is India's rank on the WEF Global Competitiveness Report, 2019 ? **—68th rank**

★ What is India's rank on the World Bank's Ease of Doing Business Study, 2020 ? **—63rd rank**

★ Who have been honoured with the Nobel Prize, 2019 in Economics ?
—Abhijit Banerjee, Esther Duflo and Dr. Michael Kremer

★ Direct credit programmes introduced
—Purpose-oriented credit

★ Narsimhan Committee recommended to make banking structure in India of **—Four tier**

★ A share buyback instituted by a company has no effect on **—Net Profit Margin**

★ Disinvestment Commission in India was established in **—August, 1996**

Geography (India and the World)

★ The stage of gradual rise of mountains and their denudation is called **—Gloptogenesis**

★ Temperate cyclones originate due to
—Conversions of two contrasting air masses

★ Which kind of clouds are called 'Horse's tail' ?
—Cirrus Clouds

★ Which oceanic current affects the temperature of New York even during the winters ?
—Gulf Stream

★ The Taylor Valley lies in **—The USA**

★ 'Tungbhadra' and 'Bhima' are the tributaries of
—Krishna river

★ Salt lake Sambhar is located in **—Rajasthan**

★ The highest point of the Aravalli mountains is
—Gurusikhar peak

★ Rohtang pass connects the valleys of
—Kullu and Spiti

★ Which is the longest mountain range of the World ?
—The Andes

Science & Technology

★ The unit of electrical resistance of a conductor is
—Ohm

★ The scientific name of 'Pearl ash' is
—Potassium Carbonate (K_2CO_3)

★ Phenol formaldehyde resins is also known as
—Bakelite

★ Green colour in fireworks is caused due to
—Barium

★ 'Ethylene' is a hormone found in
—Gaseous form

★ Blood group 'AB' is called universal receptor because it does not contain any **—Antibody**

★ Which blood group is called universal donor because it does not contain any 'antigen' ?
—Blood group O

★ 'Peptone' and 'Peptide' are examples of
—Derived Proteins

★ Which vitamins are soluble in water ?
—Vitamin 'B' and 'Vitamin 'C'

★ Which part of body is affected by Trachoma disease ?
—Eyes

Agriculture

★ The harvest index percentage in wheat varies from
—38% to 42%

★ Tensiometer in soil can work upto
—0-8 bar pressure

★ The falling of crop by any means like excess of water, nitrogen excess or stormy winds, is called
—Crop lodging

★ Which type of N-fertilizer is suitable for water-logged soil ? **—Ammonium Sulphate**

★ Leaf drop disease in 'peach' is caused due to the deficiency of **—Calcium (Ca)**

★ Red colour of onion is caused due to the presence of
—Anthocynin

★ What is the name of 'Shifting agriculture' in central America and Mexico ? **—Milpa**

★ Saline or alkaline soil is also known as
—Chopan

★ 'Yellow Vein Mosaic' is a disease of **—Okra**

★ The filler plant (tree) in mango orchard is
—Papaya

Environment, Biodiversity, Climate Change etc.

★ Who is the author of the book 'Ecological climatology' ? **—Gordon Bonan**

★ Who is the author of the book 'Global Warming Myth or Reality ? The Erring Ways of Climatology' ?
—Marcel Leroux

★ Coral reefs developed along with continental margins or along the islands are called **—Fringing reefs**

★ Who defined geography as 'human ecology' ?
—Barrows

★ In natural ecosystem, decomposers include
—Only bacteria and fungi

★ World Ozone Day is observed on
—September 16

★ World Oceans Day is celebrated on **—June 8**

★ The cycling of elements in an ecosystem is called
—Biogeochemical cycle

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★ The term 'homeostasis' in an ecosystem refers to
—Influence of production

★ Hydrological cycle is kept under control by
—Epiphytes

Communication

★ Anything which is used as a status symbol is
—Object communication

★ Information systems are composed of
—Three basic components

★ Demonstration method of teaching ensures
—Maximum participation of students

★ The messages are changed into symbols through the process of **—Encoding**

★ Semantic noise is concerned with the understandability of **—The message**

★ First step of preparing oral presentation is to determine the **—Purpose**

★ The typical feature of an information-rich classroom lecture is the nature of being **—Factual**

★ Effective classroom communication ought to be
—Empathetic

★ In communication research, the chi-square statistics is also known as **—Crosstabs**

★ The theory of 'Developmental Communication' lays stress on **—Epistemological approach**

Education and Child Psychology

★ The fact that development (as well as growth) always proceeds directionally from
—Head to foot

★ The most important factor that influences human intelligence is
—Heredity and Behaviour

★ Generally, the baby expresses smiling emotion when its face or cheeks are touched gently. It happens due to **—Reflex Action**

★ Expectancy theory is a theory of
—Motivation

★ The name of the theory advocating a sudden solution to the problem is **—Theory of insight**

★ "Sensation is a gateway of knowledge." This statement is
—Mental Development

★ What is the number of personality traits by Cattell ?
—16

★ Who advocated child centered education ?
—John Dewey

★ Scaffolding in the context of learning theories refers to
—temporary support in learning by adults

★ Reven's progressive matrices test is an example of test
—Culture free IQ

Sports and Games

★ Which country emerged on top of the medals tally in the 17th IAAF World Athletics Championship, 2019 in Doha ? **—The USA**

★ What was the name of the mascot of 17th IAAF World Athletics Championship ?
—'Falah', a falcon

★ Who was elected unopposed as the 39th BCCI President ?
—Sourav Ganguly

★ Solheim Cup is a biennial tournament of
—Golf

★ Who became 65th Chess Grandmaster of India ?
—Raunak Sadhwani

★ Who emerged winner of the FIDE Chess World Cup, 2019 ?
—Teimour Radjabov of Azerbaijan

★ David Haggerty of America was re-elected the President of
—International Tennis Federation

★ Which team emerged champion of the Vijay Hazare Trophy, 2019 ? **—Karnataka**

★ 'T', 'Stymie' and 'Putting' are terms associated with the game of **—Golf**

★ How many players are there in a team of 'Baseball' ?
—Nine players

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Miscellany

★ What is the name of India's highest altitude all-weather permanent bridge located in Ladakh ?
—Col Chewang Rinchen Setu

★ Who has been honoured with the Nobel Peace Prize, 2019 ?
—Abiy Ahmed Ali of Ethiopia

★ 'Kuchipudi' and 'Mohiniattam are famous dances of
—Andhra Pradesh

★ 'Tarun Bhattacharya' and 'Bhajan Sopori' are famous exponents of **—Santoor**

★ 'World Press Freedom Day' is observed on
—May 3

★ 'United Nations Day' is celebrated on
—October 24

★ Sakharov Prize is an Annual Human Rights prize given by
—The European Parliament

★ Which country is called the 'Land of Mid-Night Sun' ? **—Norway**

★ 38th Parallel is a boundary line between
—North Korea and South Korea

★ Who is the author of the book 'God of Small Things' ?
—Arundhati Roy

Environment/Biodiversity/Climate Change and Disaster Management Round-up

—Dhiraj Pandey

Government Clears Misgivings of Amendment in the Indian Forest Act, 1927

- The Government of India (GoI) has cleared misgivings over the zerodraftwhich sought a techno-legal suggestions in the Indian Forest Act, 1927.
- The Union Minister of Environment, Forest and Climate Change (MoEF&CC), Shri Prakash Javadekar categorically stated that the Central Government for past 5 years has always worked in the interests of tribals and forest dwellers and as such will not give space to misgivings, "We are completely withdrawing the draft amendment to the Indian Forests Act to remove any misgivings, the tribal rights will be protected fully and they will continue to be the important stakeholder in forest development", said Shri Javadekar.
- He also further clarified that it was a techno-legal exercise by officials to carry out an assessment which sought suggestions from various states and the document was circulated to Principal Chief Conservators of Forests of each states.
- The Environment Minister also highlighted the continued commitment by the Central Government to enrich the livelihood of tribals and forest dwellers, "We have supported not only with finances and more welfare schemes but have also ensured Minimum Support price for their forest produce and have also allotted hectares of land during this 5 years by giving them titles of ownership", stated the Environment Minister.

Carbon Dioxide Levels at Highest, Mandatory Respiratory Masks for All Only 20 Years Away

Carbon dioxide, the gas that we exhale to remove toxicity from our body and the one responsible for greenhouse effect the most, is at all-time high quantity in the air. At least two organisations observing global climatic patterns and variations have reported highest amount of carbon dioxide in the atmosphere for the month of May 2019.

Key Facts :

- According to the National Oceanic and Atmospheric Administration, the amount of carbon dioxide in the air was 411.25 parts per million.
- The Scripps Institution of Oceanography measured carbon dioxide at 411·35. This is the highest monthly level ever recorded by scientists.
- The scientists studying the greenhouse gases are of the view that this could also be the highest concentration of carbon dioxide in human history.
- Carbon dioxide level in the air has been increasing for over three centuries. But in recent decades, the rate of increase in carbon dioxide has been alarming. Besides rapid population growth and cutting of trees, burning of the huge amount of fossil fuels is the prime reason for the very high rate of increase in carbon dioxide in the air.
- The scientists have found that on an average, the rate of rise in carbon dioxide levels was about 1·6 ppm per year during the 1980s, and 1·5 ppm per year in the next decade. But, it accelerated with the turn of the century.
- The rate of increase in carbon dioxide levels in the air between 2016 and 2017 was recorded at 2,3 ppm. This was the sixth consecutive year-to-year increase in carbon dioxide level at above 2 ppm rate.
- The problem with carbon dioxide is that each molecule of carbon dioxide may take, scientists say, hundreds or even thousands of years to finally dissipate. The carbon dioxide molecules are, in fact, self-powered tiny heat convectors that may keep warming the air and the seas for generations to come.
- To understand the real issue with the latest rising trend in the greenhouse gas, it is imperative to underscore that the CO_2 levels were stable at 280 ppm prior to the industrial revolution.
- The climatologists say that if the current rate of rise in carbon dioxide levels continue, it would reach at 450 ppm in just 20 years from now. The companies manufacturing air-filters and protective gas masks would be the sole beneficiaries.

Cabinet Approves MoU Between India, Switzerland on Cooperation in Climate Change, Environment

The Union Cabinet chaired by the Prime Minister Shri Narendra Modi has given ex-post facto approval to the Memorandum of Understanding (MoU) between India and Switzerland on Technical Co-operation in the field of Climate Change and Environment. The MoU was signed in Switzerland on 13th September, 2019.

Major impact :

- Environmental degradation falls on the socially and economically disadvantaged, more heavily than the better of sections of the society.
- Any effort at thwarting environmental degradation would lead to environmental equity in the sense of availability of sound environmental resources to all sections of the society.

Benefits :

- The MoU will enable establishment and promotion of closer and long-term cooperation between the two countries in the field of environmental protection and management of natural resources on the basis of equity,

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reciprocity and mutual benefits, taking into account the applicable laws and legal provisions in each country.

- It will enhance public accountability by way of exchange of information and technology between the two countries.
- Further, It is expected to bring in the latest technologies and best practices suited for bringing about better environment protection, better conservation, better management of climate change and wildlife protection/conservation.

Salient features :

- Capacity-building on Climate Change and Sustainable Water management;
- Sustainable Forest Management;
- Sustainable development of mountainous regions;
- Environmentally sustainable and resilient urban development;
- Addressing issues of Air, land and water pollution;
- Focussing on Clean and Renewable Energy; and
- Climate change risk management.

Kanpur is World's Most Polluted City : Guinness World Records 2020

Analysis of a World Health Organization report showed that the most polluted city in the world is Kanpur in northern India, with an average PM2·5 level of 173 micrograms per m3 for 2016, over 17 times higher than the WHO recommended maximum of 10 micrograms per m3. PM2·5s are very small particles such as soot, dust and ash, prolonged exposure to which can cause cancer, lung and heart conditions. Of the world's 20 most PM2·5-polluted cities, 14 are in India.

India Attends IUCN's 7th Regional Conservation Forum Held at Islamabad

International Union for Conservation of Nature organized the 7th Regional Conservation Forum in Islamabad, Pakistan. Secretary of Ministry of Environment, Forest and Climate Change represented India at the forum. More than 500 representatives from different countries, corporate sector and NGOs participated in the forum.

Key Facts :

- Rapid melting of Himalayan Glacier to cause food and water shortage to 800 million people in South Asia and South-East Asia including China.
- 36% Glaciers in the regions of Himalayas and Hindukush are to vanish by 2100.
- The Himalayan and the Mekong basin are at greater risks. Failing to take timely actions will affect millions of people in the region
- The Shrinking Glaciers are the biggest challenge to the policy makers. This is because they contribute to the seasonal run off. This is very common in the climatically drier western regions. It increases the risks of outburst floods adding to the expansion of unstable proglacial lakes.
- The increasing Global Warming is decimating the glaciers of Hindu Kush Himalaya region. In the coming years, it is predicted that if current situation continues, the entire food production base in the region might get vanished.
- The rate of Global Warming is greater than in any other part of the world.
- 10 inches of ice melted in the Himalayan region between 1975 and 2000. However, this increased twice by 2016. Between 2000 and 2016, the ice melting in the region increased to 20 inches.
- The Hindu Kush Himalayan region is the origin of 10 major river basins. IT provides livelihoods to over 240 million people directly and around 1·9 billion people indirectly. Around 3 billion people are dependent on the food produced in the basin.
- The Himalayan Glaciers are considered the third pole of the world mainly because of the sheer volume of the ice they hold.

India gets USD 43 million from Green Climate Fund to Boost Climate Resilience in 3 Coastal States

In a move that may positively impact over 10 million people living on the coastline, India on November 13, 2019 kicked-off a USD 43 million project to boost climate resilience in three coastal states in partnership with the United Nations Development Programme (UNDP).

Key Facts :

- The project is funded by the Green Climate Fund, established within the framework of the United Nations Framework Convention on Climate Change (UNFCCC) to assist developing countries.
- The six-year project will build climate-resilient livelihoods for 1·7 million people in Andhra Pradesh, Maharashtra and Odisha, offset 3·5 million tonnes of carbon, protect vulnerable ecosystems.
- India's coastal areas are quite vulnerable to climate change.
- This pace-setting new initiative will help enhance resilience and adaptability, lead to emissions reductions and support sustainable livelihoods.
- The Indian government will finance an additional USD 86·8 million towards the new project to mainstream and accelerate the impacts of the Green Climate Fund grant.
- The project will work with communities in restoring ecosystems and promoting climate-resilient livelihood options, such as the sustainable farming of mud crabs.
- It establishes India as a leader on climate action, and marks an essential step for India to reach its goals outlined in the Paris Agreement and 2030 Agenda for Sustainable Development.
- Over 1·7 million people are expected to directly benefit from livelihoods support, with another 10 million indirectly benefiting from improved shoreline protection.
- The initiative will also focus on providing tangible benefits for vulnerable communities, including women, female-headed households, young people and the elderly, and members of Scheduled Castes and Tribes.
- It said through the project, over 3·5 million tonnes of carbon

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dioxide will be sequestered through restored ecosystems over the next 30 years.

- To protect life on land and below water as outlined in the 2030 Agenda, project activities will focus on restoration and conservation of over 15,000 hectares of mangroves, coral reefs, sea grasses and salt marshes.
- Communities, including the local youth, will be trained to work with scientists in monitoring ecosystem health and coastal ecology.
- To strengthen climate risk-informed coastal management and infrastructure planning, the innovative project will create an online decision-support tool available via mobile phone for use by government officers, academic institutions, community members and scientists.

Pollution in India Claimed Over 5 lakh Lives in 2016 : Lancet Report

More than five lakh people died prematurely in India in 2016 due to dangerous levels of outdoor air pollution and over 97,000 of them died after being exposed to pollutants from coal-burning, a new report revealed on November 14, 2019.

Key Facts :

- The Lancet Countdown 2019 on health and climate change also cautioned that the impact of air pollution in India will worsen if the country does not shift from coal-based energy.
- It emphasised on rapidly decreasing coal use to zero, saying it was crucial to meeting the commitments of the Paris Agreement.
- "Total energy supply from coal increased by 11 percent in India from 2016 to 2018 and out of over 5·29 lakh premature deaths in 2016 due to dangerous levels of outdoor fine particulate air pollution (PM2·5), over 97,400 deaths were from coal."
- "The energy landscape will have to change drastically, and nothing short of a 7·4 per cent year-on-year cut in fossil carbon dioxide emissions from 2019 to 2050 will limit global warming to the more ambitious goal of 1·5 degree Celsius," the report, authored by 35 institutions worldwide said.
- It said coal phase-out is essential, not only as a key measure to mitigate climate change, but also to reduce morbidity and mortality from air pollution.
- Overall, carbon dioxide emissions from fossil fuels have risen by 2·6 per cent from 2016 to 2018, the report said.
- Another global study from Switzerland, held earlier this year, revealed that China and the US may be the largest producers of coal power, but power plants in India take the highest toll in the world when it comes to health as coal-fired power plants produce more than just carbon dioxide, which contributes to global warming.
- "Temperature rise and heat waves are increasingly limiting the labour capacity of various populations. In 2018, 133·6 billion potential work hours were lost globally, 45 billion more than the 2000 baseline, and southern areas of the USA lost 15-20 percent of potential daylight work hours during the hottest month of 2018," the report said.

About 2019 Lancet Report

The 2019 Lancet report presents an annual update of 41 indicators across five key domains :

- Climate change impacts, exposures, and vulnerability
- Adaptation, planning, and resilience for health
- Mitigation actions and health co-benefits
- Economics and finance
- Public and political engagement
- The report represents the findings and consensus of 35 leading academic institutions and UN agencies from every continent.

Thousands of Birds Died Due to Botulism in Sambhar Lake

A preliminary forensic report has indicated that the mysterious death of more than 4,800 migratory birds at the country's largest inland water saltwater lake near Jaipur was caused by botulism, a serious and fatal illness that affects the nerves.

Key Facts :

- On November 10, 2019, thousands of birds, including Northern Shoveler, Ruddy Shelduck, Plovers, Avocets, were found dead in the 5-7 km area around Sambhar Lake.
- This was the second such incident in the state within a week.
- On November 7, 37 demoiselle cranes were found dead in Jodhpur's Khinchan area. An investigation is on in that case as well.
- A 70-member disaster management team was at Sambhar Lake, a key wintering area for tens of thousands of migratory birds, to dispose the carcasses so that botulism does not spread to other birds. Also, a dozen teams from the Animal Husbandry Department are closely monitoring the situation.
- Initially, it was suspected that the birds died due to avian flu but the report from a laboratory in Bhopal has ruled this out.
- Veterinary experts from Rajasthan University of Veterinary & Animal Sciences, Bikaner, have indicated that the deaths occurred due to botulism.
- The birds died due to infection spread after feeding on maggots-infested carcasses. This causes paralysis in birds. The symptoms indicate that the cause of death was botulism.

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- The National Programme for Energy Efficient Appliances has been launched in 2015 with the aim of cutting emissions significantly.
- UJALA, the programme for distributing lowcost LEDs, the Energy Efficient Building Code, Labelling of Appliances for energy efficiency are some such targeted interventions.
- India has played a leading role in the International Renewable Energy Community and has facilitated the formation of International Solar Alliance along with France, involving 121 countries, whose Secretariat is housed in New Delhi.

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Important Concepts in News

Art and Culture

Suranga Bawadi

Suranga Bawadi, an integral part of the ancient Karez system of supplying water through subterranean tunnels built during Adil Shahi era in Vijayapura, is now set to get funding for restoration. A New York-based non-governmental organisation has included it in the World Monument Watch list for 2020 along with 24 other monuments from across the world.

Key Facts :

- The Karez system was built in the 16th century by Ali Adil Shah–I, his successor, Ibrahim Adil Shah–II, brought in several changes by adding more structures to strengthen it.
- According to historians, the Adil Shahis built the magnificent underground system to supply water to the city, which had a population of nearly 12 lakh then.
- Karez system is an indigenous method of irrigation in which **groundwater is tapped by a tunnel**. After running for some distance the tunnel comes out in the open and the water is conducted to the command area.
- Karez are constructed as a series of well-like vertical shafts, connected by sloping tunnels, which tap into subterranean water in a manner that efficiently delivers large quantities of water to the surface by gravity, without need for pumping.
- The monument has been selected under the 'Ancient Water System of the Deccan Plateau' by World Monuments Fund [the NGO], which monitors restoration of ancient monuments across the globe.

Theyyams

Theyyam is a famous ritual art form that originated in North Kerala which brings to life the great stories of Kerala. The Theyyam season begins in the Malayalam month of Thulam that falls during mid-October/November and lasts for nine months. It encompasses dance, mime and music.

Key Facts :

- It exalts the beliefs of the ancient tribals who gave a lot of importance to the worship of heroes and the spirits of their ancestors.
- The ceremonial dance is accompanied by the chorus of such musical instruments as Chenda, Elathalam, Kurumkuzal and Veekkuchenda.
- There are over 400 separate Theyyams, each with its own music, style and choreography.
- The most prominent among these are Raktha Chamundi, Kari Chamundi, Muchilottu Bhagavathi, Wayanadu Kulaven, Gulikan and Pottan.
- Each artist represents a hero with great power.
- Performers wear heavy make-up and adorn flamboyant costumes.
- The headgear and ornaments are truly majestic and fill one with a sense of awe and wonder.
- From December to April, there are Theyyam performances in many temples of Kannur and Kasaragod. Karivalloor, Nileswaram, Kurumathoor, Cherukunnu, Ezhom and Kunnathoorpadi in North Malabar are places where Theyyams are performed annually (Kaliyattam) and draw huge crowds.
- The dance or invocation is generally performed in front of the village shrine. It is also performed in the houses as ancestor-worship with elaborate rites and rituals.
- There is no stage or curtain or other such arrangements for the performance. The devotees would be standing or some of them would be sitting on a sacred tree in front of the shrine.
- The first part of the performance is usually known as Vellattam or Thottam. It is performed without proper make-up or any decorative costume. Only a small, red headdress is worn on this occasion.
- There are different patterns of face-painting. Some of these patterns are called vairadelam, kattaram, kozhipuspam, kottumpurikam, and prakkezhuthu. Mostly primary and secondary colours are applied with contrast for face painting.

Bhaona

Bhaona is a traditional form of entertainment, always with religious messages, prevalent in Assam, India. The history of Assamese drama begins with the plays of Mahapurusha Srimanta Sankardeva (1449-1568) written in the early sixteenth century.

Key Facts :

- These plays are popularly known as Ankiya Nats and their staging is known as bhaona. Bhaona is a performing art form.
- It is a simple drama which shows the victory of truth at the climax, generally using fictitious or mythological kings, queens, demons, gods, soldiers etc.
- The story generally depicts some initial superficial triumph of evils over good, but it shows the ultimate victory of good with intercession by the gods.
- Bhaona was created by Sankardeva. He himself wrote seven dramas (called Onkia Naat) for performance in Bhaona.
- 'Ankiya' means one act and 'Nat' means drama. Therefore, 'Ankiya nat' simply means one act play. These plays comprise an orchestra who are called

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'Gaayan' (singers) and 'Baayans' (instrumentalists) and actors. The orchestral attire is stark white and the actors wear glittering costumes representing various kings, queens, demons and animals. The performers pass through an archway of lights, which is called 'Agni Garh'.

- There is one Sutradhar who begins the play by narrating the story of the play and who acts as the chorus of the English plays. The Sutradhar explains the story along with the orchestra in between the play to make it easier for the audience to understand.
- In Ankiya Nat, performance begins in the morning with singing and dancing to the music of drums, the entourage emerging from the 'Agni-Garh' *i.e.*, archway of lights opposite the shrine.
- After the distribution of prasada or sacred food to the musicians, the 'Sutradhar' or narrator makes his entrance, and after paying his respects to the gods, recites a verse from the play at hand and presents a song.
- The first Bhaona was Chihnayatra, where he himself played the role of Bishnu.
- The particular form of religious school established by Sankardeva is called Eksaran Bhagawati Dharma (literally meaning religion of devotion to single God).
- In a Bhaona real men and women play the roles of different characters.
- They speak dialogues in Brajawali often in lyrical form which is also created by Sankardeva. He used this special language in Bhaona because Sanskrit, which was the original language used in the Hindu religious texts, was difficult for common people; on the other hand, he wanted the language spoken in the drama to be somewhat different, to keep the divine touch.
- Nowadays, though, Bhaona is performed in spoken Assamese language in upper Assam.

Science and Technology

IndiGen' project

The Council of Scientific and Industrial Research (CSIR) recently announced the conclusion of a six-month exercise (from April 2019) of conducting a 'whole-genome sequence' of a 1,008 Indians. The project is part of a programme called 'IndiGen' and is also seen as a precursor to a much larger exercise involving other government departments to map a larger swathe of the population in the country. Project proponents say this will widen public understanding in India about genomes and the information that genes hide about one's susceptibility to disease.

Key Facts :

- A genome is the DNA, or sequence of genes, in a cell. Most of the DNA is in the nucleus and intricately coiled into a structure called the chromosome.
- Sequencing a genome means deciphering the exact order of base pairs in an individual. This 'deciphering' or reading of the genome is what sequencing is all about.
- The CSIR's 'IndiGen' project, as it is called, selected the 1,000-odd from a pool of about 5,000 and sought to include representatives from every State and diverse ethnicities. Every person whose genomes are sequenced would be given a report.
- The participants would be informed if they carry gene variants that make them less responsive to certain classes of medicines. For instance, having a certain gene makes some people less responsive to clopidogrel, a key drug that prevents strokes and heart attack.
- The project involved the Hyderabad-based Centre for Cellular and Molecular Biology (CCMB), the CSIR-Institute of Genomics and Integrative Biology (IGIB), and cost18 crore.
- The driving motive of the project is to understand the extent of genetic variation in Indians, and learn why some genes—linked to certain diseases based on publications in international literature—do not always translate into disease. Once such knowledge is established, the CSIR expects to tie up with several pathology laboratories which can offer commercial gene testing services.

Eco-Anxiety

Eco-anxiety is a recently popularised term to describe the overwhelming powerlessness some people say they experience when they think about climate change. The World Health Organisation regards climate change as "the greatest threat to global health in the 21st Century". Climate change can affect people's mental health in a number of ways, both directly and indirectly.

Key Facts :

- Eco-anxiety is a fairly recent term attributed to the psychological disorder of those individuals who are worried about the environmental crisis, especially climate change.
- The feeling of being overwhelmed by the challenges of climate change and the fear about the state of the environment.
- The American Psychological Association describes eco-anxiety as "a chronic fear of environmental doom".
- It is the helplessness that makes us see ourselves as just one insignificant entity on the planet, unable to reverse the crisis. It is also the sense that no matter how hard we work, nothing will ever be enough.
- To feel powerless against a supposedly impending doom shoots up stress levels and causes anxiety.

According to the Climate Psychology Alliance (CPA), a not-for-profit organisation that aims to help people with eco-anxiety, the condition manifests itself in a number of ways—grief, rage, depression and hopelessness.

Defence/Security

Dustlik-2019

Dustlik, 2019 is the first-ever India-Uzbekistan Joint Exercise begun on 4th November, 2019 and culminated on 13 November, 2019 after 10

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days of joint training with Uzbekistan Army.

- In the joint exercise, training was focused on counter insurgency and counter terrorism operations in urban scenario as well as sharing of expertise on skills at arms, both combat shooting and experiences in counter insurgency and counter terrorism.
- The exercise also provided an opportunity to armies of all nations for greater cultural understanding, sharing experiences and strengthening mutual trust and cooperation.
- After intense military training, the joint exercise concluded with both Armies exhibiting their combat power and dominance over the extremist groups.
- The closing ceremony showcased the immense talent with unique traditional touch of both nations.
- It was conducted at Chirchiq Training Area, Uzbekistan. The senior officials expressed great satisfaction with high standards achieved in the exercise.
- The next edition of Ex-Dustlik will be conducted in India in 2020. Uzbekistan which has a strong military in the region and is a key player in the region will be of great importance for India from a security point of view.

MILAN Exercise

The Mid Planning Conference (MPC) for MILAN exercise was concluded at Visakhapatnam 08 Nov 19. The three-day conference was attended by 29 delegates from 17 friendly Foreign Navies. The scope of exercise planned during the harbour and sea phase of MILAN 2020 was discussed in detail with the delegates of the participating countries during the conference.

Key Facts :

- MILAN 2020 scheduled to be conducted at Visakhapatnam in March 2020.
- MILAN series of biennial multilateral naval exercise which commenced in 1995, was conducted at Andaman and Nicobar Command (ANC) until last year; it is being conducted for the first time on the mainland at ENC with increased scope and complexity of the Exercise.
- MILAN 2020 is aimed to enhance professional interaction between friendly foreign navies and learn from each other's strengths and best practices in the maritime domain.
- The event would also provide an excellent opportunity for Operational Commanders of friendly foreign navies to interact with each other in areas of mutual interest.

Shakti– 2019

The closing ceremony of the joint military exercise between Indian and French Army, Exercise 'SHAKTI-2019' was held at Mahajan Field Firing Range on 13 November, 2019. The aim of the exercise was to achieve interoperability, to acquaint each other with operational procedures, combat drills and understand the functioning in such a situation. It was evident that both the armies were able to achieve this aim.

Key Facts :

- The exercise was conducted in two phases. The first phase of combat conditioning and tactical training was completed successfully by both the contingents. The training received by both the armies in the first phase was put into practice in the second phase which was termed as validation stage.
- Both the contingents jointly took part in the validation exercise which included establishment of observation posts, cordon and search operation and house clearing drills including evacuation of casualities using helicopters.
- The exercise also included newly inducted 'RUDRA' helicopter, the weaponised version of the Advanced Light Helicopter 'Dhruv' produced indigenously by India.
- The closing ceremony was organised as a solemn occasion to felicitate outstanding soldiers and to showcase each other's cultural and martial heritage.
- Both the armies shared valuable combat experience with respect to countering terrorist operations in an international environment.
- It was a significant milestone achieved in ensuring cordial relations between the two countries and another step forward towards global war on terror.

Polity and Governance

Acquisition of Certain Area At Ayodhya Act, 1993

While holding that the disputed land in Ayodhya belongs to the Hindu deity Ram Lalla, the 5 judges bench of the Supreme Court has directed the Central government to formulate a scheme for setting up a trust which shall be transferred the possession of the inner and outer courtyards.

Key Facts :

- The direction comes in view of the powers vested in the Central Government under Sections 6 and 7 of the Acquisition of Certain Area at Ayodhya Act 1993.
- The Ayodhya Act empowered the Central Government to acquire 67·7 acres of land, in and around the disputed site of Ayodhya, in order to maintain peace and harmony between the Hindu and Muslim communities.
- Section 3 of the Ayodhya Act transferred the right, title and interest in relation to the area in and around the disputed land to the Central Government.
- Section 6 of the Act stipulated that the Central government may vest the acquired area in any authority or other body, or trustees of any trust, set up on or after the commencement of the Act, if the body is willing to comply with such terms and conditions as the Government may impose.
- Further, it prescribed that the rights of the Central Government in relation to the area shall then be deemed to have become the rights of that authority or body or trustees of that trust, as the case may be.
- This provision has been used by the Supreme Court to direct the Central Government to hand over the land to a trust that will manage and develop the area in accordance with the scheme so formulated by the government.
- The validity of the Ayodhya Act was earlier upheld by the Supreme Court in Dr. M. Ismail

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Faruqui & Ors. v. Union Of India & Ors., 1994 SCC (6) 360.

- It also struck off Section 4(3) of the Act which sought to abate any suit, appeal or other proceeding in respect of the right, title and interest of the acquired land, pending before any court, tribunal or other authority at the time of commencement of the Act.
- Had that not been the case, the present appeals which culminated into the Supreme Court's verdict could not have been possible.

Transgender Persons (Protection of Rights) Bill, 2019

The Bill provides a mechanism for their social, economic and educational empowerment. Lok Sabha passed the Transgender Persons (Protection of Rights) Bill, 2019 on 5th August 2019.

Key Facts :

- Transgender community is among one of the most marginalized communities in the country because they don't fit into the stereotypical categories of gender of 'men' or 'women'. Consequently, they face problems ranging from social exclusion to discrimination, lack of educational facilities, unemployment, lack of medical facilities and so on. The Bill shall empower the transgender community socially, educationally and economically.
- According to the bill, a transgender is a person whose "gender does not match with the gender assigned to that person at birth and includes trans-man or trans-woman (whether or not such person has undergone Sex Reassignment Surgery or hormone therapy or laser therapy or such other therapy), person with intersex variations, gender-queer and person having such socio-cultural identities as kinner, hijra, aravani and jogta."
- The Bill will benefit a large number of transgender persons, mitigate the stigma, discrimination and abuse against this marginalized section and bring them into the mainstream of society. This will lead to inclusiveness and will make the transgender persons productive members of the society.

Economy/Finance

HS Code

Khadi has once again come out of its customary veil, marking its presence in the exclusive HS code bracket, issued by the central government on 4th Nov '19 to categorize its products in export. In a long-awaited move to make export of Khadi, exclusively categorized from the general league of textile products, the ministry of commerce and industries has allocated separate HS code for this signature fabric of India.

Key Facts :

- HS Stands for Harmonized System and it is a six-digit identification code. It was developed by the WCO (World Customs Organization) and custom officers use HS Code to clear every commodity that enters or crosses any international border.
- HS Code stands for Harmonized System. This system has been developed by the World Customs Organization to identify and highlight the type of goods that are shipped.
- HS Code is basically a six-digit identification code.
- At present, more than 200 countries are using HS Code system for the collection of international trade statistics.
- More than 98 per cent of the items present in international trade is classified in terms of the HS Code.
- The system of HS Code is not only used by governments but international organizations and private firms are also using it.
- HS Code is utilized to monitor, internal taxes, trade policies, update and optimized goods, freight tariffs, price monitoring, economic research and monitoring economic statistics.
- Khadi and Village Industries products are eco-friendly and natural and are in great demand in the International Markets. Recognizing its potential to generate exports and its eco-friendly importance, the Ministry of Commerce had accorded deemed Export Promotional Council Status (EPCS) to KVIC in 2006, to boost the export of Khadi products. However, in the absence of separate HS code, the export of Khadi products was difficult to categorize and calculate.

Financial Stability and Development Council (FSDC)

The 21st Meeting of the Financial Stability and Development Council (FSDC) was held on 7th November, 2019 under the Chairmanship of the Union Minister for Finance & Corporate Affairs, Nirmala Sitharaman. The Council reviewed the current global and domestic macro-economic situation and financial stability and vulnerabilities issues, including, inter-alia, those concerning NBFCs and Credit Rating Agencies.

Key Facts :

- Financial Stability and Development Council (FSDC) is an apex-level body constituted by the government of India.
- The idea to create such a super regulatory body was first mooted by the Raghuram Rajan Committee in 2008.
- Finally in 2010, the then Finance Minister of India, Pranab Mukherjee, decided to set up such an autonomous body dealing with macro prudential and financial regularities in the entire financial sector of India.
- An apex-level FSDC is not a statutory body.
- The recent global economic meltdown has put pressure on governments and institutions across the globe to regulate their economic assets.
- This Council is seen as India's initiative to be better conditioned to prevent such incidents in future.
- The new body envisages to strengthen and institutionalise the mechanism of maintaining financial stability, financial sector development, inter-regulatory coordination along with monitoring macro-prudential regulation of economy.
- No funds are separately allocated to the Council for undertaking its activities.

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Current Objective Questions

Trade And Industry



1. Eleventh BRICS Summit was held on 13-14 November, 2019 in—
   (A) Brasília, Brazil
   (B) Beijing, China
   (C) Masco, Russia
   (D) Johannesburg, South Africa

2. Who has been appointed Executive Director for International Monetary Fund in October 2019 ?
   (A) Dr. Arvind Pangarhia
   (B) Dr. Raghuram G. Rajan
   (C) Prof. Surajit Bhalla
   (D) Dr. Bibek Deboroy

3. As on November 1, 2019 number of Maharatna Central Public Sector Undertaking is—
   (A) 8 (B) 9
   (C) 10 (D) 11

4. As on November 1, 2019 number of Navaratna CPSUs is—
   (A) 17 (B) 16
   (C) 15 (D) 14

5. As on November 1, 2019 who is eligible to invest in National Pension System—
   I. Resident Indian
   II. Non-Resident Indian
   III. Overseas Citizens of India
   (A) Only I
   (B) Only I and II
   (C) Only I and III
   (D) I, II, III all

6. Which is the first Indian Corporate giant to hit ₹ 9 lakh crore market capitalisation in mid of October 2019 ?
   (A) Oil and Natural Gas Company
   (B) Tata Consultancy Services
   (C) Reliance Industries Ltd.
   (D) Indian Oil Corporation

7. India's external debt as on June 30, 2019 was—
   (A) US $ 557·4 billion
   (B) US $ 517·8 billion
   (C) US $ 559·4 billion
   (D) US $ 561·8 billion

8. Debt service ratio, as on June 30, 2019 was—
   (A) 5·8% (B) 6·4%
   (C) 7·3% (D) 8·2%

9. National Council of Applied Economic Research (NCEAR) has pegged India's Gross Domestic Product (GDP) growth for 2019-20 at—
   (A) 6·5% (B) 5·9%
   (C) 4·9% (D) 4·5%

10. Which of the following pairs is not matched correctly in relation to forecast by different agencies for India's GDP growth for the financial year 2019-20 ?
    (A) RBI-5%
    (B) NCAER- 4·9%
    (C) World Bank–6.3%
    (D) CLSA- 5·0%

11. Husband and wife jointly borrowed a home loan in the ratio of 50 : 50. Wife enjoys full ownership of the house. Each can avail income tax rebate in the ratio of—
    (A) Ownership
    (B) Borrowing
    (C) Any one, at the borrower's discretion
    (D) The respective assessee's income

12. The term 'Seingnorage' refers to—
    (A) Intrinsic value of currency notes less the cost of production
    (B) Cost of production of currency notes less intrinsic value
    (C) Domestic currency value less foreign currency value
    (D) Inflation adjusted currency value

13. Losses can be carried forward even if one files an income tax return after due date in case of—
    (A) Business Losses
    (B) Loss from House property
    (C) Short-term capital loss
    (D) Long-term capital loss

14. Minimum Support Price for wheat for the marketing season 2020-21 has been fixed..... per quintal.
    (A) ₹ 1925 (B) ₹ 1975
    (C) ₹ 2055 (D) ₹ 2105

15. Highest increase in MSP of Rabi crops for the marketing season 2020-21 has been done in case of—
    (A) Barley
    (B) Gram
    (C) Mustard seed
    (D) Lentil (Masoor)

16. As per a report by the RBI, in terms of value share of ₹ 2000 notes in total currency in circulation is about.....as on March 31, 2019.
    (A) 31% (B) 45%
    (C) 49% (D) 52%

17. On an average.....of work was provided per household across the country in 2018-19 as against 100 days mandated in the Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA)
    (A) 78 days (B) 69 days
    (C) 51 days (D) 46 days

18. Which of the following statements is correct about 'Kerala Bank' ?
    (A) Kerala Bank is a Private sector scheduled commercial bank
    (B) The Reserve Bank of India has approved merger of 13 District Cooperative Banks of Kerala with the Kerala State Co-operative Bank. The new identity has been given a name of 'Kerala Bank'
    (C) Kerala Bank is a Regional Rural Bank sponsored by State Bank of India
    (D) Kerala Bank is a new Small Finance Bank

19. Index of Industrial Production based growth rate during the first half of 2019-20 (April-September) declined to ..... from 5·2 per cent during the same period of 2018-19.
    (A) 1·3 per cent
    (B) 3·4 per cent
    (C) 2·9 per cent
    (D) 3·1 per cent

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20. As per NITI Aayog's internal assessment Gross Domestic Product (GDP) in India at current prices needs to grow by ..... annually over the next five years for the country to be a $5-trillion economy by 2024-25, an internal assessment by the NITI Aayog has showed.
(A) 10·8 per cent
(B) 12·4 per cent
(C) 11·6 per cent
(D) 15·6 per cent

21. The goal of Poshan Abhiyaan is to achieve improvement in nutritional status of .....in a time bound manner in next three years period beginning 2017-18.
(A) Children (0-6 years)
(B) Pregnant Women
(C) Lactating Mothers (PW&LM)
(D) All of the above

22. Adjusted Gross Revenue is related to—
(A) Commercial Banks
(B) Telecommunication companies
(C) Corporate finance
(D) Government's revenue

23. Which was the first private sector bank in India ?
(A) Catholic Syrian Bank
(B) City Union Bank
(C) Nedungadi Bank
(D) Nainital Bank

24. Largest number of toll plazas on national highways are in the state of—
(A) Rajasthan
(B) Uttar Pradesh
(C) Madhya Pradesh
(D) Maharashtra

25. As per Sample Registration System (SRS) bulletin, released on November 1, 2019, Maternal Mortality Ratio in India was ..... during 2015-17.
(A) 167 per lakh live birth
(B) 130 per lakh live birth
(C) 122 per lakh live birth
(D) 111 per lakh live birth

26. As per latest SRS bulletin, released on November 1, 2019, the lowest maternal mortality ratio during 2015-17 was reported in the state of—
(A) Kerala
(B) Maharashtra
(C) Andhra Pradesh
(D) Tamil Nadu

Answers with Hints

1. (A) BRICS is a five Nation group-Brazil, Russia, India, China and South Africa.
2. (C) Union Government on October 1, 2019 appointed Prof. Surjit Bhalla, an economist and former member of Prime Minister's Economic Advisory Council, as the Executive Director for the IMF for a period of three years. The key post had fallen vacant after the death of Dr. Subir Gokaran in July 2019.
3. (C) The Union government on October 23, 2019 accorded 'Maharatna' status to state-owned Hindustan Petroleum and Power Grid Corporation With this number of Maharatna CPSUs has increased to 10, while the number of Navaratna CPSUs is now 14.
4. (D) Central government on October 23, 2019 accorded Maharatna status to two Navaratna CPSUs-Hindustan Petroleum and Power Grid Corporation. With this change total number of Navaratna CPSUs came down to 14 from 16 earlier.
5. (D) As per a notification issued on October 31, 2019 by the Ministry of Finance, any Indian citizen, resident or non resident and OCI is eligible to join NPS till age of 65 years.
6. (C) Share price of RIL traded at ₹ 1428 on October 18, 2019, as a result the market capitalisation of RIL became ₹ 9·03 lakh crore.
7. (A) At end-June 2019, India's external debt was placed at US $ 557·4 billion, recording an increase of US$ 14·1 billion over its level at end-March 2019.
8. (A) A country's debt service ratio is the ratio of its debt service payments (principal + interest) to its export earnings.
9. (C) NCAER's observations say that farm sector and agricultural output has been looking up, the industrial sector outlook remains dim due to weak demand and investment activities.
10. (C) World Bank projected India's GDP growth rate of 6·0% for 2019.
11. (B) The ownership pattern is usually disregarded.
12. (A) For very low-value currencies the 'Seingnorage' amount can be negative. In such situations, the central bank (Currency issuing authority) usually discontinues fresh issuance of that denomination (currency).
13. (B) This can be carried forward up to–eight years.
14. (A) The absolute increase in MSP for wheat is ₹ 85 per quintal for marketing season 2020-21.
15. (D) MSP of lentil has been fixed at ₹ 4800 per quintal for marketing season 2020-21, as compared to ₹ 4475 per quintal in 2019-20.
16. (A) Supply of currency Notes :

Year	₹ 2000 note		₹ 500 note	
	Volume (million pieces)	Value (₹ Billion)	Volume (million pieces)	Value (₹ Billion)
2018-19	47	94	11468	5734
2017-18	151	302	9693	4847
2016-17	3504	7008	7260	3630

17. (C) Average days of employment provided per household under MGNREGA was 92 days in Mizoram, 77 days in West Bengal, 72 days in Meghalaya, 66 days in Kerala and 52 days in Madhya Pradesh.
18. (B)
19. (A) Index of Industrial Production was 128·7 during April-September 2019-20 as compared to 127·1 during April-September 2018-19. It shows growth rate of only 1·3 per cent.
20. (B) Though the NITI Aayog did not give its estimates for the required GDP growth at constant prices, economists pegged it at 9 per cent, a feat not seen since the GDP series was revised with 2011-12 as the base year.

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Multiple Choice Questions

Current Questionnaire

1. In Germany, the term 'Black Zero' is referred to as—
   (A) Loss making Start-Ups
   (B) Profitable zero-debt companies
   (C) Balanced Budget
   (D) Tainted Companies

2. World's first Artificial Intelligence powered Sari has been designed by designer Gaurav Gupta in close collaboration with—
   (A) Myntra (B) IBM
   (C) Google (D) VianAI

3. As per a study published in *Nature* ..... is most likely the ancestral homeland of all humans.
   (A) Northern Botswana
   (B) Andaman & Nicobar Islands
   (C) Central Part of Ghana
   (D) Southern Australia

4. India climbed 14 ranks in the World Bank's Ease of Doing Business 2020 survey to stand at 63, among 190 countries, making it one of world's top 10 most improved countries for the third consecutive time. However, India's position is miserably very low in—
   I. Enforcing Contract
   II. Registering property
   III. Protecting Minority Investors
   Correct code is :
   (A) Only I
   (B) Only I and II
   (C) Only II
   (D) I, II and III

5. Historic Ayodhya verdict was pronounced by the Supreme Court on—
   (A) November 9, 2019
   (B) November 14, 2019
   (C) November 26, 2019
   (D) December 6, 2019

6. The Steel Scrap Recycling Policy, 2019 has been notified by the—
   (A) Ministry of Road Transport and National Highways
   (B) Ministry of Steel
   (C) Department of Heavy Industries
   (D) Ministry of MSMEs

7. Treasury Bills are—
   I. Government bonds or debt securities with a maturity of less than a year
   II. Treasury bills are issued to meet short-term mismatches in receipt and expenditure
   (A) Only I is correct
   (B) Only II is correct
   (C) I and III both are correct
   (D) Neither I nor II is correct

8. Consider the following statements in respect of Logistic Ease Across Different States (LEADS) Index 2019, and choose the correct code given below—
   I. This index is prepared by department of Commerce (GoI).
   II. Gujarat is at the top in this index followed by Punjab and Andhra Pradesh.
   III. Infrastructure availability, quality of services, delivery time, and tracking of consignment are some of the parameters of the index.
   Correct code is :
   (A) Only II is correct
   (B) I and II only are correct
   (C) I, II and III all are correct
   (D) None of the above is correct

9. 10-year Sanitation Plan launched by Government of India in mid of 2019 focuses on—
   (A) Solid and Liquid Waste Management
   (B) Cleanliness of public places
   (C) Environmental Sanitation
   (D) The making of the country 100% open defecation free

10. The theme of XI BRICS Summit 2019 was—
    (A) 'Economic Growth for an Innovative Future'
    (B) 'Growth with Sustainable Future'
    (C) 'Development with Equity'
    (D) 'Growth, Equity and Inclusiveness'

11. Which of the following statements is/are correct about retail inflation ?
    I. Consumer prices rose at 4·6 per cent in October, 2019, the fastest rate since June 2018.
    II. The CPI based inflation rate in October 2019 is an inch above the median 4 per cent target set by the Reserve Bank of India under its inflation-targeting framework.
    III. The core inflation rate, which excludes the volatile components food and fuel, dropped to its lowest in the past eight years, at 3·3 per cent, in October 2019.
    VI. Core inflation represents the demand and pricing power in the economy, and a sharp drop in October portends feeble prospects of recovery in the current quarter also.
    (A) I, II, III and IV all are correct
    (B) Only III is correct
    (C) Only I and III are correct
    (C) Only IV is correct

12. India decided to opt out of Regional Comprehensive Economic Partnership (RCEP). The reasons given is/are—
    I. concerns about getting swamped by imports under the RCEP—putting its domestic industry and agriculture at risk—haven't been assuaged.
    II. The present form of the RCEP Agreement does not fully reflect the basic spirit and the agreed guiding principles of RCEP.
    III. India runs a large trade deficit with RCEP countries and was looking for specific protection for its industry and farmers from a surge in imports.

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IV. Domestic industry and dairy farmers had strong reservations about the trade pact.

Correct code is :

(A) Only I
(B) Only I and II
(C) Only II, III and IV
(D) I, II, III and IV all

13. Which of the following is India's first state to launch, "Emission Trading Scheme" ?
(A) Gujarat
(B) West Bengal
(C) Haryana
(D) Tamil Nadu

14. It is feared that the following species of animals have become extinct due to desertification in India ?
I. Indian Cheetah
II. Pink-headed Duck
III. Great Indian Bustard
(A) Only I and II
(B) Only II and III
(C) I, II and III all
(D) Only III

15. Project REPLAN is related—
(A) Rehabilitation of Divyangjan
(B) Reducing Plastic in Nature
(C) Reducing the burden of class room bag of children studying in class I-V
(D) Redevelopment of cities

16. Which of the following statements is correct in respect of the latest consumption expenditure survey by the National Statistical Office (NSO) ?
I. Consumer spending fell for the first time in more than four decades in 2017-18.
II. In rural areas, consumer spending declined by 8·8 per cent in 2017-18 as compared to 2011-12.
III. In urban areas, consumption expenditure declined by 2 per cent over six years (Between 2011-12 and 2017-18).
(A) Only I and II are correct
(B) Only I and III are correct
(C) I, II and III all are correct
(D) None of the above is correct

17. Consider the Assertion (A) and Reason (R) and choose the correct code given below—
Assertion (A) : Government of India has taken several measures after the Budget 2019-20 to boost up the economy but there is no sign of revival in Q2 of 2019-20.
Reason (R) : The NSSO survey—Key Indicators : Household Consumer Expenditure in India—shows the average amount of money spent by a person in a month fell by 3·7 per cent to ₹ 1,446 in 2017-18 from ₹ 1,501 in 2011-12.
(A) Assertion (A) and Reason (R) both are correct and Reason (R) is the correct explanation of Assertion (A)
(B) Assertion (A) and Reason (R) both are correct but Reason (R) is not the correct explanation of Assertion (A)
(C) Assertion (A) is correct but Reason (R) is incorrect
(D) Assertion (A) is incorrect but Reason (R) is correct

18. Number of States in India with 'Bi-cameral' legislature is ..... as on November 1, 2019.
(A) 6 (B) 7
(C) 8 (D) 9

19. 18th Summit of Non-Alligned Movement (NAM) was held on 25-26 October 2019 in—
(A) New Delhi
(B) Porelamar (Venezuela)
(C) Baku (Ajarbejan)
(D) Tehran (Iran)

20. Which of the following is odd one out ?
(A) 18th Summit of NAM, 2019
(B) 3rd Summit of RCEP, 2019
(C) 35th Summit of ASEAN, 2019
(D) 14th East Asia Summit, 2019

21. Passengers of which train are suitably compensated for late running of train ?
(A) All the Rajdhani Express Trains
(B) Gatiman Express
(C) Tejas Express between Lucknow and New Delhi
(D) All the Tejas Express trains

22. Ministry of Law and Justice, in its order dated October 22, 2019, put senior citizens and disabled people in the absentee voter list. What will be the fall out of this amendment in the Conduct of Election Rules, 1961 ?
(A) Senior citizens over the age of 80 years and disabled people's names will be published in a Separate voter list
(B) Senior citizens over the age of 80 years and disabled people's names will be struck of the voter lists
(C) Senior citizens over the age of 80 years and disabled people can now cast their votes through postal ballots
(D) Ballot papers of senior citizens over 80 years of age and disabled persons will be collected by the presiding officers

23. As per latest notification of the Central Government, tenure of Information Commissioners has been—
(A) reduced from five years to four years
(B) reduced from five years to three years
(C) increased from five years to six years
(D) increased from five years to six years

24. Consider the following facts about 'SUMAN', and choose the correct code given below—
I. SUMAN is Surakshit Matritva Aashwasan scheme
II. It is aiming zero preventable maternal and newborn deaths in India.
III. All pregnant women, newborns and mothers up to 6 months of delivery will be able to avail several free health care services.
IV. There will be zero expense access to identification and management of complications during and after the pregnancy.
(A) Only I is correct
(B) Only I and III are correct
(C) Only I, II and IV are correct
(D) I, II, III and IV are correct

25. As per WHO's Global Tuberculosis Report 2019, India accounts for ..... of the global Tuberculosis burden.
(A) 27% (B) 39%
(C) 44% (D) 51%

26. World Economic Forum introduced the new Global Competitiveness Index 4·0 in 2019. In this Index '4·0' represents—

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(A) Industry 4·0 (Fourth Industrial Revolution)
(B) Service 4·0 (Fourth Services Revolution)
(C) Agriculture 4·0 (Fourth Agricultural Revolution
(D) IT 4·0 (Fourth generation IT solutions)

27. Global Mobility Report has been released by ..... on October 23, 2019.
(A) World Bank
(B) World Economic Forum
(C) The United Nations Economic and Social Council
(D) Sustainable Mobility for All (SuM4All)

28. 'Bishwa Ijtema' is held every year in—
(A) India
(B) Bangladesh
(C) Indonesia
(D) Maldives

29. The Union Cabinet has given its approval for introduction of the Industrial Relations Code, 2019 in the Parliament. The Industrial Relations Code, 2019 has been prepared after amalgamating, simplifying and rationalizing the relevant provisions of following Central Labour Acts—
I. The Trade Unions Act, 1926.
II. The Industrial Employment (Standing Orders) Act, 1946.
III. The Industrial Disputes Act, 1947.
(A) Only I and II
(B) Only III
(C) Only II and III
(D) I, II and III all

30. Farmers' Clubs have been promoted by—
(A) Indian Council of Agricultural Research
(B) National Bank for Agriculture and Rural Development
(C) Regional Rural Banks
(D) Ministry of Agriculture, Farmers' Welfare and Cooperation

31. Consider the following statements about Jansankhya Sthirtha Kosh and choose the correct code given below—
I. Jansankhya Sthirtha Kosh (JSK), an autonomous body under Ministry of Health and Family Welfare, implemented the following schemes : 1. Prerna Scheme (for delaying marriage, child-birth and spacing), 2. Santushti Scheme (Public Private Partnership for sterilization services), and 3. National Helpline (for information on family planning).
II. The Jansankhya Sthirtha Kosh has been discontinued on 08/02/2019 vide the cabinet decision on 7.02.2018 and various schemes for population control are being supported under National Health Mission.
(A) Only I is correct
(B) Only II is correct
(C) I and II both are correct
(D) Neither I nor II is correct

32. In a big bang move, Union Cabinet on November 21,2019 gave its node for strategic sale in certain Public Sector Undertakings.
I. Bharat Petroleum Corporation Ltd.
II. Shipping Corporation of India Ltd.
III. Container Corporation of India Ltd.
IV. Tehri Hydro Power Development Corporation Ltd.
V. North Eastern Electric Power Corporation Ltd.
(A) Only I, II and III
(B) Only IV and V
(C) I, II, III, IV and V
(D) Only I

33. Consider the following facts about Indian Railways Catering and Tourism Corporation Ltd. (IRCTC).
I. IRCTC is a Mini Ratna Category-I Public Sector Enterprises.
II. It is wholly–owned by and is under the administrative control of Railway Board
III. IRCTC operates Delhi-Lucknow Tejas Express
IV. An IPO issued in 2019 by IRCTC received an impressive response from investors
(A) Only I and II
(B) Only I, II and III
(C) I, II, III and IV
(D) Only I

34. As per central government's latest direction, MGNREGA wages are to be pegged with—
(A) Consumer Price Index-Rural
(B) Consumer Price Index-Combined
(C) Consumer Price Index-Agricultural Labourers
(D) Consumer Price Index-Rural Labourers

35. Prime Minister Narendra Modi on September 24, 2019 inaugurated 50KW Gandhi Solar Park at—
(A) Sabarmati Ashram Ahmadabad
(B) Headquarters of United Nations, New York
(C) Phoenix Ashram, Durban, South Africa
(D) Parliament House New Delhi

36. Gandhi Peace Garden , inaugurated by Prime Minister Narendra Modi on September 24,2019 is situated at—
(A) UNO Head quarters
(B) Campus of State University of New York
(C) GIFT city Gandhi Nagar Gujarat
(D) Rajghat New Delhi

37. UNESCO world heritage site of Mamallapuram hosted the second India–China informal Summit on October 11-12, 2019. Mamallapuram archaeological sites were created during the rule of—
(A) Chola Dynasty
(B) Pandyan Dynasty
(C) Pallava Dynasty
(D) Chalukya Dynasty

38. 35% Indian children suffer from stunting, 17% suffer from wasting, 33% are under weight and 2% are overweight. These stunning figures are the observations of which of the following reports ?
(A) UNICEF State of the World 's Children Report 2019
(B) Fourth National Family Health Survey 2015-16
(C) Global Hunger Report 2019
(D) Economic Survey 2018-19

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39. Which of the following pairs is not matched correctly ?
(A) Dadasaheb Phalke Award 2019—Amitabh Bachchan
(B) Goalkeeper Award 2019—Prime Minister Narendra Modi
(C) Nobel Prize Economics, 2019—Esther Duflo
(D) Right Livelihood Award 2019—Dr. Sbimal Ghosh

40. Libra, permissioned blockchain digital currency, has been launched by—
(A) Facebook
(B) Google
(C) Apple
(D) WhatsApp

Answers with Hints

1. (C)
2. (B) In 2017, Vogue magazine enabled a collaboration between IBM's Cognitive system, Watson, and fashion designer Gaurav Gupta to create the world' first ever AI-inspired sari-gown, at the 'Vogue Women of the year 'Award.
3. (A) In the study published in *Nature*, a group of Australian, Namibian, South African and South Korean researchers combined multiple fields of anthropology, such as ethno-linguistics (relationship between language and ethnic groups), genetics, climatic reconstructions and more, to conclude that our first *Homo sapiens* ancestors emerged from Makgadikgadi-Okavango, the palaeo-wetland of southern Africa.
4. (B) World Bank placed India at 163,154 and 12 rank, respectively, on enforcing contracts, registering property and protecting minority investors.
5. (A) Supreme Court's five judges bench headed by Chief Justice Ranjan Gogoi, delivered historic judgment on November 9, 2019 in Ram Janambhumi case by accepting sitting deity Shree Ram Lala as a legal identity and established that the entire disputed land measuring 2·77 acre belongs to Shree Ram Lala. The Apex Court directed the government to allot 5 acre land at an appropriate site in Ayodhya to Sunni Waqf Board.
6. (B) Ministry of Steel has issued the Steel Scrap Recycling Policy on November 8, 2019 with the aim of promoting circular economy in the steel sector and to promote a formal and scientific collection, dismantling and processing activities for end of life products that are sources of recyclable (ferrous, non-ferrous and other non-metallic) scraps which will lead to resource conservation and energy savings and setting up of an environmentally sound management system for handling ferrous scrap.
7. (C) Treasury bills or T-bills, which are money market instruments, are short term debt instruments issued by the Government of India and are presently issued in three tenors, namely, 91 day, 182 day and 364 day. Treasury bills are zero coupon securities and pay no interest. Instead, they are issued at a discount and redeemed at the face value at maturity.
8. (C) Department of commerce, GoI, released on September 11, 2019 a report containing the Logistics Ease Across Different States (LEADS) Index which has been developed in collaboration with Deloitte and is based on the perception of users and stakeholders at the state level. It is estimated on the basis of 8 indicators-Infrastructure, services, timeliness, traceability, competetiveness, security, operating environment and efficiency of regulation.
9. (A) Jal Shakti Ministry launched a document on 10-year rural sanitation strategy (ODF plus), with focus on increasing access to solid and liquid waste management. The framework will be in place from 2019 to 2029.
10. (A) Five-Nation BRICS-Brazil, Russia, India, China and South Africa was held in Brasilia (Brazil) Summit during November 13-14, 2019. The new areas of BRICS cooperation spearheaded by Brazil, are : strengthening of cooperation on science, technology and innovation; enhancement of cooperation on digital economy; invigoration of cooperation on the fight against transnational crime, especially against organized crime, money laundering and drug trafficking; and encouragement to the rapprochement between the New Development Bank (NDB) and the BRICS Business Council.
11. (A) 12. (D)
13. (A) The Gujarat government has launched country's first 'Emission Trading System' which is being described as world's first market trading in Particulate Matter (PM) emission. ETS was launched in Surat, one of the most polluted cities of Gujarat.
14. (C) Researchers warned at the 14th meeting of Conference of Parties to the United Nations Convention to Combat Desertification (UNCCD CoP 14) held in New Delhi that at least three important species of animals–Indian Cheetah, Pink-Head Duck, and Great Indian Bustard have become extinct due to desertification in India.
15. (B) REPLAN–Reducing Plastic in Nature is an initiative of Khadi India under Prime Minister's 'Swachhata Hi Seva campaign. Khadi India has developed a process to make carry bags from a mix of plastic and paper pulp in the ratio of 80 : 20.
16. (C) The NSSO survey—Key Indicators : Household Consumer Expenditure in India—shows the average amount of money spent by a person in a month fell by 3·7 per cent to ₹ 1,446 in 2017-18 from ₹ 1,501 in 2011-12. The figures for monthly per capita consumption expenditure (MPCE) are in real terms, meaning these have been adjusted for inflation, keeping 2009-10 as the base year.
17. (B)
18. (A) Prior to the abrogation of Article 370 in the state of Jammu and Kashmir, Andhra Pradesh, Bihar, Karnataka, Maharashtra, Telangana, and Jammu & Kashmir had both the houses of the state legislatures. As on 31 October, 2019, Jammu & Kashmir has been divided into two Union

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Territories—Jammu & Kashmir (which will have a Legislative Assembly but no legislative council) and Ladakh (which will not have a legislative assembly).

19. (C) Non-Aligined Movement started in 1961 with first summit in Belgrade. Indian Prime Minister Pt. Jawahar Lal Nehru, Yugoslavian President Marshal Tito and Egyptian President Gamal Abdel Nasser were the founding fathers of the NAM. The NAM was created as a third force, mainly of third world countries, during the era of cold war between USA and USSR. At present the total membership of NAM is 120. The theme of 2019's NAM summit was 'Upholding the Bandung Principles to ensure a concerted and adequate response to the challenges of the contemporary world.
20. (A) 18th Summit of Non-Aligned Movement was held on 25-26 October in Baku (Ajarbiajan), while rest of the Summits were held between October 31,2019 and November 4, 2019 in Bangkok (Thailand).
21. (C) Tejas Express, a premium segment private passenger train, running between Lucknow and New Delhi is the only train in India that is operated by the IRCTC. IRCTC pays passengers a compensation of ₹ 100 in case the train during its run is delayed by more than one hour and, ₹ 250 if it is delayed by more than two hours.
22. (C) The absentee voter refers to a vote cast by someone who is unable to go to polling station. In case senior citizens and disabled people both these categories of voters are unable to reach their respective polling stations and thus are unable to cast their votes. Now they will be able to cast their vote through postal ballot.
23. (B) Right to information Act 2005 has been revised in 2019. The amended RTI Act gave the government the discretion to decide on 'conditions of service' for which no express provisions are made in the rules.
24. (D) Government of India launched Surakshit Matritva Aashwasan (SUMAN) scheme on October 10, 2019 to bring down preventable maternal and newborn deaths at zero level. The beneficiaries are entitled to receive several healthcare services free of cost at public health centres.
25. (A) As per World Health Organisations' Global Tuberculosis Report an estimated 10·0 million people had tuberculosis and out of these about 27% cases are in India (highest) followed by 9% in China, 8% in Indonesia and 6% each in Philippines and Pakistan.
26. (A) New Global Competitiveness Index 4·0 has been introduced by the World Economic Forum. It provides detailed map of the factors and attributes that derive productivity, growth and human development in the era of the upcoming Fourth Industrial Revolution.
27. (D) Sustainable Mobility for All (SuM4All) is a global multi-stakeholder partnership that acts collectively to help transform the transport sector. 55 public and private organisations of transport sector across the world are actively associated with this initiative to make the mobility equitable, efficient, safe and green (Eco friendly). Global Mobility Report, Released by SuM4All is the first ever attempt to examine performance of transport sector globally.
28. (B) Bishwa Ijtema, the second largest congregation of Muslims after Hajj, is organised every year in Dhaka (Bangladesh) on the bank of the Turag river at tongi since 1967. It draws lakhs of Muslims from more than 150 countries. The gathering focuses only on prayer and meditation and is not open for political discussions. First phase of Bishwa Ijtem is scheduled from January 10-12, 2020, while the second phase of Ijtem will be held from January 17-19, 2020.
29. (D) The government plans to codify 44 central labour laws into four broad codes-Code on Wages, 2019 (already passed by the Parliament); the Code on Occupational Safety, Health and Working Conditions (Bill was presented in the Budget session, 2019). The Code on Social Security is in the pre-legislative stage; Industrial Relations Code, 2019 (Union Cabinet gave its approval).
30. (B) Farmers' Clubs (FCs) promoted by National Bank for Agriculture and Rural Development (NABARD) are grass roots level informal fora organized by the rural branches of banks, Non-Government Organisations (NGOs), Krishi Vigyan Kendras (KVKs), etc. The major objective is to promote "Development through credit, technology transfer, awareness and capacity building" of the farmers. As on 31st October, 2019, there are 24321 active Farmers' Clubs existing in different States/UTs.
31. (C) Jansankhya Sthirata Kosh (JSK), established in 2004-05, was a registered society of the Ministry of Health and Family Welfare, Government of India started with a ₹ 100 crore grant from government. JSK was to promote and undertake activities aimed at achieving population stabilisation at a level consistent with the needs of sustainable economic growth, social development and environment protection, by 2045. It has been discontinued on 8.2.2019.
32. (C) Cash starved Central government on November 21, 2019 gave in-principle approval for strategic disinvestment of the government shareholding in five PSUs along with management control. Strategic disinvestment means offering stake along with control and management of the company.
33. (C) IRCTC was incorporated in September 1999 as an arm of Indian Railways to upgrade, professionalise and manage the catering and hospitality services in trains and stations. India's first and only privately managed and operated train Tejas is operated by IRCTC. The initial public offer (IPO), in the month of September 2019 of Indian Railway Catering and Tourism Corporation (IRCTC) received bids for 225·69 crore crore shares as against 2·01 crore shares (112 times) on offer.

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Solved Paper

UPSSSC Combined Lower Subordinate Services (General Selection) Competitive Examination 2019

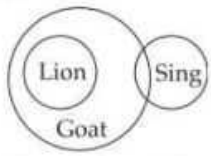
(Held on 1-10-2019)

General Aptitude Test

1. Find the odd one out of the below geometrical shapes—
Rhombus, Triangle, Square, Parallelogram, Rectangle, Trapezium
(A) Rhombus
(B) Triangle
(C) Parallelogram
(D) Trapezium

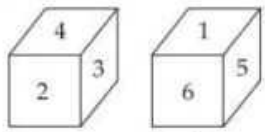
2. Find the odd one out from the below group of names—
Guava, Watermelon, Lettuce, Apple, Kiwi, Mango, Pear, Pomegranate
(A) Lettuce
(B) Kiwi
(C) Pear
(D) Pomegranate

3. Study the below diagram and identify the option that is **not** correct—



(A) Some lions are not goats
(B) Some goats are lions
(C) Lions are not singers
(D) Some goats can sing

4. Two positions of a dice are shown as below. If the number 6 is exactly opposite to number 4, then which number is exactly opposite to number 3 ?



(A) 1 (B) 2
(C) 5 (D) 6

5. Deepak left his home and walked 4 km towards east, then turned left and walked 3 km to reach his office. His sister Deepika left the same home, walked 16 km towards east, then turned left and walked 8 km to reach her college. What is the shortest distance between the office and the college ?
(A) 10 km (B) 13 km
(C) 17 km (D) 18 km

6. If the pentagon shown below is rotated anti-clockwise 270° three times, the rhombus is rotated clockwise 45° four times, and the mirror image of the alphabet is used, then what is the resulting figure ?



(A) 

(B) 

(C) 

(D) 

7. Below is a statement followed by two conclusions. Read the statement and conclusions and determine which conclusion(s) logically follow(s) the statement given ?
Statement : For late return of books by readers, a library charges penalty of ₹ 10 per day for the number of days of delay beyond the due date.
Conclusions :
I. Penalty for costlier books will be higher.
II. Penalty for lighter books will be lesser.
(A) Only conclusion I follows
(B) Only conclusion II follows
(C) Either conclusion I or II follows
(D) Neither conclusion I nor II follows

8. Choose an option that is a valid assumption for the below statement—
Statement : The Ministry of Railways introduces additional Holiday Special trains and also adds extra coaches to existing trains during vacations.
(A) During vacations, kids love to travel by trains instead of aeroplanes
(B) Passenger traffic in trains significantly increases during vacations
(C) People need change and like to see new trains during vacations
(D) Engine drivers like to work for more hours during vacations

9. Read the statement below and two courses of action given. Choose which course(s) of action need(s) to be taken with regard to the statement given.
Statement : Despite having a standard work timing of 10 am to 6 pm, there has been more number of cases of employees reporting late for work, which affects the work flow in the factory.
Courses of Action :
I. The employees must be given a warning and strict disciplinary action must be initiated if no improvement is found.
II. The work timing must be made flexible so that everyone is able to come as per his or her own convenient time.
(A) Only Action I needs to be taken
(B) Only Action II needs to be taken
(C) Either Action I or Action II needs to be taken
(D) Neither Action I nor Action II needs to be taken

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10. If Puzzle :: Solve, then Essay :: ? Identify what can come in place of '?'.
(A) Resolve (B) Dictate
(C) Recite (D) Write

11. Select the option that is related to the third term in the same way as second term is related to the first term.
Temperature : Thermometer :: Humidity : ?
(A) Spectrometer
(B) Seismometer
(C) Hygrometer
(D) Osmometer

12. In a certain coded language, if 'LITMUS' is written as 'SMIUTL' and 'INDIGO' is written as 'OINGDI', then how is the word 'JAGGER' would be written in that language ?
(A) RGAEGJ (B) RGJEGA
(C) RGAGEJ (D) RGJEAG

13. In a certain coded language, if 'TABLE' is written as 'VEDNI' and 'CHAIR' is written as 'EJEOT', then how is the word 'BENCH' would be written in that language ?
(A) DIPFJ (B) DGPEJ
(C) DIPEJ (D) DGPFT

14. If P@Q means P is the husband of Q; J#L means L is the son of J; and N$M means N is the brother of M, then which of the below options definitely states that B is the mother of A ?
(A) A#B$C@D
(B) C$D@A#B
(C) B$C#A@D
(D) D@B#C$A

15. Given below are four statements followed by four conclusions. Identify which conclusions(s) definitely follow(s) the given four statements disregarding the commonly known facts.
Statements :
1. All dogs are cats.
2. Some cats are tigers.
3. All tigers are lions.
4. No lion is a donkey.

Conclusions :
I. Some cats are dogs.
II. All lions are tigers.
III. Some donkeys are tigers.
IV. No tiger is a donkey.
(A) Only conclusion I follows
(B) Only conclusions III and IV follow
(C) Only conclusions II and III follow
(D) Only conclusions I and IV follow

16. If the below alphabets are formed as per the ascending order of their appearance in the standard alphabet series, then which meaningful English word can be formed using the alphabets in 1st, 4th, 6th, 9th and 16th position from left ?
XUIHQLETBWMRKSAGC
(A) STEAM (B) WHALE
(C) MEANS (D) SHAME

17. Study the below series and identify what can come in the place of '?'.
GAS27, IEU35, MIY47, OMA29, SOE39, USI49, ?
(A) WUM57 (B) WWO61
(C) YUM59 (D) YWN62

18. Study the below series and identify what can come in the place of '?'.
3947, 4379, 7493, 9734, ?
(A) 9437 (B) 7934
(C) 4793 (D) 3947

19. If the symbols '+' and '–' are interchanged, '×' and '÷' are interchanged and also the digits '3' and '7' are interchanged, then what will be the value of the below equation ?
$83 \times 7 - 79 + 63 \div 7$
(A) – 133 (B) – 350
(C) 244 (D) 511

20. The ages of husband, wife and their son are in the ratio of 10 : 9 : 3. To calculate the age of the son, which of the below pieces of information is additionally required and sufficient ?
(A) Before 6 years, the age of the son was 20% the age of his mother then
(B) After 10 years, the sum of the ages of all three will be 30 more than the sum of their present ages
(C) The difference between the age of father and son is more than the difference between the age of mother and son
(D) The sum of the ages of all the three is a perfect multiple of 11

21. The perimeter of a rectangular ground with corners A, B, C and D is 28 metre. To calculate the area of the ground, which of the below pieces of information is additionally required and sufficient ?
(A) The length of the diagonal AC is same as the length of the diagonal BD
(B) The sum of the diagonals is 8 metre less than the perimeter of the rectangle
(C) The perimeter of the rectangle is greater than 50% of the area of the rectangle
(D) The sum of all the internal angles of the rectangle is 360°

22. We need to find the value of 'a' from the below two equations, if both a and b are positive integers—
1. $2a + b = 22$
2. $3a - 2b = 12$
Now, read the below options and select the one that applies—
(A) Only equations I is sufficient to derive the value of 'a'
(B) Only equation 2 is sufficient to derive the value of 'a'
(C) Neither equations 1 or 2 alone are sufficient, but both together are required to derive the value of 'a'
(D) The value of 'a' cannot be derived by any individual equation or even by both equations combined

23. If in a coded language 'PEASANT' is written as 'RQYVYHN', how will 'RANCHER' be written in the same language ?
(A) PHFFPDL (B) PLDPHFF
(C) PHFFLDP (D) PFFHLDP

24. Study the given table carefully to answer the question that follows—

Sale (in crores) of no. of units by four companies (cos.) over the years (yrs.)

Co./ Year	2015	2016	2017	2018
A	115·8	85·7	58·9	46·6
B	150·1	76·3	37·2	39·1
C	93·3	69·5	53·7	48·9
D	180·6	111·1	21·2	33·4

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Which company has sold the maximum number of units over the years ?

(A) A (B) B
(C) C (D) D

25. If P + Q implies P − Q, P − Q implies P × Q, P × Q implies P ÷ Q, P ÷ Q implies P + Q, which of the following is **true** ?

(A) $1 + 2 - 6 \times 3 \div 8 = 8$
(B) $6 + 2 - 3 \times 1 \div 4 = 12$
(C) $25 + 6 - 45 \times 9 \div 23 = 18$
(D) $10 + 4 - 3 \times 1 \div 2 = 5$

General Knowledge

26. Computer tools such as Word, Excel and Power Point are products owned by which of these companies ?

(A) Intel (B) Apple
(C) Microsoft (D) Google

27. Timothy Donald Cook, popularly known as Tim Cook, is the Chief Executive Officer (CEO) of which of these companies ?

(A) Google (B) Twitter
(C) Amazon (D) Apple

28. In the context of Microsoft Word, there is a feature called 'Gutter Margin'. What is this feature used for ?

(A) Improve the clarity of graphics and images
(B) Give provision for better document binding
(C) Improve the clarity of the printed text
(D) Facilitate the insertion of page numbers

29. Which of these districts of the state of Uttar Pradesh does **not** share its border with Nepal ?

(A) Pilibhit (B) Shravasti
(C) Sitapur (D) Maharajganj

30. Which of these districts of Uttar Pradesh lies on the Uttar Pradesh-Bihar border ?

(A) Basti
(B) Bulandshahr
(C) Banda
(D) Ballia

31. Name the national leader who undertook a marathon walk called 'padayatra' from Kanyakumari to Rajghat in Delhi in 1983. The intent of the yatra was to renew rapport with the Indian masses.

(A) Chandrashekhar
(B) L.K. Advani
(C) Ram Vilas Paswan
(D) V.P. Singh

32. Name the Indian Prime Minister who announced in the Parliament that he would implement the Mandal Commission's recommendations. This declaration triggered nationwide protests in India.

(A) Rajiv Gandhi
(B) V.P. Singh
(C) Chowdhary Charan Singh
(D) Chandrashekhar

33. Which city in Uttar Pradesh is called 'Suhaag Nagari' because it is famous for making glass bangles ?

(A) Firozabad (B) Gorakhpur
(C) Varanasi (D) Bareilly

34. Who among these following leaders is also the head priest of the Gorakhnath Temple and Math ?

(A) Uma Bharati
(B) Yogi Adityanath
(C) Sri Sri Ravi Shankar
(D) Mahant Paramhans Das

35. Sarnath, the sacred place where Lord Buddha delivered his first sermon, is located very close to which of these cities ?

(A) Mathura (B) Ayodhya
(C) Jhansi (D) Varanasi

36. Which part of Uttar Pradesh is famous for the delicately embroidered sarees called 'Chikankari sarees' ?

(A) Moradabad
(B) Lucknow
(C) Meerut
(D) Prayagraj (Allahabad)

37. Name the poet and saint who wrote Ramcharitmanas, another version of the Ramayan.

(A) Ravidas (B) Surdas
(C) Kalidas (D) Tulsidas

38. Name the South Indian King who vanquished the forces of the Dutch East India Company in 1741 in the battle of Colachel—

(A) Veera Pandya Kattabomman
(B) Raja Raja Chola
(C) Marthanda Varma
(D) Haider Ali

39. Name the famous warrior begum from the principality of Awadh, who fought the British as part of the 1857 mutiny ?

(A) Begum Hazrat Mahal
(B) Begum Raziya Sultan
(C) Begum Jahanara
(D) Begum Meherunnissa

40. The first emperor of the Mughal dynasty, Babur has written an autobiography in his native tongue of Chagatai Turkic. What is the name of this book ?

(A) Mughalnama
(B) Baburnama
(C) Baburmubarak
(D) Baburbihaya

41. When Atal Bihari Vajpayee became the Prime Minister for his first tenure in 1996, what was the closest approximate duration of his Prime Ministership ?

(A) Two days
(B) Two weeks
(C) Two months
(D) Two years

42. Name the celebrated physician in the court of King Bimbisara who was the personal physician of Lord Buddha himself ?

(A) Ajathashatru
(B) Sariputta
(C) Jivaka
(D) Rahula

43. Which of these statements is **True** with regard to the poem 'Amar Sonar Bangla' penned by Rabindranath Tagore ?

(A) It was Tagore's first ever poem
(B) This poem later was adopted by Bangladesh as its national anthem
(C) This poem fetched Tagore the Nobel Prize
(D) The poem was a school prayer at Shantiniketan

44. India's 5-year plan system was adopted from Russia. Name the Russian leader who first implemented the 5-year plan approach in Russia ?

(A) Vladimir Lenin
(B) Joseph Stalin
(C) Leonid Brezhnev
(D) Nikita Khrushchev

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45. Near which European capital would you find the Palace of Versailles ?
(A) London (B) Paris
(C) Rome (D) Brussels

46. The two famous universities of Oxford and Cambridge are located in which country ?
(A) France
(B) United States of America
(C) United Kingdom
(D) Italy

47. How many total biosphere reserves are there in India ?
(A) 10 (B) 12
(C) 18 (D) 25

48. The Dandeli Wildlife Sanctuary is located in which Indian state ?
(A) Kerala (B) Tamil Nadu
(C) Telangana (D) Karnataka

49. In which of these hill stations would you find the Cheeyapara Waterfalls, Pothamedu View point and Attukad Waterfalls ?
(A) Munnar (B) Ooty
(C) Kodaikanal (D) Yercaud

50. The city of Venice, criss-crossed by canals and bridges, is located in which country ?
(A) Denmark (B) Scotland
(C) France (D) Italy

51. Mount Etna, considered to be the most active volcano of Europe, is located in—
(A) Portugal (B) Spain
(C) Greece (D) Italy

52. Ponmudi is a small hill station in South India. It is located near which of these cities ?
(A) Kozhikode
(B) Madurai
(C) Thiruvananthapuram
(D) Mangluru

53. Name the city that is the capital of Western Australia—
(A) Darwin (B) Perth
(C) Brisbane (D) Hobart

54. Article 161 of the Indian Constitution confers pardoning powers and commutation of sentence powers on—
(A) The President of India
(B) The Prime Minister of India
(C) The governors of various states
(D) The Chief Justice of India

55. Articles 5 to 11 of the Indian Constitution deal with which of these aspects ?
(A) Citizenship of India
(B) Languages in India
(C) Boundaries of Indian states
(D) Education for children

56. As of April 2019, who is the Governor of the state of Maharashtra ?
(A) E.S.L. Narasimhan
(B) C. Vidyasagar Rao
(C) Palanisamy Sathasivam
(D) Anandiben Patel

57. What does article 300A of the Indian Constitution aim to guarantee ?
(A) No person shall be deprived of his education
(B) No person shall be deprived of his marital rights
(C) No person shall be deprived of his property
(D) No person shall be deprived of his privacy

58. Articles 324-329 of the Indian Constitution deal with which of these aspects ?
(A) Elections
(B) Minorities protection
(C) Panchayats
(D) Powers of a governor

59. Currently, what is the highest percentage slab for the new tax regime called Goods and Services Tax (GST) ?
(A) 18% (B) 25%
(C) 28% (D) 32%

60. Bezwada Wilson is a social activist who was awarded the Ramon Magsaysay Award in 2016. What is his sphere of social activity ?
(A) Eradication of child labour
(B) Eradication of female infanticide
(C) Eradication for manual scavenging
(D) Eradication of child marriage

61. With which foreign country is India collaborating to develop the supersonic cruise missile called BrahMos ?
(A) France (B) China
(C) Japan (D) Russia

62. Prime Minister Narendra Modi addresses the nation through his radio broadcast called 'Mann Ki Baat'. When did this program get aired for the first time ?
(A) October 2014
(B) October 2015
(C) October 2016
(D) October 2017

63. United States is the country with the world's largest GDP. Which country comes second in the global GDP ranking ?
(A) Japan (B) Germany
(C) China (D) India

64. Abdelaziz Bouteflika, the President of ....., has resigned in April 2019 bowing to public pressure.
(A) Sudan (B) Libya
(C) Chad (D) Algeria

65. Name the new CEO of the International Cricket Council (ICC) after the Cricket World Cup 2019—
(A) Sunil Gavaskar
(B) Sharad Pawar
(C) Manu Sawhney
(D) Rahul Johri

66. Name the ex-CEO and MD of Ashok Leyland who took over as the CEO of Royal Enfield ?
(A) Vinod K. Dasari
(B) Dheeraj Hinduja
(C) Rajeev Dubey
(D) G.V. Prasad

67. Name the cricket team that is number 2 in international test ranking, as per ICC, as of March 2019 ?
(A) New Zealand
(B) South Africa
(C) Australia
(D) England

68. Who was chosen as the captain of the Delhi Capitals team for IPL 2019 season ?
(A) Virendra Sehwag
(B) Ravichandran Ashwin
(C) Shreyas Iyer
(D) Shikhar Dhawan

69. In which state has the National Cancer Institute (NCI) been set up in early 2018 ?
(A) Rajasthan
(B) Punjab
(C) Haryana
(D) Himachal Pradesh

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70. Which is the leading areca nut producing state in India ?
(A) Kerala
(B) West Bengal
(C) Manipur
(D) Karnataka

71. Name the 70-year-old lady from Odisha who was awarded the Padmashri award for her work of preserving of hundreeds of types of paddy seeds throughout her life ?
(A) S. Thimmakka
(B) Kamala Pujari
(C) Harika Dronavalli
(D) Muktaben Pankajkumar Dagli

72. The first areca nut to get the Geographic Indications (GI) tag is the Sirsi Supari. In which state is this supari grown ?
(A) Karnataka
(B) Bihar
(C) Andhra Pradesh
(D) Odisha

73. In which town of Uttar Pradesh would one find the 11 storid Pagal Baba Temple ?
(A) Vrindavan (B) Varanasi
(C) Sarnath (D) Chitrakoot

74. The tomb of which of these ancient emperors is located in the Sasaram town of Bihar state ?
(A) Bahadur Shah Jafar
(B) Alauddin Khilji
(C) Sher Shah Suri
(D) Qutb-ud-Din Aibak

75. The area called Bundelkhand comes under which of these borders ?
(A) Uttar Pradsh—Bihar Border
(B) Uttar Pradesh —Madhya Pradesh Border
(C) Uttar Pradesh—Nepal Border
(D) Uttar Pradesh —Uttarakhand Border

General Science/Arithmetic

76. What was the name of the mission, an anti-satellite missile test, carried out successfully by the DRDO on 27 March, 2019 from Dr. APJ Abdul Kalam Island launch complex ?
(A) Mission Parakram
(B) Mission Shakti
(C) Mission Vikram
(D) Mission Sahas

77. What is the application of the GSAT-31 satellite launched by India on 6 February, 2019 ?
(A) Earth observation
(B) Navigation
(C) Climate and Environment
(D) Communication

78. Name the unclear-capable surface-to-surface intercontinental ballistic missile developed by the Defence Research and Development Organisation (DRDO) ?
(A) Prithvi III (B) Trishul
(C) Agni 5 (D) Barak-8

79. Which of the following is a part of the process involved in water cycle ?
(A) Evaporation
(B) Sublimation
(C) Freezing
(D) Melting

80. Deficiency of which mineral causes anaemia ?
(A) Magnesium (B) Iron
(C) Zinc (D) Lead

81. Which of the following is a commonly used chemical method for purifying water ?
(A) Hibernation
(B) Excavation
(C) Chlorination
(D) Denitrification

82. Which of the following is the source of freshwater ?
(A) Ocean (B) Sea
(C) Brine (D) River

83. Which of the following is a good source of vitamin A ?
(A) Fish oil (B) Sugar
(C) Banana (D) Coconut oil

84. Sound cannot travel through—
(A) Gas (B) Vacuum
(C) Liquid (D) Metal

85. Which form of energy causes a matchstick to ignite into a bright flame when the matchstick is struck against the match box surface ?
(A) Potential energy
(B) Kinetic energy
(C) Chemical energy
(D) Wind energy

86. CGS system of measurement units stands for—
(A) Coulomb, Gauss, Steradian
(B) Celsius, Grade, Second
(C) Centiliter, Gallon, Siemens
(D) Centimetre, Gram, Second

87. In Electronic Communication Systems, noise refers to—
(A) unwanted signals that tend to disturb the transmission and processing of message signals
(B) loud music harming the eardrums
(C) sensation of hearing that is not audible
(D) unwanted sensations that disturb messages

88. Which of the following is TRUE about the process of evaporation ?
(A) It does not depend upon humidity level
(B) It increases with increase in surface area
(C) It decreases with increase in wind speed
(D) It decreases with increase in temperature

89. Plaster of Paris is a product of—
(A) Magnesium (B) Aluminium
(C) Calcium (D) Sodium

90. Which of the following statements is **true** about natural rubber ?
(A) It is a natural polymer and possesses elastic properties
(B) It is an artificial polymer and possesses elastic properties
(C) It is not a polymer but possesses elastic properties
(D) It is a natural polymer but does not possess elastic properties

91. Which of the following is a form of calcium carbonate ?
(A) Washing soda
(B) Baking soda
(C) Limestone
(D) Table Salt

92. Dietary intake of ..... is essential for the normal functioning of thyroid gland.
(A) sodium (B) calcium
(C) iodine (D) potassium

93. Which microorganism is Penicillin obtained from ?
(A) Amoeba (B) Virus
(C) Protozoa (D) Fungi

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94. Which of the following diseases is caused by the deficiency of vitamin A ?
(A) Rickets
(B) Scurvy
(C) Night blindness
(D) Pellagra

95. Which of the following diseases is caused by the deficiency of vitamin B1 (thiamin) ?
(A) Rickets
(B) Beriberi
(C) Night blindness
(D) Pellagra

96. Which among the following is a vitamin deficiency disease in which dark red patches occur on face, neck, hands, calves and feet ?
(A) Pellagra (B) Thyroid
(C) Anemia (D) Keshan

97. Blood enters the kidney through the—
(A) renal artery
(B) external iliac artery
(C) axillary artery
(D) ulnar artery

98. Which among the following organs secretes bile juice ?
(A) Heart (B) Brain
(C) Kidney (D) Lever

99. Which among the following diseases is very rare in women as compared to its occurrence in men ?
(A) Myopia
(B) Kidney stone
(C) Brain tumor
(D) Colour blindness

100. Haemoglobin is the protein inside red blood cells that carries—
(A) Oxygen
(B) Carbion dioxide
(C) Nitrogen
(D) Ozone

101. Which of the following is equal to $8{\cdot}13 \times 10^6$?
(A) 831000 (B) 8310000
(C) 813000 (D) 8130000

102. When 0·353535... is converted into a fraction, then the result is—
(A) $\frac{35}{99}$ (B) $\frac{35}{100}$
(C) $\frac{15}{19}$ (D) $\frac{1}{99}$

103. What is the HCF of $2^2 \times 3^3 \times 5^2 \times 7$, $2 \times 3^2 \times 5^3 \times 7^2$ and $2^3 \times 3 \times 5^2 \times 7^3$?
(A) 210 (B) 420
(C) 1005 (D) 1050

104. Solve the following—
$\sqrt{\frac{36}{81} - \frac{1}{9}} = ?$
(A) $\frac{4}{9}$ (B) $\frac{5}{9}$
(C) $\frac{1}{9}$ (D) $\frac{2}{9}$

105. A number is as much greater than 55 as it is lesser than 79. The number is—
(A) 59 (B) 63
(C) 65 (D) 67

106. The sum of three consecutive numbers is 96. The greatest among these three numbers is—
(A) 28 (B) 31
(C) 33 (D) 43

107. Which of the options will come in place of the question mark (?) in the following equation ?
$\frac{128 + 16 \times 3 - 7 \times 2}{? - 6 \times 6 - 3} = 1$
(A) 16 (B) 49
(C) 60 (D) 128

108. 1000 boys and 600 girls are examined in a test. 43% of the boys and 35% of the girls passed. The percentage of the number of candidates who failed is—
(A) 40% (B) 50%
(C) 58% (D) 60%

109. A finishes a work in 9 days and B finishes the same work in 18 days. In how many days will they together finish the same work ?
(A) 3 days (B) 6 days
(C) 8 days (D) 9 days

110. How many minutes will Preethi take to cover a distance of 500 m, if she runs at a speed of 30 km/hr ?
(A) 1 min (B) 2 min
(C) 5 min (D) 6 min

111. Which of the following cars with speed given below is the fastest ?
(A) 90 km/hr
(B) 25 m/sec
(C) 1500 m/min
(D) 100 km/hr

112. A solid right circular cylinder has a radius of 21 cm and height of 16 cm. What is its curved surface area ?
(A) 2000 cm^2 (B) 2002 cm^2
(C) 2010 cm^2 (D) 2112 cm^2

113. Two pipes A and B can fill a tank in 16 hours and 48 hours respectively. If both the pipes are opened simultaneously, how much time will be taken to fill the tank ?
(A) 10 hours (B) 12 hours
(C) 15 hours (D) 16 hours

114. At present, the ratio between the ages of Vimal and Vinay is 4 : 5. After 6 years, Vimal's age will be 26 years. What is Vinay's age at present ?
(A) 20 years (B) 21 years
(C) 25 years (D) 30 years

115. An accurate clock shows 9 o'clock in the morning. Through how many degrees would the hour hand have rotated when the clock shows 3 o'clock in the afternoon ?
(A) 150° (B) 155°
(C) 175° (D) 180°

116. If a straight line intersects the sides AB and AC of a ΔABC at D and E respectively and is parallel to BC, then $\frac{AE}{AC} = ?$
(A) $\frac{AD}{EC}$ (B) $\frac{AD}{DB}$
(C) $\frac{AD}{AB}$ (D) $\frac{DE}{BC}$

117. A system of two linear equations in two variables is inconsistent if their graphs—
(A) cut the x-axis
(B) cut the y-axis
(C) coincide
(D) do not intersect at any point

118. If $\theta = 45°$, then $\cos^2\theta + \sec^2\theta = ?$
(A) 0 (B) 1
(C) 2 (D) 2·5

119. If the system $6x - 2y = 3$, $kx - y = 2$ has a unique solution, then—
(A) $k \neq 3$ (B) $k = 3$
(C) $k \neq 4$ (D) $k = 4$

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120. The square of any number is divided by 4, then the remainder is—
(A) 1
(B) 0
(C) Either 1 or 0
(D) Neither 1 nor 0

121. While resolving 1500 into two factors, the possible number of ways is—
(A) 12 (B) 18
(C) 36 (D) 24

122. The ratio of Amit's age and Anu's age, nine years ago was 5 : 7. Then 5 years from now, which of the following **cannot** be the ratio of their ages ?
(A) 13 : 19 (B) 11 : 13
(C) 15 : 16 (D) 21 : 25

123. Each of the interior angles of a cyclic polygon with 'n' sides measures 144°. Then, the measure of the angle subtended by each of its side at the geometric centre of the polygon is—
(A) 30° (B) 144°
(C) 54° (D) 36°

124. If $\frac{\sin^2\theta - 3\sin\theta + 2}{\cos^2\theta} = 1$, then θ can be—
(A) 45° (B) 60°
(C) 30° (D) 0°

125. Club A had won 30% of the first 60 matches it had played in a particular season. Then the minimum possible number of additional matches the Club A should play to achieve a success rate of 44% in that season is—
(A) 15 (B) 20
(C) 30 (D) 25

सामान्य हिन्दी

निर्देश—(प्रश्न 126 से 128 तक) निम्नलिखित जानकारी का अध्ययन कीजिए और दिए गए प्रश्नों के उत्तर दीजिए–

शीलयुक्त व्यवहार मनुष्य की प्रकृति और व्यक्तित्व को उद्घाटित करता है. उत्तम, प्रशंसनीय और पवित्र आचरण ही शील है. शीलयुक्त व्यवहार प्रत्येक व्यक्ति के लिए हितकर है. इससे मनुष्य की ख्याति बढ़ती है. शीलवान व्यक्ति सबका हृदय जीत लेता है. शीलयुक्त व्यवहार से कटुता दूर भागती है. इससे आशंका और संदेह की स्थितियाँ कभी उत्पन्न नहीं होतीं. इससे ऐसे सुखद वातावरण का सृजन होता है, जिसमें सभी प्रसन्नता का अनुभव करते हैं. शीलवान व्यक्ति अपने सम्पर्क में आने वाले सभी लोगों को सुप्रभावित करता है. शील इतना प्रभुत्वपूर्ण होता है कि किसी कार्य के बिगड़ने की नौबत नहीं आती. अधिकारी-अधीनस्थ, शिक्षक-शिक्षार्थी, छोटों-बड़ों आदि सभी के लिए शीलयुक्त व्यवहार समान रूप से आवश्यक है. शिक्षार्थी में यदि शील का अभाव है, तो वह अपने शिक्षक से वांछित शिक्षा प्राप्त नहीं कर सकता. शीलवान अधिकारी या कर्मचारी में आत्मविश्वास की वृद्धि स्वतः ही होने लगती है और साथ ही उनके व्यक्तित्व में शालीनता आ जाती है. इस अमूल्य गुण की उपस्थिति में अधिकारी वर्ग और अधीनस्थ कर्मचारियों के बीच, शिक्षकगण और विद्यार्थियों के बीच तथा शासक और शासित के बीच मधुर और प्रगाढ़ सम्बन्ध स्थापित होते हैं और प्रत्येक वर्ग की कार्यकुशलता में वृद्धि होती है. इस गुण के माध्यम से छोटे-से-छोटा व्यक्ति बड़ों की सहानुभूति अर्जित कर लेता है. शील कोई दुर्लभ और दैवी गुण नहीं है. इस गुण को अर्जित किया जा सकता है. पारिवारिक संस्कार इस गुण को विकसित और विस्तारित करने में बहुत बड़ी भूमिका अदा करते हैं.

126. निम्नलिखित में से कौनसा कथन शील के सम्बन्ध में गलत है ?
(A) शीलयुक्त व्यवहार से सुखद वातावरण का निर्माण होता है
(B) शील एक दैवी गुण है
(C) पारिवारिक संस्कार शील को विकसित करने में महत्वपूर्ण भूमिका निभाते हैं
(D) शीलयुक्त व्यवहार छोटों-बड़ों में समान रूप से आवश्यक है

127. गद्यांश में रेखांकित अंश की उचित व्याख्या होगी—
(A) शील प्रभु द्वारा दिया जाता है
(B) किसी कार्य के बिगड़ने पर शील प्रभुत्व स्थापित कर लेता है
(C) जहाँ शील का प्रभुत्व होता है वहाँ कोई कार्य बिगड़ने नहीं पाता
(D) जहाँ कार्य बिगड़ता है वहाँ शील का प्रभुत्व होता है

128. गद्यांश में कौनसा शब्द 'दुष्प्रभावित' का विलोम है ?
(A) कुप्रभावित (B) प्रगाढ़
(C) सुप्रभावित (D) आशंका

129. जब कोई सरकारी पत्र, कार्यालय ज्ञापन या ज्ञापन एक साथ अनेक प्रेषितियों को भेजा जा रहा हो, तब उसे क्या कहा जाता है ?
(A) कार्यालय आदेश
(B) अधिसूचना
(C) अनुस्मारक
(D) परिपत्र

130. अपने विद्यालय की किसी मनोरंजन घटना का वर्णन करते हुए मित्र को लिखा गया पत्र किस कोटि के अन्तर्गत आएगा ?
(A) शासकीय (B) अर्धशासकीय
(C) वैयक्तिक (D) व्यावसायिक

131. निम्नलिखित में से कौनसा अंतःस्थ व्यंजन है ?
(A) ल (B) प
(C) च (D) ट

132. निम्नलिखित में से कौनसा स्वर कंठतालव्य है ?
(A) ई (B) आ
(C) औ (D) ए

133. 'पो + अन' किस स्वर संधि का उदाहरण है ?
(A) गुण (B) अयादि
(C) वृद्धि (D) यण

134. 'प्रत्यंग' किस समास का उदाहरण है ?
(A) अव्ययीभाव (B) तत्पुरुष
(C) द्विगु (D) द्वंद्व

135. 'सीता सखियों सहित पुष्प वाटिका गई.'
वाक्य में रेखांकित अव्यय-प्रयोग निम्नलिखित में से किस भेद का उदाहरण है ?
(A) समुच्चयबोधक
(B) क्रियाविशेषण
(C) संबंधबोधक
(D) विस्मयादिबोधक

136. 'कश्मीरी सेब सिंदूरी लाल होता है.'
वाक्य में रेखांकित शब्द विशेषण के किस भेद के अन्तर्गत आएगा ?
(A) गुणवाचक (B) परिमाणवाचक
(C) प्रविशेषण (D) सार्वनामिक

137. निम्नलिखित में से कौनसा शब्द 'मस्तक' का पर्यायवाची है ?
(A) लाल (B) ललाट
(C) लालिमा (D) ललाई

138. निम्नलिखित में से कौनसा विलोम युग्म सही नहीं है ?
(A) भद्र–अभद्र (B) भय–साहस
(C) मूढ़–ज्ञानी (D) मान्य–धान्य

139. 'गाड़ी-गाढ़ी' शब्द युग्म के लिए सही अर्थ युग्म चुनिए—
(A) यान–गहरी
(B) गहरी–यान
(C) गिरी–निकाली
(D) निकाली–गिरी

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140. 'जो इन्द्रियों की पहुँच से बाहर हो' वाक्यांश के लिए एक शब्द बताइए.
(A) इंद्रियजित (B) इंद्रियानिग्रह
(C) इंदियातीत (D) इंदधनुष

141. 'उस जगह एक सभा होने जा रही है,' रेखांकित पद में कौनसा परसर्ग है ?
(A) करण (B) अधिकरण
(C) संप्रदान (D) अपादान

142. 'देखा गया हो' क्रिया के किस पक्ष का उदाहरण है ?
(A) संदिग्ध वर्तमान
(B) संभाव्य वर्तमान
(C) संदिग्ध भूत
(D) संभाव्य भूत

143. 'उसने अपने को निर्दोष घोषित किया'. इस सरल वाक्य के मिश्र वाक्य का रूप निम्नलिखित में से कौनसा है ?
(A) उसने कहा कि मैं निर्दोष हूँ
(B) उसने कहा और वह निर्दोष घोषित हुआ
(C) उसने कहा कि उसे निर्दोष घोषित किया जाए
(D) उसने कहा कि मैं अपने को निर्दोष घोषित कर रहा हूँ

144. विराम चिह्न के प्रयोग की दृष्टि से निम्नलिखित में से कौनसा वाक्य सही नहीं है ?
(A) वह दूर से, बहुत दूर से, आ रहा है
(B) सुनो, सुनो, वह गा रही है
(C) नहीं, नहीं, ऐसा कभी नहीं हो सकता
(D) क्रोध, चाहे जैसा भी हो, मनुष्य को दुर्बल बनाता है

145. 'एड़ियाँ रगड़ना' मुहावरे का सही अर्थ क्या होगा ?
(A) एड़ियाँ साफ करना
(B) परिश्रम करना
(C) बहुत दौड़-धूप करना
(D) परेशान करना

146. 'सावन हरे न भादों सूखे' लोकोक्ति का सही अर्थ क्या है ?
(A) सावन में हरा और भादों में सूखा
(B) न सावन में हरा, न भादों में सूखा
(C) असम्भव बात
(D) सदा एकसी दशा

147. हिन्दी साहित्य के इतिहास के किस काल को वीरगाथा काल भी कहा गया है ?
(A) आदिकाल (B) भक्तिकाल
(C) रीतिकाल (D) आधुनिक काल

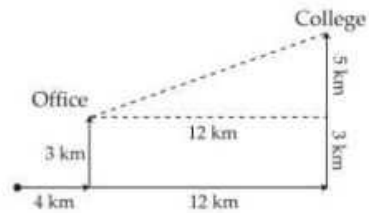
148. निम्नलिखित में से कौनसी रचना तुलसीदास की नहीं है ?
(A) रामचरितमानस
(B) गीतावली
(C) श्रीकृष्णगीतावली
(D) भक्तमाल

149. हिन्दी का प्रथम समाचार पत्र कौनसा था ?
(A) कवि वचन सुधा
(B) उदंत मार्तण्ड
(C) हरिश्चंद पत्रिका
(D) सरस्वती

150. हिन्दी की मूल उत्पत्ति किससे मानी गई है ?
(A) मागधी अपभ्रंश
(B) अर्द्धमागधी अपभ्रंश
(C) खस अपभ्रंश
(D) शौरसेनी अपभ्रंश

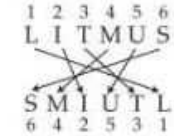
Answers with Hints

1. (B) A triangle has three sides and three angles only, while each of the rest three structures has four sides and four angles.
2. (A) **Lettuce–Botanical name**–Lectuca sativa; **Family**–Compositae; **Local Name–Salad** is a green/culinary vegetable, rich in iron (0·5 mg); 100 gm fresh leaves per plant, grown in many parts of India, while **Kiwi**, Pear and Pomegranate are fruits.
3. (A)
4. (C) 4 $\xrightarrow{\text{opposite}}$ 6
2 $\xrightarrow{\text{opposite}}$ 1
3 $\xrightarrow{\text{opposite}}$ 5
5. (B)



Shortest distance between the office and the college
$= \sqrt{12^2 + 5^2}$
$= \sqrt{144 + 25}$
$= \sqrt{169} = 13$ km

6. (C) 7. (D) 8. (B) 9. (A) 10. (D)
11. (C) **'Hygrometer'** is an equipment/tool for measuring Atmospheric moisture/available humidity. Therefore, Temperature : Thermometer :: Humidity : Hydrometer is a correct relationship.
12. (A) As,



and



Same as,



13. (C) As,



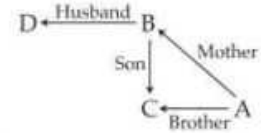
and



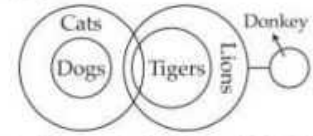
Same as,



14. (D) D @ B # C $ A



15. (D)

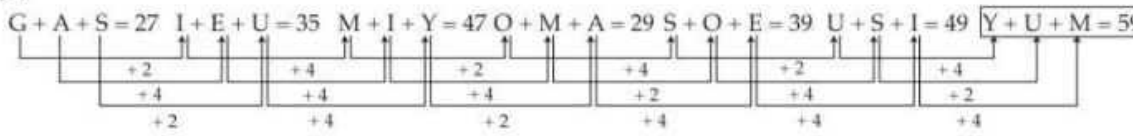


Only conclusion I and IV follow.

16. (B) Ascending order. A B C E G H I K L M Q R S T U W X
Meaningful English Word : WHALE

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17. (C)

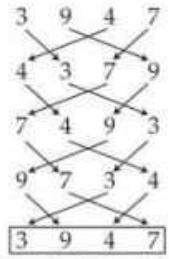


Here Consonant → + 2

Vowel → + 4

So ? = YUM59

18. (D)



19. (A) $8\,3 \times 7 - 7\,9 + 6\,3 \div 7$

$8\,7 \div 3 + 3\,9 - 6\,7 \times 3$

$= 29 + 39 - 201$

$= -133$

20. (A) Let ages of husband, wife and their son are $10x$, $9x$ and $3x$ years respectively.

Then, from option (A) :

$$3x - 6 = (9x - 6) \times \frac{20}{100}$$

$$15x - 30 = 9x - 6$$

$$6x = 24$$

$$x = 4$$

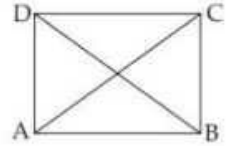
Age of son $= 3 \times 4$

$= 12$ years

21. (B) Given that

$2(AB + BC) = 28$

$AB + BC = 14$ ...(1)



From option (B) :

$AC + BD = 28 - 8$

$= 20$

$\because$ $AC = BD$

(Diagonals of rectangle are equals)

$\therefore$ $AC = BD$

$= \frac{20}{2} = 10$ m

From ΔABC :

$AC^2 = AB^2 + BC^2$

$AB^2 + BC^2 = 10^2 = 100$

On squaring of equation 1

$AB^2 + BC^2 + 2 \times AB \times BC$

$= 196$

$100 + 2 \times AB \times BC$

$= 196$

$AB \times BC = \frac{96}{2}$

$= 48$ m^2

22. (C) $2a + b = 22$ ...(1)

$3a - 2b = 12$ ...(2)

On solving equation 1 and 2

$6a + 3b = 66$

$6a - 4b = 24$

$- \quad + \quad -$

$7b = 42$

$b = 6$

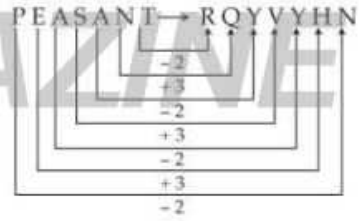
From equation 1

$2a + 6 = 22$

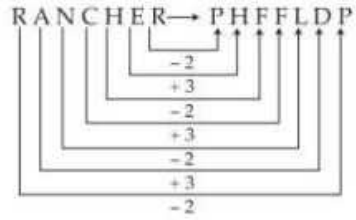
$2a = 16$

$a = 8$

23. (C) As,



Same as,



24. (D) No. of units sold over the years

$A = 115{\cdot}8 + 85{\cdot}7 + 58{\cdot}9 + 46{\cdot}6$

$= 307$ crores

$B = 150{\cdot}1 + 76{\cdot}3 + 37{\cdot}2 + 39{\cdot}1$

$= 302{\cdot}7$ crores

$C = 93{\cdot}3 + 69{\cdot}5 + 53{\cdot}7 + 48{\cdot}9$

$= 265{\cdot}4$ crores

$D = 180{\cdot}6 + 111{\cdot}1 + 21{\cdot}2 + 33{\cdot}4$

$= 346{\cdot}3$ crores

25. (C) $25 + 6 - 45 \times 9 \div 23 = 18$

$25 - 6 \times 45 \div 9 + 23 = 18$

$25 - 30 + 23 = 18$

$18 = 18$

26. (C) 27. (D) 28. (D)

29. (C) Sitapur district of the U.P. State does not share its border with Nepal country; While other districts *e.g.*, Pilibhit, Shravasti and Maharajganj districts of U.P. are linked with border of Nepal.

30. (D) **'Balia'** district of Uttar Pradesh (Eastern U.P.) lies on the U.P.–Bihar border; While **Bulandshahr** district in Western U.P. (Haryana border); **Banda** district touch with M.P. border and **Basti** district in North-Eastern U.P. touch with Gonda and Ambedkar Nagar district of U.P.

31. (A) National Leader of Indian Janta Party Chandrashekhar undertook a marathon walk **Padayatra from Kanyakumari** to Rajghat in Delhi on 31 May, 1983, so as to renew rapport with the Indian masses.

32. (B) Indian Prime Minister Shri Vishwanath Pratap Singh (V.P. Singh 1931-2008) tenure 2 December, 1989-10 November 1990) announced in the Parliament to implement the Mandal Commission's recommendations and after declaration triggered nation-wide protests in India.

33. (A) **Firozabad** city (district of Agra Region) in Western U.P. is called **'Suhaag Nagari'** because it is famous for making glass bangles since long as a world famous centre of ladies bangles.

34. (B) The 32th Chief Minister of U.P. Shri Yogi Adityanath (Native-Uttarakhand) w.e.f. 19 March, 2017 to till date working as C.M. leader is also the head priest of the Gorakhnath Temple and Math (Gorakhpur district of Eastern U.P.).

35. (D) **'Sarnath'** a sacred place is located very close to Varanasi (Kashi) city, about 10 km distance, where Lord Gautam Buddha delivered his **first**

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sermon-called as **'Dharmchakra Pravartan.'**

36. (B) 37. (D)
38. (C) South Indian King **'Marthanda Varma'** varkquished the forces of the Dutch East India company on 16 August, 1741 in the battle of Colachel.
39. (A) 40. (B)
41. (B) Shri Atal Bihari Vajpayee (**born** 25 December, 1924 and **death** 16 Aug. 2018) became the **first** time Prime Minister of India as first tenure 16 May, 1996–1 June, 1996 (only for 2 weeks); **Second** tenure 19 March, 1998-13 October, 1999 and **Third** tenure 13 October, 1999-22 May, 2004.
42. (C) 43. (B)
44. (B) Joseph Stalin announced the start of the first five-year plan for Industrialization on October 1, 1928.
45. (B) 46. (C) 47. (C) 48. (D)
49. (A) In Kerala, **Munnar**-20 km distance, hill stations Cheeyapara. Water falls, Pothamedu View Point and Attukad Water falls are located.
50. (D) 51. (D) 52. (C) 53 (B) 54. (C)
55. (A)
56. (B) As of April 2019 Chennamaneni Vidyasagar Rao (C. Vidyasagar Rao) was the governor of Maharashtra State-remained from 30 August, 2014 to 4th September, 2019; But, the present Governor of Maharashtra is Bhagat Singh Koshyari w.e.f. 5 September, 2019.
57. (C) 58. (A) 59. (C) 60. (C) 61. (D)
62. (A) 63. (C) 64. (D) 65. (C) 66. (A)
67. (A) 68. (C) 69. (C) 70. (D) 71. (B)
72. (A) 73. (A)
74. (C) The tomb of Ancient Emperor Sher Shah Suri is located in Sasaram Town of Bihar state in Shahabad district, 193 km from Patna city.
75. (B) 76. (B) 77. (D) 78. (C) 79. (A)
80. (B) **'Anaemia'** disease in human being is caused due to the deficiency of Iron mineral, resulting reduction in blood of RBC and Haemoglobin.
81. (C) Distilled water is not worth-drinking. Some mineral salts and some carbon dioxide should be dissolved in drinking water. This makes drinking water tastefull and healthy. However, more percentage of dissolved mineral salts make it (water) hard.

    Rather than impurities, same infections bacteria and virus are also present in water. To get rid of these, chlorine, ozone, potassium permangnate, ... ore used. In one million part of water, 0·25 part of liquid chlorine is used to disinfect it.
82. (D)
83. (A) Fish oil is a good source of Vitamin 'A' (Retinol) as well as milk, butter, egg, carrot etc. but due to its (Vitamin 'A') deficiency, night-blindness is occurred. In fact, Vitamin 'A' is a cancer controller.
84. (B) 85. (B) 86. (D) 87. (A) 88. (B)
89. (C) **'Plaster of Paris'**–$CaSO_4$-Hemihydrate is a product of calcium, **formula**–$CaSO_4 - \frac{1}{2} H_2O$.
90. (A) Natural rubber is an elastic polymer of Mathylbuta-1, 3 diene. Molecular formula of natural rubber is : $(C_5H_8)_n$

    Structural formula of natural rubber is



91. (C) The form of Calcium carbonate ($CaCO_3$) is **Limestone**.
92. (C) 93. (D)
94. (C) **'Night blindness'** disease in human is caused due to the deficiency of Vitamin 'A' by which less appear at night. The main sources of Vitamin 'A' are carrot, milk, egg., cream/butter etc. products.
95. (B) The **'Beri-Beri'** disease in human is caused due to the deficiency of Vitamin 'B_1' (Thiamin), resulting there by pain in muscles creates and stomach swells. The main sources of Vitamin 'B_1' are–pea, egg, green vegetable, bean etc.
96. (A) In humanbody, **'Pellagra'** disease is caused due to the deficiency of Vitamin 'B_5', resulting there by dark red patches occur on face, neck, hands, calves and feet in the body.
97. (A) 98. (D) 99. (D)
100. (A) **'Haemoglobin'** is the protein inside Red Blood cells that carries Oxygen in humanbody.
101. (D) 102. (A)
103. (D) Required HCF
$$= 2 \times 3 \times 5^2 \times 7$$
$$= 1050$$
104. (B) 105. (D)
106. (C) Let greatest number = x

As per question,
$$x + x - 1 + x - 2 = 96$$
$$3x = 99$$
$$x = 33$$
107. (B) $\frac{128 \div 16 \times 3 - 7 \times 2}{?-6 \times 6 - 3} = 1$
$$\frac{24 - 14}{?-36 - 3} = 1$$
$$\frac{10}{?-39} = 1$$
$$? - 39 = 10$$
$$? = 49$$
108. (D) Total no. of failed boys
$$= 1000 \times \frac{57}{100}$$
$$= 570$$

Total no. of failed girls
$$= 600 \times \frac{65}{100}$$
$$= 390$$

Required percentage
$$= \frac{570 + 390}{1000 + 600} \times 100$$
$$= \frac{960}{1600} \times 100$$
$$= 60\%$$
109. (B) Required time
$$= \frac{9 \times 18}{9 + 18}$$
$$= \frac{162}{27} = 6 \text{ days}$$
110. (A) Required time
$$= \frac{500 \times 18}{30 \times 5}$$
$$= 60 \text{ second}$$
$$= 1 \text{ min.}$$
111. (D)
112. (D) Curved surface area of solid right circular cylinder
$$= 2 \times \frac{22}{7} \times 21 \times 16$$
$$= 2112 \text{ cm}^2$$
113. (B) Required time taken to fill the tank
$$= \frac{16 \times 48}{16 + 48}$$
$$= \frac{768}{64} = 12 \text{ hours}$$

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114. (C) Let present ages of Vimal and Vinay are $4x$ and $5x$ years respectively.

As per question,

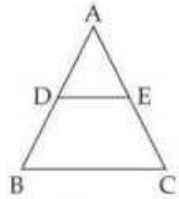
$$4x + 6 = 26$$
$$4x = 20$$
$$x = 5$$

Present age of Vinay

$$= 5 \times 5$$
$$= 25 \text{ years}$$

115. (D)

116. (C)



$\because$ DE || BC

$\therefore \quad \frac{AE}{AC} = \frac{AD}{AB}$

117. (D)

118. (D) $\cos^2 45^\circ + \sec^2 45^\circ$

$$= \left(\frac{1}{\sqrt{2}}\right)^2 + \left(\sqrt{2}\right)^2$$
$$= \frac{1}{2} + 2 = \frac{1+4}{2}$$
$$= \frac{5}{2} = 2.5$$

119. (A) $6x - 2y = 3$

and $kx - y = 2$

Then, $\frac{a_1}{a_2} \neq \frac{b_1}{b_2}$

$$\frac{6}{k} \neq \frac{-2}{-1}$$
$$k \neq 3$$

120. (C)

121. (A) Possible factors of 1500 into two factors

$= 1500 \times 1, 750 \times 2, 500 \times 3,$
$375 \times 4, 300 \times 5, 250 \times 6, 150 \times 10,$
$125 \times 12, 100 \times 15, 75 \times 20, 60 \times 25,$
50×30

Required no. of ways = 12

122. (A)

123. (D) As per question,

$$\frac{180^\circ(n-2)}{n} = 144^\circ$$
$$180^\circ n - 360^\circ = 144^\circ n$$
$$36^\circ n = 360^\circ$$
$$n = 10$$

Measure of angle subtended by each of its side at the geometric centre of the polygon

$$= \frac{360^\circ}{10} = 36^\circ$$

124. (C) $\frac{\sin^2\theta - 3\sin\theta + 2}{\cos^2\theta} = 1$

$\sin^2\theta - 3\sin\theta + 2 = 1 - \sin^2\theta$

$(\because \cos^2\theta = 1 - \sin^2\theta)$

$2\sin^2\theta - 3\sin\theta + 1 = 0$

$2\sin^2\theta - 2\sin\theta - \sin\theta + 1 = 0$

$2\sin\theta(\sin\theta - 1) - 1(\sin\theta - 1) = 0$

$(2\sin\theta - 1)(\sin\theta - 1) = 0$

$$\sin\theta = \frac{1}{2}, 1$$

$$\sin 30^\circ = \frac{1}{2}$$

or $\sin 90^\circ = 1$

125. (A) Total no. of matches won by club A

$$= 60 \times \frac{30}{100}$$
$$= 18$$

Let no. of additional matches $= x$

As per question,

$$(60 + x) \times \frac{44}{100} = 18 + x$$
$$2640 + 44x = 1800 + 100x$$
$$56x = 840$$
$$x = 15$$

126. (B)127. (C)128. (C)

129. (D) जब अनेक प्रेषितियों को कोई कार्यालय ज्ञापन, पत्र या ज्ञापन एक साथ भेजा जाता है, तब उसे 'परिपत्र' कहा जाता है.

130. (C) अपने किसी मित्र को जब अपने विद्यालय की किसी मनोरंजक घटना का वर्णन करते हुए कोई पत्र लिखा जाता है, तब वह पत्र 'वैयक्तिक' कहलाता है.

131. (A)132. (D)133. (B)134. (A) 135. (C)

136. (C)

137. (B) 'मस्तक' का पर्यायवाची शब्द है, 'ललाट'.

138. (D) 'मान्य' का विलोम शब्द 'अमान्य' होगा, 'धान्य' नहीं.

139. (A)140. (C)141. (B)142. (D) 143. (A)

144. (A)

145. (C) 'एड़ियाँ रगड़ना' मुहावरे का अर्थ होगा 'बहुत दौड़-भाग करना.

146. (D) लोकोक्ति, "सावन हरे न भादों सूखे' का अर्थ है, "सदा एक सी दशा'.

147. (A)148. (D)

149. (B) 'उदंत मार्तण्ड' हिन्दी का पहला समाचार पत्र था. इसका प्रकाशन 1826 में कलकत्ता से शुरू हुआ था. इसके संस्थापक जुगल किशोर शुक्ल थे.

150. (D)

Continued from Page 122

34. (A) Recently Government of India announced that MGNREGA wages would be indexed with Consumer Price Index—Rural which is prepared and released by The National Statistical Office (NSO). Earlier MGNREGA wages were indexed with Consumer Price Index prepared and released by Labour Bureau Shimla.

35. (B) During the United Nations Climate Summit, the Prime Minister Narendra Modi inaugurated the Gandhi Solar Park at the Headquarters of United Nations.

36. (A) It is an innovative initiative under which *Consulate General of India* (in New York), *Shanti Fund* (a Long Island-based NGO) and *State University of New York-Old Westbury* have entered into an agreement for planting 150 trees.

37. (C) Although the Pallavas ruled from their capital Kanchipuram, they developed Mamallapuram as a port. Pallava ruler Narasimhavarman I Mamalla, commissioned the monuments at Mamallapuram. The Pallava Kings had a trade and defence relationship with China. Chinese traveller Hiuen Tsang also mentioned the sea port in his travel records.

38. (A) This 2019 edition of *The State of the World's Children* (SOWC), released on October 17, 2019, examines the issue of children, food and nutrition, providing a fresh perspective on a rapidly evolving challenge. Despite progress in the past two decades, one third of children under age 5 are malnourished—stunted, wasted or overweight while two thirds are at risk of malnutrition and hidden hunger because of the poor quality of their diets.

39. (D) Right Livelihood Award 2019 was given to Greta Thunberg (Sweden), Amintou Haider (West Sahara), Guo Jiamei (China), Davi Kopenawa Yanomami (Brazil).

40. (A) Libra is a global cryptocurrency that will be available around the world.

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Solved Paper

NABARD GRADE 'A' OFFICER EXAM., 2019

(Held on 15-6-2019)

Economy and Social Issues

(Based on Memory)

1. The Government of India aims to double farmers' income by 2022-2023 from the level of incomes in—
   (A) 2016-17 (B) 2015-16
   (C) 2012-13 (D) 2014-15
   (E) 2013-14

2. The prices, at which Government purchases of foodgrains for maintaining the public distribution system and for building up buffer stocks, are known as—
   (A) Minimum Support Prices
   (B) Procurement Prices
   (C) Issue Prices
   (D) Ceiling Prices
   (E) None of the above

3. Which of the following Cooperative Societies of India is responsible for the production of fertilizers ?
   (A) NAFED (B) IFFCO
   (C) NCDC (D) TRIFED
   (E) None of the above

4. In India, which of the following have the highest share in the disbursement of credit to agriculture and allied activities ?
   (A) Microfinance Institutions
   (B) Regional Rural Banks
   (C) Cooperative Banks
   (D) Commercial Banks
   (E) None of the above

5. Outcome focused schemes for vocational education and training 'SANKALP' and 'STRIVE' launched by the Government of India, are supported by the—
   (A) International Labour Organization
   (B) World Bank
   (C) UN Economic and Social Council
   (D) World Economic Forum
   (E) International Monetary Fund (IMF)

6. In agriculture Census, the operational holdings are categorized in five classes. Farmers with land holding of 4·00 to 10·00 hectare belongs to ..... category.
   (A) Large (B) Small
   (C) Marginal (D) Medium
   (E) Semi-medium

7. Based on the National Sample Survey Office (2011-12) estimates, the recent 'Oxfam India report entitled 'Mind the Gap-State of Employment in India' shows that ..... is not one of the reasons for women's low participation in the work force.
   (A) Unequal pay
   (B) Decline in number of rural jobs for women
   (C) Burden of unpaid care work
   (D) Feminization of agriculture
   (E) None of the above

8. The 'Honey Mission' initiative of the Government of India aimed at production of healthy honey and wax is being implemented through—
   (A) Khadi and Village Industries Commission (KVIC)
   (B) District Rural Development Agency (DRDA)
   (C) Department of Food and Public Distribution
   (D) Other than those given as options
   (E) None of the above

9. 'Krushal Assistance for Livelihood and Income Augmentation' (KALIA) scheme, which provides financial assistance to small and marginal farmers for cultivation support alongwith insurance support, is launched in which state ?
   (A) Odisha
   (B) Andhra Pradesh
   (C) Telangana
   (D) West Bengal
   (E) None of the above

10. In a recently released Global Gender Gap Index 2018 by World Economic Forum, India was placed at ..... position.
    (A) 104 (B) 98
    (C) 108 (D) 89
    (E) 74

11. 'Saur Jalanidhi' scheme, aims to increase the use of solar energy for helping farmers in irrigating their land, has been launched in which of the following states ?
    (A) Telangana
    (B) Bihar
    (C) Andhra Pradesh
    (D) Odisha
    (E) Karnataka

12. India's rank in Global Economic Freedom index-2019 is—
    (A) 96th (B) 88th
    (C) 79th (D) 37th

13. The Pradhan Mantri Shramik-Yogi Maan-Dhan Yojana will be open for unorganized sectors' workers entails a minimum monthly pension of—
    (A) ₹ 5,000 (B) ₹ 4,000
    (C) ₹ 3,000 (D) ₹ 6,000
    (E) Other than those given as options

14. 'Per Drop More Crop' (PDMC) is a component under the—
    (A) PMGSY Scheme
    (B) PMFBY Scheme
    (C) PKVY Scheme
    (D) PMKSY Scheme
    (E) None of the above

15. Which State government recently launched an old age pension scheme — 'Mukhyamantri Virdhajan Pension Yojana ?
    (A) Maharashtra
    (B) Odisha

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(C) Jharkhand
(D) Bihar
(E) Chhattisgarh

16. A tax-exempt bond, issued by federally qualified organizations or by municipalities for the development of brownfield sites, is known as—
(A) Masala Bond
(B) Climate Bond
(C) Green Bond
(D) Social Impact Bond
(E) None of the above

17. The purest form of the income of the nation is—
(A) Net National Income
(B) Gross National Income
(C) Gross National Product
(D) Net National Product
(E) Gross Domestic Income

18. 'India Vision 2020' is prepared by—
(A) Arvind Panagariya
(B) M. Subramaniam
(C) A. P. Shah
(D) S. C. Gupta
(E) None of the above

19. Union Agriculture Minister Radhamohan Singh has inaugurated Global Agriculture and Food Summit 2018 in—
(A) Patna (B) Ranchi
(C) Kolkata (D) Hyderabad
(E) Guwahati

20. Which of the following state Governments has launched an ambitious project State of SMART in 10,000 villages with an objective to achieve sustainable farming within the next three years ?
(A) Rajasthan
(B) Madhya Pradesh
(C) Gujarat
(D) Maharashtra
(E) Uttarakhand

21. The theme of the 4th Edition of NITI Lecture Series by NITI Aayog is—
(A) India and Global Economy
(B) Going forward Technology and Transformation
(C) AI for ALL leveraging artificial intelligence for inclusive growth
(D) All the above
(E) None of the above

22. 'Yuva Sahakar–Cooperative Enterprise Support and Innovation Scheme' of the National Cooperative Development Corporation (NCDC) was launched by which ministry ?
(A) Railways Ministry
(B) Agriculture Ministry
(C) Statistics and Programme Implementation Ministry
(D) HRD Ministry
(E) Skill Development and Entrepreneurship Ministry

23. Deendayal Antyodaya Yojana – National Rural Livelihood Mission is a flagship programme of the—
(A) Ministry of Rural Development
(B) Ministry of Tribal Affairs
(C) Ministry of Panchayati Raj
(D) Ministry of Housing and Urban Poverty Alleviation (HUPA)
(E) None of the above

24. According to the 10th edition of Agriculture Census Data for 2015-16 released by the Ministry of Agriculture in October 2018, Small and Marginal farmers with less than two hectares of land—
(A) 71·2% of all farmers in India
(B) 86·2% of all farmers in India
(C) 66·2% of all farmers in India
(D) 79·09% of all farmers in India
(E) None of the above

25. National Adaptation Fund for Climate Change (NAFCC) is a Central scheme to support—
(A) Adjustment to climate change impact
(B) Welfare of minority communities
(C) Support the study of melting of Indian glaciers
(D) Compensate the farmers for loss due to climate-change
(E) All the above

26. The specifications for Rural Roads being constructed, maintained and repaired are laid down as by the—
(A) Ministry of Environment Forest and Climate Change
(B) Ministry of Rural Development
(C) Ministry of Road Transport and Highways
(D) Ministry of Urban Housing and Poverty Alleviation
(E) Other than those given as options

27. NABARD was set up with an initial capital of—
(A) ₹ 200 crore (B) ₹ 500 crore
(C) ₹ 1500 crore (D) ₹ 100 crore
(E) ₹ 1000 crore

28. Which organization holds the highest/maximum share in NABARD as on 31st March, 2016 ?
(A) Finance Ministry
(B) Reserve Bank of India
(C) Government of India
(D) Securities and Exchange Board of India
(E) None of the above

29. Which Indian State has the largest number of Cotton Textile mills ?
(A) Madhya Pradesh
(B) Gujarat
(C) Maharashtra
(D) West Bengal
(E) None of the above

30. 'NABVENTURES' has recently launched a fund to back agriculture, food and rural start-ups with a proposed corpus of ₹ 500 crore NABVENTURES is a subsidy of—
(A) NABARD (B) RBI
(C) IL&FS (D) SIDBI
(E) EXIM Bank

31. The government has recently (May 2019) announced that the National Sample Survey Office (NSSO) will be merged with the Central Statistics Office to form the National Statistical Office (NSO) which will be headed by the Secretary of the—
(A) National Survey and Mapping Organization (NSMO)
(B) Ministry of Statistics and Programme Implementation (MOSPI)
(C) Ministry of Corporate Affairs (MCA)
(D) None of those given as options
(E) National Statistical Commission (NSC)

32. Agriculture employs upto what per cent of the Indian Population ?
(A) 80 (B) 60
(C) 40 (D) 70
(E) 90

MAGAZINE KING

33. What kind of unemployment is found in the agriculture sector of India ?
(A) Situational (B) Voluntary
(C) Disguise (D) Frictional
(E) None of the above

34. Which of the following is a direct tax ?
(A) Corporation Tax
(B) Custom Duty
(C) Excise Duty
(D) Service Tax
(E) None of the above

35. The increases in procurement operations by TRIFED results in enhancement of employment generation opportunities for—
(A) Farmers & agriculturists
(B) Micro enterprises
(C) Minority communities
(D) Rural youth
(E) Tribal families

36. Under KUSUM scheme, the government desires to assist as many farmers as possible to install new and improved solar pumps on their farms. The word 'S' in the 'KUSUM' stands for—
(A) Sujata (B) Shiksha
(C) Sunhera (D) Suraksha
(E) Sameeksha

37. 'NULM' is a scheme launched by the Ministry of Housing and Urban Poverty Alleviation (MHUPA), Government of India on 23 September, 2013. The full-form of NULM is—
(A) National Urban Livelihoods Mission
(B) Nation Urban Likelihood Mission
(C) National Urban Leverage Mission
(D) National Urban Labour Mission
(E) Nation Urban Leverage Mission

38. As per SECC 2011, what is the number of households with no literate adult above age 25 years ?
(A) 4·22 crore (B) 5·78 crore
(C) 9·88 crore (D) 1·22 crore
(E) 7·34 crore

39. ..... occurs when people are willing to work, but the people searching for work are not qualified for the job.
(A) Frictional Unemployment
(B) Budding Unemployment
(C) Structural Unemployment
(D) Static Unemployment
(E) Cyclical Unemployment

40. ..... recently set up Eklavya Model Residential Schools (EMRSs) for scheduled tribe students across the country.
(A) Ministry of Human Resources and Development
(B) Ministry of Social Justice and Empowerment
(C) Ministry of Women and Child Development
(D) Ministry of Tribal Affairs
(E) Ministry of Home Affairs

Answers

1. (B) 2. (B) 3. (B) 4. (D) 5. (B)
6. (D) 7. (D) 8. (A) 9. (A) 10. (C)
11. (D) 12. (C) 13. (C) 14. (D) 15. (D)
16. (C) 17. (D) 18. (D) 19. (B) 20. (D)
21. (C) 22. (B) 23. (D) 24. (B) 25. (A)
26. (B) 27. (D) 28. (B) 29. (C) 30. (A)
31. (B) 32. (D) 33. (C) 34. (A) 35. (E)
36. (D) 37. (A) 38. (A) 39. (C) 40. (D)

Continued from Page 98

It is alleged that the Constituent Assembly was dominated by legal experts and hence its provisions have become more legal and less comprehensible to common man. Prof. Pylee terms Indian Constitution as Lawyers' paradise. However, it should be noted that the Constitution is a legal document and for the sake of clarity it should be expressed in legal terms.

The Constitution making and the Constitution both were the lengthy affairs. The Constituent Assembly took 2 years 11 months and 18 days to complete the framing of the Constitution. In total 13 sessions of the Assembly were held with numerous sittings. Not less than 7635 amendments were proposed to the draft bill and 2473 amendments were actually moved and disposed of. The cost of Constitution making is estimated to be around ₹ 6-4 million. The Constituent Assembly adopted the Constitution on November 26, 1949 with 395 Articles and 8 Schedules. The Constitution came into force on January 26, 1950. The date of January 26 was selected due to its historical significance as it was on this day in 1930 that Indians celebrated it as Independence Day for the first time, following the passing of *Purna Swarajya* resolution in the Lahore Congress held in December, 1929.

Continued from Page 117

21. (D) Fixed targets under Poshan Abhiyaan are : Prevent and reduce stunting in children (0-6 years) by 6% @ 2% p.a.; Prevent and reduce under-nutrition (underweight prevalence) in children (0-6 years) by 6% @ 2% p.a.; Reduce the prevalence of anemia among young children (6-59 months) by 9% @ 3% p.a.; Reduce the prevalence of anemia among women and adolescent girls in the age group of 15-49 years by 9% @ 3% p.a.; Reduce Low Birth Weight (LBW) by 6% @ 2% p.a.

22. (B) The Supreme Court has instructed telecom companies to deposit the dues sought by the Vodafone Idea and Bharti Airtel the two telcos affected most by the SC order with pending licence fee and spectrum usage charge (SUC) dues of ₹ 39,000 crore and over ₹ 41,000 crore, respectively.

23. (C) It was established in 1899 in Kerala. It was taken over by Punjab National Bank in 2003.

24. (A) As on November 1, 2019, largest number of toll plazas on national highways were in Rajasthan (90), followed by Uttar Pradesh (62), Tamil Nadu (54), Madhya Pradesh (52) and Maharashtra (47).

25. (C) SRS bulletins are released by the office of Registrar General of India. As per SRS bulletin released on November 1, 2019 Maternal Mortality Ratio (MMR) came down to 122 per lakh live birth during 2015-17 from 167 during 2011-13, and 130 during 2014-16.

26. (A) As per latest SRS bulletin the lowest maternal mortality ratio during 2015-17 was in Kerala (42 per lakh live births), followed by Maharashtra (55), Tamil Nadu (63) and Andhra Pradesh (74).

MAGAZINE KING

Solved Paper

Railway Recruitment Board, Junior Engineer Computer Based Test, 2019

(Held on 25-5-2019)

First Stage

1. According to World Health Organization, the soft water has 0 to ..... milligram per litre as $CaCO_3$.
   (A) 120 (B) 60
   (C) 30 (D) 90
2. Find the ODD one out from the given options.
   (A) Bus (B) Auto
   (C) Van (D) Car
3. Ten years ago, the ages of father and son were in the ratio 3 : 1. Ten years hence this ratio will be 2 : 1. What is the age of the father now ?
   (A) 70 (B) 75
   (C) 65 (D) 55
4. If 'PEOPLE' is coded as 'PLPOEE', how is 'TREND' coded ?
   (A) TNERD (B) TREDN
   (C) DNERT (D) NDETR
5. When a decomposition reaction is carried out by heating, it is called—
   (A) Thermal decomposition
   (B) Electrolytic decomposition reaction
   (C) Photo decomposition reaction
   (D) Non-electrolytic decomposition reaction
6. If the selling price is doubled, then profit triples. What is the profit per cent ?
   (A) 100% (B) 120%
   (C) 80% (D) 60%
7. Sneha wants to go to the market. She starts from her home which is in the north and comes to the crossing. The road to her left ends in a park and straight ahead is the office complex, and market is located direct opposite to the park. In which direction is the market to the crossing ?
   (A) South (B) North
   (C) East (D) West
8. Which of these places was founded in 1577 by Guru Ram Das ?
   (A) Ludhiana
   (B) Amritsar
   (C) Chandigarh
   (D) Jalandhar
9. Who is the present captain of India's men National field hockey team ?
   (A) Akashdeep Singh
   (B) Harmanpreet Singh
   (C) Rupinder Pal Singh
   (D) Manpreet Singh
10. Read the following information carefully and answer the question given below.
    Six boys—A, B, C, D, E, F are standing in one row, and six girls—G, H, I, J, K, L are standing in another row in such a way that each girl faces one boy, not necessarily in the same order. G is to the immediate right of the girl who is facing E, the boy at the extreme right. Only B is between D and E. F is to the immediate left of A and to the immediate right of C. I is facing A and is to the immediate left of H. L is third to the left of J.
    Which of the following boys is to the immediate left of D ?
    (A) F (B) B
    (C) A (D) E
11. If the frequency of a sound wave is 100 Hz, then what is its time period ?
    (A) 0·1 second
    (B) 0·01 second
    (C) 10 seconds
    (D) 1 second
12. The cooking gas (LPG) mainly consists of—
    (A) Ethene
    (B) Propene
    (C) Propane and Butane
    (D) Ethyne
13. Complete the series.
    4, 4, 8, 24, 96, (...)
    (A) 461 (B) 448
    (C) 493 (D) 480
14. A right circular cylinder just encloses a sphere of radius 6 cm. If A and B are their curved surface areas, then :
    (A) Cannot be determined
    (B) A = B
    (C) A < B
    (D) A > B
15. Complete the series.
    38, 35, 34, 31, 30, (...)
    (A) 28 (B) 27
    (C) 25 (D) 24
16. Which of these diseases is communicable ?
    (A) Plague
    (B) Cancer
    (C) Diabetes
    (D) Hypertension
17. Complete the series.
    B, C, F, G, J, K, (...)
    (A) O (B) M
    (C) N (D) P
18. The liquid portion of blood is called—
    (A) Serum (B) Lymph
    (C) Water (D) Plasma
19. What day of the week will 1 January, 2022 be ?
    (A) Saturday (B) Monday
    (C) Thursday (D) Sunday
20. Which of these is a hill station in Rajasthan ?
    (A) Panchgani
    (B) Nainital
    (C) Mount Abu
    (D) Kasauli
21. If a convex lens forms a real inverted same size image at 30 cm, then the object is placed ..... in front of the lens.

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(A) 30 cm (B) 40 cm
(C) 10 cm (D) 20 cm

22. Find the HCF of 513, 1134 and 1215.
(A) 36 (B) 27
(C) 18 (D) 33

23. A sum of ₹ 25,000 amounts to ₹ 32,000 in 4 years. What is the rate of Interest ?
(A) 8% (B) 6%
(C) 6·5% (D) 7%

24. Find the least number that is divisible by 12, 18, 21, and 30.
(A) 1020 (B) 1260
(C) 1620 (D) 1060

25. How is the ammeter connected in all circuits to measure current flowing in it ?
(A) In parallel (B) Across
(C) In series (D) In line

26. In a certain code, 'HUNTER' is coded as 'UHNTRE'. How is 'MANAGE' coded in that code ?
(A) MNAAEG (B) MAANGE
(C) AMNAEG (D) EGNAAM

27. Simplify : $\frac{\sin 3A}{\sin A} + \frac{\cos 3A}{\cos A}$
(A) 2 sin A (B) 2 cos A
(C) 4 cos 2A (D) – 2

28. In which part of the human ear is amplification of sound done by 3 bones ?
(A) Middle ear
(B) Auditory nerve
(C) Inner ear
(D) Outer ear

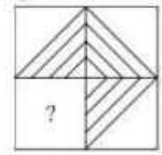
29. Pure ghee costing ₹ 100 per kilogram and vegetable oil costing ₹ 50 per kilogram are mixed in some ratio and sold at ₹ 96 per kilogram so as to gain 20%. In what ratio is ghee and oil mixed ?
(A) 3 : 4 (B) 3 : 2
(C) 2 : 3 (D) 4 : 3

30. Which of the following is a use of ethanol ?
(A) All of the options
(B) Manufacturing paints
(C) In alcoholic drinks
(D) In cough syrups

31. What is the length of the greatest rod that can be placed in a hall 12 m long, 4 m broad and 3 m high ?
(A) 9 m (B) 18 m
(C) 13 m (D) 15 m

32. A group of more than three atoms carrying a charge is known as ..... ion.
(A) Di atomic
(B) Mono atomic
(C) Tri atomic
(D) Polyatomic

33. Choose from the alternatives the figure that best completes the pattern given below :



(A)  (B) 
(C)  (D) 

34. Which of these plants is mainly found in deserts ?
(A) Teak (B) Cactus
(C) Oak (D) Eucalyptus

35. Gokul walks 8 km from his home towards east. He turns left to cover 2 km, and he turns right and walks 3 km. Find the distance he travelled towards east ?
(A) 5 km (B) 8 km
(C) 14 km (D) 11 km

36. Which of the following is **not** a celestial object ?
(A) Stars (B) Sun
(C) Ocean (D) Planets

37. Which of the following diseases is a disease of the lung ?
(A) Tuberculosis
(B) Cancer
(C) Tetanus
(D) Allergy

38. What is the shape of the Cocci bacteria ?
(A) Spherical
(B) Rod shaped
(C) Comma-shaped
(D) Spiral

39. Which organ in the human body regulates the sugar content in the blood ?
(A) Pancreas (B) Liver
(C) Stomach (D) Gall bladder

40. Simplify : $5 + 4 \times 5^2 + 4 \times 5^3 + 4 \times 5^4 + 4 \times 5^5$
(A) 5^5 (B) 5^4
(C) 5^6 (D) 5^2

41. In what time will a train 100 m long cross an electric pole, If its speed is 144 km/h ?
(A) 2·5 seconds
(B) 12·5 seconds
(C) 4·25 seconds
(D) 5 seconds

42. Where did Google launch its first drone delivery service in 2019 ?
(A) India
(B) United States
(C) Australia
(D) England

43. What is the minimum temperature to which a fuel must be heated so that it may catch fire and start burning ?
(A) Normal temperature
(B) Neutral temperature
(C) Boiling temperature
(D) Ignition temperature

44. The acceleration experienced by an object during a free fall is independent of its—
(A) Velocity (B) Pressure
(C) Mass (D) Energy

45. What is the aim of the 'Young Scientist Programme' for students, which was recently launched by ISRO ?
(A) To impart basic knowledge of research
(B) To impart basic knowledge of space technology
(C) To impart basic knowledge of biology
(D) To impart basic knowledge of computers

46. P and Q can do a work individually in 15 days and 20 days respectively. Find the respective ratio of their efficiencies.
(A) 5 : 4 (B) 4 : 5
(C) 4 : 3 (D) 3 : 4

47. In universal Indicators, red colour shows a pH of—
(A) 0 to 3 (B) 4 to 7
(C) 12 to 14 (D) 8 to 11

48. Two stations A and B are 110 km apart on a straight line. One train starts from A at 7 a.m. and travels towards B at 20 km/h. Another train starts from B at 8 a.m. and travels towards A at a speed of 25 km/h. At what time will they meet ?
(A) 11 a.m. (B) 10 a.m.
(C) 9 a.m. (D) 10·30 a.m.

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49. What digit will come in the place of 'a' in the number 1a5a01, if it is divisible by 11 ?
(A) 5 (B) 6
(C) 4 (D) 8

50. Which disease is prevented with the help of Salk's vaccine ?
(A) Measles
(B) Polio
(C) Chicken pox
(D) Small pox

51. Find the wrong number in the given series.
6, 12, 21, 36, 56, 81
(A) 21 (B) 12
(C) 36 (D) 56

52. To which of the following family of elements does potassium belong ?
(A) Halogens
(B) Alkaline earth metals
(C) Noble gases
(D) Alkali metals

53. P takes 10 days and Q takes 24 days to complete a work. With the help of R, they all work together and finish it in 6 days. Find the payment they receive out of a total remuneration of ₹ 1,000.
(A) P–₹ 500; Q–₹ 400; R–₹ 100
(B) P–₹ 400; Q–₹ 350; R–₹ 250
(C) P–₹ 600; Q–₹ 250; R–₹ 150
(D) P–₹ 500; Q–₹ 350; R–₹ 150

54. Which of the following will best complete the relationship given below ?
BAT : YZG : : EMU : ?
(A) VFN (B) FNV
(C) FVN (D) VNF

55. If '+' means '–', '–' means '+', '÷' means '×' and '×' means '÷', then $18 \times 3 \div 4 - 5 + 3 = ?$
(A) 21 (B) 29
(C) 26 (D) 31

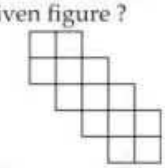
56. In some machines, why is using oil as a lubricant not advisable ?
(A) Oil makes the movement of the parts tough
(B) Sometimes oil leaks into the parts of the machine causing undesirable obstruction of working
(C) Oil sometimes increases friction
(D) Oil makes the machine parts and the whole place dirty

57. Vedha walked 15 m from point A in the east direction and turned south and walked 8 m to reach point B. What is the distance between point A and point B ?
(A) 12 m (B) 18 m
(C) 15 m (D) 17 m

58. Which satellite is dedicated as India's first multi wavelength space observatory ?
(A) Astrosat (B) SARAL
(C) SRMSAT (D) Jugnu

59. Which organ in the human body helps to maintain balance ?
(A) Heart (B) Liver
(C) Ear (D) Brain

60. How many squares are there in the given figure ?



(A) 15 (B) 21
(C) 19 (D) 17

61. What is the name of the border line between India and China ?
(A) Durand Line
(B) McMahon Line
(C) Radcliffe Line
(D) 24th parallel

62. A certain sum of money invested at Compound Interest, compounded annually, amounts to ₹ 338 at the rate of 4% per annum for 2 years. Find the sum.
(A) ₹ 320 (B) ₹ 318·52
(C) ₹ 315 (D) ₹ 312·50

63. Two trains 100 m and 80 m in length are moving in the same direction, with speeds 51 m/s and 42 m/s respectively. In what time will they cross each other ?
(A) 18 seconds (B) 30 seconds
(C) 25 seconds (D) 20 seconds

64. If $3\left(\frac{2}{5}\right) + 1\left(\frac{2}{9}\right) = 4\left(\frac{4}{5}\right) - a$, find the value of '$a$'.
(A) $\frac{6}{25}$ (B) $\frac{16}{9}$
(C) $\frac{4}{45}$ (D) $\frac{11}{45}$

65. A sum of ₹ 1,100 was taken as a loan. This is to be paid in two equal instalments. If the rate of interest is 20% per annum, compounded annually, find the amount payable in each instalment.
(A) ₹ 720 (B) ₹ 620
(C) ₹ 670 (D) ₹ 600

66. Find the ODD one out from the given options.
(A) Leopard (B) Cougar
(C) Elephant (D) Cheetah

67. Find the missing number in the following series.
8, 6, 8, 14, 30, (…), 233
(A) 77 (B) 55
(C) 72 (D) 60

68. Archery is the national game of—
(A) Bhutan
(B) Denmark
(C) Sri Lanka
(D) Switzerland

69. Which Indian city is famous for the embroidery work called 'Chikankari' ?
(A) Hyderabad
(B) Puri
(C) Ahmedabad
(D) Lucknow

70. If 9 # 3 @ 4 = 31 and 8 # 7 @ 2 = 58, then what will be 5 # 6 @ 7 ?
(A) 40 (B) 47
(C) 37 (D) 52

71. If $\frac{a}{b}$ is a fraction, where $a = b - 3$ and $\frac{(a+10)}{b-a/b} = \frac{10}{7}$, then find $\frac{a}{b}$.
(A) $\frac{4}{7}$ (B) $\frac{5}{8}$
(C) $\frac{8}{11}$ (D) $\frac{2}{5}$

72. K-shell is the …… energy level.
(A) Third (B) Fourth
(C) First (D) Second

73. Read the following information carefully and answer the question given below :
A, B, C, D, E, F, G and H are sitting around a circle facing the center. B is third to the right of F and third to the left of H. C is fourth to the left of A. A is not an immediate neighbour of F and B. E is not an immediate neighbour of B. G is second to the right of D.
Which of the following pairs represents the immediate neighbours of F ?

MAGAZINE KING

(A) E and D (B) H and D
(C) C and E (D) C and H

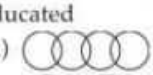
74. Which of the following districts won the platinum of Web Ratna Award in Digital India Awards 2018 ?
(A) Chennai
(B) Kurukshetra
(C) Aurangabad
(D) Koraput

75. Which of the following former Indian Presidents served for the shortest duration ?
(A) Dr. Zakir Husain
(B) Dr. Rajendra Prasad
(C) R. Venkataraman
(D) Neelam S. Reddy

76. Which are the BRIC countries ?
(A) Brazil, Russia, India and Canada
(B) Britain, Russia, India and China
(C) Brazil, Russia, India and China
(D) Britain, Russia, India and Canada

77. The process of movement of molecules from a higher concentration place to a lower concentration places is known as :
(A) Condensation
(B) Evaporation
(C) Diffusion
(D) Sublimation

78. If $a\ (a + b + c) = 45$; $b\ (a + b + c) = 75$ and $c\ (a + b + c) = 105$, then find the value of $a^2 + b^2 + c^2$.
(A) 83 (B) 625
(C) 225 (D) 90

79. Choose the figure that best represents the relationship among the classes given below :
Teachers, Language, Hindi, Educated
(A) 
(B) 
(C) 
(D) 

80. The price of a book was first increased by 25% and then reduced by 20%. What is the change in its original price ?
(A) 10% increase
(B) No change
(C) 5% decrease
(D) 10% decrease

81. What should be the smallest integer in place of * if the number 502*693 is exactly divisible by 9 ?
(A) 3 (B) 2
(C) 4 (D) 0

82. Sodium metal is stored in—
(A) Kerosene (B) Ether
(C) Water (D) Acetone

83. Which nutrient provides the maximum energy on breakdown ?
(A) Fibres (B) Proteins
(C) Fats (D) Carbohydrates

84. If A and B are supplementary angles, then find the value of $\frac{\tan A + \tan B}{1 - \tan A \tan B}$.
(A) 0 (B) 1
(C) -1 (D) $\frac{1}{2}$

85. Find the ODD one out from the given options.
(A) 162, 18 (B) 117, 13
(C) 171, 19 (D) 304, 16

86. The radius of a sphere is 3 times the radius of a cylinder. If their volumes are equal, find the height of the cylinder.
(A) 3 times its radius
(B) 27 times its radius
(C) 36 times its radius
(D) Equal to its radius

87. Limestone, chalk and marble are different forms of—
(A) Sodium hydroxide
(B) Ammonium hydroxide
(C) Calcium hydroxide
(D) Calcium carbonate

88. Simplify : $(5 + 0{\cdot}5 + 0{\cdot}005 + 0{\cdot}0005 + 0{\cdot}05) \times 2$
(A) 11·011 (B) 10·111
(C) 11·111 (D) 11·001

89. Find the value of $\sin 60^\circ \cos 30^\circ + \cos 60^\circ \sin 30^\circ$.
(A) $\frac{1}{2}$ (B) $\frac{3}{4}$
(C) 1 (D) $\frac{1}{4}$

90. If in a certain code 'COLOURED' is written as 'XDPDNAQZ', then how will 'ORDER' be written in that code ?
(A) DAZQA (B) DAQZA
(C) ADZQA (D) DAZAQ

91. Which of the following is equal to Hertz ?
(A) s^{-1} (B) $m\ s^{-2}$
(C) s (D) m/s

92. Which Article of Indian Constitution gives the procedure for impeachment of the President ?
(A) Article 42 (B) Article 59
(C) Article 48 (D) Article 61

93. Which number will best complete the relationship given below ?
6 : 24 : : 120 : ?
(A) 212 (B) 215
(C) 229 (D) 210

94. Complete the series.
ABZ, BCY, CDX, DEW, (...).
(A) FEV (B) DEV
(C) DEF (D) EFV

95. Choose the alternative that best replaces the question mark (?) in the given figure.

16	36	64
4	6	?
15	13	11
11	7	3

(A) 8 (B) 3
(C) 6 (D) 5

96. An ammeter has ..... resistance, so that it passes maximum current through it.
(A) Infinite (B) Very less
(C) Very high (D) High

97. Which of the following teams won the final in Vijay Hazare Trophy 2018 ?
(A) Rajasthan (B) Mumbai
(C) Delhi (D) Punjab

98. Which is the longest muscle in the body ?
(A) Gracilis (B) Soleus
(C) Sartorius (D) Trapezius

99. A vessel contains 20 litres containing milk and water in the ratio 3 : 2. Ten litres of this milk is removed and replaced with equal amount of pure milk. If this process is repeated once again, find the final ratio of milk and water.
(A) 4 : 1 (B) 5 : 3
(C) 9 : 1 (D) 1 : 4

100. Find the least perfect square that is divisible by 21, 36 and 66.
(A)214344 (B) 213444
(C) 231444 (D) 214434

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Answers with Hints

1. (B) 2. (B)

3. (A) Let, present age of father = x

$\therefore$ Age of father 10 years ago $= x - 10$

Age of son 10 years ago $= \frac{x-10}{3}$

$$\therefore \frac{x-10+20}{\frac{x-10}{3}+20} = \frac{2}{1}$$

$$x - 10 + 20 = 2\left[\frac{x-10}{3} + 20\right]$$

$$x + 10 = 2\left[\frac{x-10+60}{3}\right]$$

$$3x + 30 = 2x + 100$$

$$3x - 2x = 100 - 30$$

$$x = 70 \text{ years}$$

4. (A) As,

P E O P L E → P L P O E E

1 2 3 4 5 6 1 5 4 3 2 6

Same as,

T R E N D → T N E R D

1 2 3 4 5 1 4 3 2 5

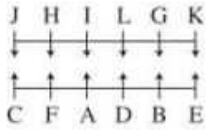
5. (A) 6. (A)

7. (D)



8. (B) 9. (D)

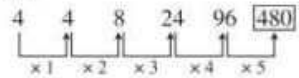
10. (C)



So A is to the immediate left of D.

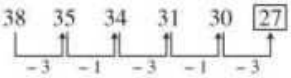
11. (B) 12. (C)

13. (D)



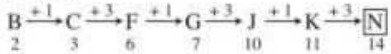
14. (B)

15. (B)



16. (A)

17. (C)



18. (D) 19. (A) 20. (C) 21. (A) 22. (B)

23. (D) Interest rate

$$= \frac{(32000 - 25000) \times 100}{25000 \times 4}$$

$$= \frac{7000}{250 \times 4} = 7\%$$

24. (B) LCM of 12, 18, 21 and 30 $= 1260$

25. (C)

26. (C) As,



Same as,



27. (C) $= \frac{\sin 3A}{\sin A} + \frac{\cos 3A}{\cos A}$

$$= \frac{3\sin A - 4\sin^3 A}{\sin A} + \frac{4\cos^3 A - 3\cos A}{\cos A}$$

$$= 3 - 4\sin^2 A + 4\cos^2 A - 3$$

$$= 4(\cos^2 A - \sin^2 A)$$

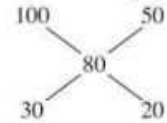
$$= 4 \text{ Cos } 2A$$

28. (A)

29. (B) Cost price of mixture

$$= 96 \times \frac{100}{120}$$

$$= ₹ 80 \text{ per kg.}$$



$\therefore$ Ghee : Oil = 30 : 20 = 3 : 2

30. (A)

31. (C) Length of required rod

$$= \sqrt{12^2 + 4^2 + 3^2}$$

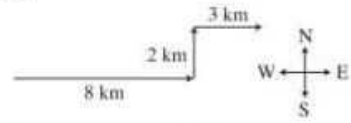
$$= \sqrt{144 + 16 + 9}$$

$$= \sqrt{169}$$

$$= 13 \text{ metre}$$

32. (D) 33. (A) 34. (B)

35. (D)



$\therefore$ Distance travelled towards east

$$= 8 + 3$$

$$= 11 \text{ km}$$

36. (C) 37. (A) 38. (A) 39. (A)

40. (*) $= 5 + 4 \times 5^2 + 4 \times 5^3 + 4 \times 5^4 + 4 \times 5^5$

$$= 5 + 4 \times 25 + 4 \times 125 + 4 \times 625 + 4 \times 3125$$

$$= 5 + 100 + 500 + 2500 + 12500$$

$$= 15605$$

41. (A) Speed $= 144 \text{ km/h}$

$$= 144 \times \frac{5}{18} \text{ m/sec.}$$

$$= 40 \text{ m/sec.}$$

$\therefore$ Required time $= \frac{100}{40}$

$$= 2{\cdot}5 \text{ sec.}$$

42. (C) $P : Q = \frac{1}{15} : \frac{1}{20}$

$$= 20 : 15$$

$$= 4 : 3$$

43. (D) 44. (C) 45. (B) 46. (C) 47. (A)

48. (B) Distance covered by first train in 1 hour $= 20 \text{ km}$

Remain distance $= 110 - 20 = 90 \text{ km}$

Distance covered by both trains in 1 hour $= 20 + 25 = 45 \text{ km/h}$

$\therefore$ Time taken to travel 90 km

$$= \frac{90}{45}$$

$$= 2 \text{ hours}$$

$\therefore$ Required time

$$= 8:00 \text{ AM} + 2 \text{ hr}$$

$$= 10:00 \text{ AM}$$

49. (D) For divisible by 11,

$$(a + a + 1) - (1 + 5 + 0) = 11$$

$$2a + 1 - 6 = 11$$

$$2a - 5 = 11$$

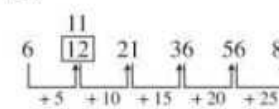
$$2a = 11 + 5$$

$$a = \frac{16}{2}$$

$$= 8$$

50. (B)

51. (B)



52. (D)

53. (C) $\frac{1}{P} + \frac{1}{Q} + \frac{1}{R} = \frac{1}{6}$

$$\frac{1}{R} = \frac{1}{6} - \frac{1}{P} - \frac{1}{Q}$$

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$$= \frac{1}{6} - \frac{1}{10} - \frac{1}{24}$$

$$= \frac{20-12-5}{120}$$

$$= \frac{3}{120} = \frac{1}{40}$$

$\therefore$ R = 40 Days.

$$\therefore P : Q : R = \frac{1}{10} : \frac{1}{24} : \frac{1}{40}$$

$$= \frac{120}{10} : \frac{120}{24} : \frac{120}{40}$$

$$= 12 : 5 : 3$$

$$\therefore \text{Payment of P} = \frac{12 \times 1000}{20}$$

$$= ₹\,600$$

$$\text{Payment of Q} = \frac{5 \times 1000}{20}$$

$$= ₹\,250$$

$$\text{Payment of R} = \frac{3 \times 1000}{20}$$

$$= ₹\,150$$

54. (D) As,

B A T
↓ ↓ ↓ opposite
Y Z G

Same as,

E M U
↓ ↓ ↓ opposite
V N F

55. (C) $? = 18 \times 3 \div 4 - 5 + 3$

By interchanging the signs as per question,

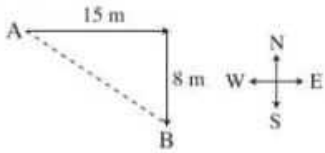
$$= 18 \div 3 \times 4 + 5 - 3$$

$$= 6 \times 4 + 2$$

$$= 24 + 2 = 26$$

56. (B)

57. (D)



$$AB = \sqrt{15^2 + 8^2}$$

$$= \sqrt{225 + 64}$$

$$= \sqrt{289}$$

= 17 metre

58. (A) 59. (C) 60. (D) 61. (B)

62. (D) Let required sum = ₹ P

$$\therefore \quad 338 = P\left(1 + \frac{4}{100}\right)^2$$

$$338 = P\left(\frac{104}{100}\right)^2$$

$$338 = P\left(\frac{26}{25}\right)^2$$

$$P = \frac{338 \times 25 \times 25}{26 \times 26}$$

$$= \frac{625}{2} = ₹\,312{\cdot}5$$

63. (D) Required time

$$= \frac{100+80}{51-42} = \frac{180}{9} = 20 \text{ second}$$

64. (B) $3\left(\frac{2}{5}\right) + 1\left(\frac{2}{9}\right) = 4\left(\frac{4}{5}\right) - a$

$$\frac{6}{5} + \frac{2}{9} - \frac{16}{5} = -a$$

$$\frac{54+10-144}{45} = -a$$

$$\frac{-80}{45} = -a$$

$$a = \frac{80}{45} = \frac{16}{9}$$

65. (A) Amount of each instalment

$$= \frac{1100}{\frac{100}{100+20} + \left(\frac{100}{100+20}\right)^2}$$

$$= \frac{1100}{\frac{100}{120} + \left(\frac{100}{120}\right)^2}$$

$$= \frac{1100}{\frac{5}{6} + \left(\frac{5}{6}\right)^2} = \frac{1100}{\frac{30+25}{36}}$$

$$= \frac{1100 \times 36}{55} = 20 \times 36$$

$= ₹\,720$

66. (C)

67. (A) $8 \times 0{\cdot}5 + 2 = 6$

$6 \times 1 + 2 = 8$

$8 \times 1{\cdot}5 + 2 = 14$

$14 \times 2 + 2 = 30$

$30 \times 2{\cdot}5 + 2 = \boxed{77}$

$77 \times 3 + 2 = 233$

68. (A) 69. (D)

70. (C) As, $9 \times 3 + 4 = 31$

and $8 \times 7 + 2 = 58$

Same as, $5 \times 6 + 7 = 37$

71. (A) $\frac{(a+10)}{b} - \frac{a}{b} = \frac{10}{7}$

$$\frac{a+10-a}{b} = \frac{10}{7}$$

$$\frac{10}{b} = \frac{10}{7}$$

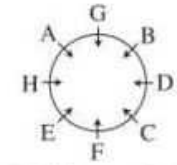
$\therefore \quad b = 7$

$\therefore \quad a = 7 - 3 = 4$

$\therefore \quad \frac{a}{b} = \frac{4}{7}$

72. (C)

73. (C)



74. (B) 75. (A) 76. (C) 77. (C)

78. (A) $a(a+b+c) = 45$

$$\Rightarrow (a+b+c) = \frac{45}{a}$$

$b(a+b+c) = 75$

$$\Rightarrow (a+b+c) = \frac{75}{b}$$

$c(a+b+c) = 105$

$$\Rightarrow (a+b+c) = \frac{105}{c}$$

$$\frac{45}{a} = \frac{75}{b} = \frac{105}{c}$$

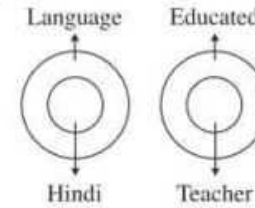
$$\frac{3}{a} = \frac{5}{b} = \frac{7}{c}$$

$\therefore \quad a = 3, b = 5, c = 7$

$a^2 + b^2 + c^2 = 3^2 + 5^2 + 7^2$

$= 9 + 25 + 49 = 83$

79. (B)



80. (B) Change in original price

$$= \frac{125 \times 80}{100} - 100$$

$$= \frac{10000}{100} - 100$$

$= 100 - 100 = 0$

81. (B) $5 + 0 + 2 + 6 + 9 + 3 = 25$

Number divisible by 9 and greater then 25 = 27

$\therefore$ Required Integer (*)

$= 27 - 25 = 2$

82. (A) 83. (C)

84. (A) Given, $A + B = 180°$

$$\frac{\tan A + \tan B}{1 - \tan A \cdot \tan B} = \tan(A + B)$$

$= \tan 180° = 0$

Continued on Page 155

MAGAZINE KING

Solved Paper

Kendriya Vidyalaya Sangathan Trained Graduate Teacher Exam., 2017 (North-East Region)

(Held on 17-12-2017)

Part–I

(1) General English

Directions—(Q. 1 and 2) In each group of words given below only one word is spelt correctly. Choose the one.

1. (A) Nutritous (B) Nutrishus
   (C) Nutritius (D) Nutritious
2. (A) Magnificient
   (B) Magnificent
   (C) Magneficient
   (D) Magnifecient

Directions—(Q. 3–5) Each of the following sentences has been divided into four parts. There is an error in one of the parts. Identify the part which has the error.

3. No sooner did / the thief see / the
   (A) (B)
   policeman when / he ran away.
   (C) (D)
4. Ram is / anxious to see / you for
   (A) (B) (C)
   the / last one week.
   (D)
5. I asked / my father / if I can /
   (A) (B) (C)
   take his pen.
   (D)

Directions—(Q. 6 and 7) Each of the following idioms is followed by four meanings of which only one is correct. Choose the correct one.

6. To take away one's breath.
   (A) To surprise one
   (B) To hit one badly
   (C) To kill one
   (D) To take away one's money
7. A dead letter.
   (A) One which has not been posted
   (B) One of rejection
   (C) No longer in use
   (D) One that has not reached its destination

Directions—(Q. 8 and 9) Choose the correct alternative to complete each of the following sentences.

8. You ..... be mad if you think I am going to lend you more money.
   (A) might (B) ought to
   (C) should (D) must
9. Eating sweets ..... be bad for your teeth.
   (A) should (B) would
   (C) ought to (D) may

Directions—(Q. 10 and 11) In each of the following items choose the words **opposite** in meaning to the given word.

10. SACRED
    (A) Unholy (B) Open
    (C) False (D) Inauspicious
11. SOBER
    (A) Crooked (B) Drunk
    (C) Unwise (D) Cruel

Directions—(Q. 12 and 13) Out of the given alternatives, choose the word which most closely fits each definition.

12. One who has vowed not to marry.
    (A) Spinster (B) Bachelor
    (C) Celibate (D) Callous
13. A self-centred person.
    (A) Arrogant (B) Profane
    (C) Egoist (D) Clever

Directions—(Q. 14 and 15) Choose the word from the given options which best expresses the meaning of the given word.

14. RADIANT
    (A) Famous (B) Bright
    (C) Just (D) Timely
15. STRICTURE
    (A) Criticism
    (B) Harshness
    (C) Despot
    (D) Passion

(2) General Hindi

16. निम्नलिखित में से कौनसा शब्द सर्वनाम है ?
    नीचे दिए गए विकल्पों में से चुनिए–
    (A) राधा (B) वह
    (C) सुन्दर (D) विभीषण
17. 'उन्मूलन' का विपरीतार्थक शब्द निम्नलिखित विकल्पों में से छाँटिए–
    (A) रोपण (B) विलोमन
    (C) अनुकूलन (D) विनाशन
18. निम्नलिखित वाक्यों में से अशुद्ध वाक्य का चयन कीजिए–
    (A) लडकी दौडती है.
    (B) शहर अच्छा है.
    (C) बादशाह खाँसती है.
    (D) होटल ठीक है.
19. 'दोपहर का समय'– के लिए निम्नलिखित शब्दो में से कौनसा उपयुक्त है ? चिह्नित कीजिए–
    (A) रात (B) सन्ध्या
    (C) अपराह्न (D) मध्याह्न
20. 'आँखें चार होना'– मुहावरे के अर्थ का दिए गए विकल्पों में से चयन कीजिए–
    (A) प्रेम होना
    (B) दृष्टि गिनना
    (C) रतौंधी होना
    (D) परेशान होना
21. 'अक्ल पर पत्थर पडना'– मुहावरे के अर्थ का निम्नांकित विकल्पों में से चयन कीजिए–
    (A) चोट लगना
    (B) बुद्धि भ्रष्ट होना
    (C) कठिन वाक्य
    (D) मुसीबत
22. "शीला आई और अंधे को सहारा दिया."
    यह वाक्य किस वाक्य-भेद का उदाहरण है ?
    सही विकल्प बताइए–
    (A) संयुक्त वाक्य
    (B) मिश्र वाक्य

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(C) नकारात्मक वाक्य
(D) प्रश्नवाचक वाक्य

23. निम्नलिखित विकल्पों में से 'देवालय' शब्द का सन्धि-विच्छेद चिह्नित कीजिए–
(A) देवा + लय
(B) देवा: + लय
(C) देव + आलय
(D) दे + वालय

24. 'फ' वर्ण का उच्चारण स्थान बताइए–
(A) मूर्धा (B) तालु
(C) कंठ (D) ओष्ठ

25. सही विकल्प को चुनकर निम्नलिखित वाक्य के रिक्त स्थान की पूर्ति कीजिए–
नाच न आवे ····· टेढा
(A) उंगली (B) पैर
(C) आँगन (D) घडा

26. निम्नलिखित में से किस शब्द में 'अ' उपसर्ग है ? सही विकल्प बताइए–
(A) अनेक (B) अमर
(C) अतिशय (D) अधिभार

27. 'छात्रावास' में कौनसी सन्धि है ? सही विकल्प बताइए–
(A) दीर्घ (B) गुण
(C) वृद्धि (D) अयादि

28. 'ने' किस कारक की विभक्ति है ? सही विकल्प चुनिए–
(A) कर्म (B) सम्बन्ध
(C) कर्ता (D) अधिकरण

29. निम्नलिखित शब्दों में से अशुद्ध वर्तनी वाले शब्द का चयन कीजिए–
(A) महीना (B) अनुगृह
(C) क्रिया (D) सप्ताह

30. 'शक्ति की उपासना करने वाले' को क्या कहते हैं ? सही विकल्प बताइए–
(A) शैव (B) वैष्णव
(C) शाक्त (D) नाथपंथी

Part–II
(1) Current Affairs

31. Where among the following is the current headquarters of UNESCO located ?
(A) New York
(B) Geneva
(C) Switzerland
(D) Paris

32. Where among the following is the International Court of Justice located ?
(A) Berlin
(B) The Hague
(C) Barcelona
(D) New York

33. Which among the following country won the Women's Rugby World Cup held in 2017 ?
(A) England
(B) New Zealand
(C) Canada
(D) Australia

34. Which of the following is the correct match of books and authors of 2017 ?

List–I
(a) First Love
(b) A Line Made by Walking
(c) The Heart's Invisible Furies
(d) The Refugees

List–II
1. Sara Baume
2. Gwendoline Riley
3. Viet-Thanh Nguyen
4. John Boyne

Codes :

	(a)	(b)	(c)	(d)
(A)	4	3	2	1
(B)	2	3	1	4
(C)	2	1	4	3
(D)	1	2	3	4

35. Where is the headquarters of World Organization Located ?
(A) Geneva (B) Madrid
(C) New York (D) Germany

36. Which of the following option is correct with reference to the tally of gold medals won in Asian Athletics Championship, 2017 ?
(A) China, India, Kazakhstan, Iran
(B) India, Kazakhstan, China, Iran
(C) Iran, India, China, Kazakhstan
(D) India, China, Kazakhstan, Iran

37. Which of the following Act was amended by the U.S. house of representatives of facilitate defence cooperation in India recently ?
(A) National Defence Act, 2017
(B) National Defence Authorisation Act, 2018
(C) National Defence Act, 1980
(D) National Defence Authority Act, 2020

38. Which of the following refers to the maiden search and rescue exercise scheduled in November 2017 in Bay of Bengal ?
(A) IMMSAREX
(B) IMSAAREX
(C) IMMASAREX
(D) TIMASAREX

39. What was the mascots for the 2017 FIFA Under-17 World Cup Football Tournament played in India ?
(A) SHERA (B) BHOLU
(C) KHELEO (D) APPU

40. Where is the headquarters of International Union for Conservation of Nature located ?
(A) Paris, France
(B) Gland, Switzerland
(C) Vienna, Austria
(D) New York, U.S.A.

41. Which of the following city hosted 'A festival of India' in 2017 ?
(A) Delhi (B) Amsterdam
(C) Rotterdam (D) Hague

42. Under which Article of the Constitution of India did the Union Government setup a Commission to examine the sub-categorization of the other Backward Classes in August 2017 ?
(A) Article 338
(B) Article 338A
(C) Article 340
(D) Article 341

43. Which of the following city hosted the 2017 Asian Athletics Championship ?
(A) Delhi
(B) Bengaluru
(C) Bhubaneshwar
(D) Chandigarh

44. Who among the following won the gold medal in 10,000 metres race in Asian Athletics Championship, 2017 ?
(A) Govindan Lakshmanan
(B) Adilet Kyshtabekov
(C) Gopi Thonakal
(D) Chen Chich

45. Which of the following country won the men's gold medal in Javelin throw event of the Asian Atheltics Championship in 2017 ?
(A) Qatar (B) India
(C) China (D) Thailand

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46. Which of the following day was observed as 'World Teachers Day' in 2017 ?
(A) 24 June
(B) 24 May
(C) 5 September
(D) 5 October

47. Which among the following refers to the National Electric Mobility Mission Plan, 2020 ?
(A) To achieve national fuel security by promoting hybrid and electric vehicles in the country
(B) To replace diesel engines with electric engines and achieve fuel security
(C) To replace coal engines with electric engines and achieve fuel security
(D) The replace petrol engines by diesel engines and achieve fuel security

48. Which of the following day was observed as the 'World Cancer Day' this year ?
(A) 1 February
(B) 26 January
(C) 4 February
(D) 14 February

49. Which of the following day was observed on March 1st this year ?
(A) Self Injury Awareness Day
(B) Blood Cancer Awareness Day
(C) Anti-terrorism Day
(D) National Youth Day

50. Which of the following day was observed as the International Day of Happiness in 2017 ?
(A) 25 March
(B) 14 February
(C) 1 January
(D) 20 March

51. Which of the following day was observed as the 'World Nature Conservation Day' this year ?
(A) 15 August (B) 28 July
(C) 27 June (D) 25 March

52. Who among the following has recently authored the book named, 'The Ministry of Utmost Happiness' ?
(A) C.M. Pokhriyal
(B) Arundhati Roy
(C) David Grossman
(D) Michael Clarke

53. Which of the legendry poet was conferred with 4th Kalinga Literary Award in 2017 ?
(A) Hemant Mohapatra
(B) Anil Chavda
(C) Haraprasad Das
(D) Tapan Kumar Pradhan

54. Who is the author of 'Indira Gandhi : A Life in Nature', published recently ?
(A) Jai Ram Ramesh
(B) M. Veerappa Moily
(C) D.G. Tendulkar
(D) Kiren Rijiju

55. Which of the following book has been authored by Ashwini Kumar in 2017 ?
(A) The Rise of Sivagami
(B) Gandhi in Champaran
(C) Hope in a challenged Democracy : An Indian Narrative
(D) The Flaming Tresses of Draupadi

56. With reference to the books published in 2017 and its authors, which among the following is the correct match ?

List–I

(a) Istanbul : A Tale of Three Cities
(b) Age of Anger : A History of the Present
(c) 4321 : A Novel
(d) We Come Apart

List–II

1. Pankaj Mishra
2. Paul Auster
3. Sarah Crossan and Brian Conaghan
4. Bettany Hughes

Codes :

	(a)	(b)	(c)	(d)
(A)	4	3	2	1
(B)	4	1	2	3
(C)	1	2	3	4
(D)	3	4	2	1

57. Which is the correct statement with reference to the recently launched e-RAKAM portal ?
(A) A digital platform for exchanging currencies
(B) A digital platform for buying and selling agricultural products
(C) A digital platform for paying taxes
(D) A digital platform for imports and exports

58. Which of the following statement is correct about the recently launched mobile app called 'Aarambh' by the Government of India ?
(A) An app for performance based maintenance of roads
(B) An app for performance based maintenance of buildings
(C) An app for performance based maintenance of reservoirs
(D) An app for performance based maintenance of cleanliness

59. Which of the following institution has recently launched the 'Mentor India' initiative ?
(A) SHRAM Aayog
(B) NITI Aayog
(C) NAMO GANGE Aayog
(D) Make in India Campaign

60. Which of the following State Government has recently launched the India's first student startup and innovation policy ?
(A) Gujarat Government
(B) Delhi Government
(C) Haryana Government
(D) Tamil Nadu Government

61. Which of the following is the correct statement regarding the 'Navika Sagar Parikrama Project', 2017 ?
(A) First Indian Circumnavigation of the globe by an all women crew
(B) First global navigation of oceans by Indian men
(C) First navigation of seas and oceans by Indians
(D) First international circumnavigation

62. What is the theme of the 2017 National Girl Child Day ?
(A) Child Marriage Prohibition
(B) Girl Child Safety
(C) Beti Bachao, Beti Padhao
(D) Beti Bachao, Beti Badhao

63. Which of the following is the correct statement regarding the new Open Acreage Licensing Policy for Oil and Gas Exploration ?
(A) It prohibits licensing policy for oil exploration
(B) It allows bidders to carve out areas where they want to drill

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(C) It prohibits licensing policy for gas exploration

(D) It allows oil and gas exploration

64. Which of the following country is hosting the G7 Interior Minister's Summit on security in 2017 ?
(A) Canada (B) Italy
(C) France (D) Japan

65. Which of the following day was observed as International Literacy Day in 2017 ?
(A) 15 August
(B) 26 January
(C) 8 September
(D) 24 April

66. Where is the headquarters of the North Atlantic Treaty Organisation (NATO) located ?
(A) Brussels, Belgium
(B) Berlin, Germany
(C) Kathmandu, Nepal
(D) Paris, France

67. Which of the following day was observed as the National Girl Child Day in 2017 ?
(A) 15 August
(B) 24 August
(C) 26 January
(D) 24 January

68. In which country was the Women's Rugby World Cup held in 2017 ?
(A) Ireland (B) England
(C) Canada (D) France

69. Who among the following won the UEFA Men's Player of the year award for the 2016-17 session ?
(A) Paulo Dybola
(B) Cristiano Ronaldo
(C) Lionel Messi
(D) Casemiro

70. Which of the following country is still showing records of polio according to WHO ?
(A) Somalia (B) India
(C) Pakistan (D) Bangladesh

(2) Reasoning Ability

71. If first and the last day of the month are Sundays and the month has 5 Sundays, then the number of days in the month are—
(A) 28 (B) 29
(C) 30 (D) 31

72. Find the missing term in the series given below—
0, 4, 18, 48, ...?..., 180, 294
(A) 72 (B) 90
(C) 100 (D) 142

73. Which number does not belong to the class ?
125, 343, 512, 476, 216
(A) 476 (B) 343
(C) 216 (D) 125

74. Which of the numbers does not belong to the group ?
325, 473, 246, 583, 684
(A) 684 (B) 583
(C) 473 (D) 325

75. If the 3rd of a month is Sunday and the month has 5 Sundays, then the month consists of how many days ?
(A) 31 days (B) 30 days
(C) 29 days (D) 28 days

76. If 253 is coded as 352 and 475 is coded as 574, then 2317 would be coded as—
(A) 7321 (B) 7231
(C) 7123 (D) 7132

77. If the 25th of July in a year is Thursday, the number of Tuesdays in that month will be—
(A) 3 (B) 4
(C) 5 (D) 6

78. Which of the following is the next term of the series given below ?
ACX, BDU, CER, DFO, ...?...
(A) FHN (B) EGL
(C) DHN (D) DGM

79. Which of the following is the missing term of the series given below ?
1, 8, ...?..., 64, 125, 216
(A) 4 (B) 9
(C) 27 (D) 49

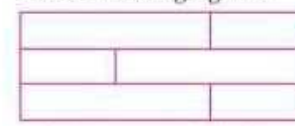
80. From the given alternatives, select the word which cannot be formed using the letters of the given word—
MANUFACTURER
(A) CURRENT
(B) NATURE
(C) FRACTURE
(D) MANNER

81. The word RACE is coded as 3124 and LEARN is coded as 54136, then CLEAR would be coded as—
(A) 25413 (B) 21354
(C) 25431 (D) 24135

82. A student ranks 9th from top and 24th from the bottom in his class. The total number of children in the class is—
(A) 30 (B) 31
(C) 32 (D) 33

83. Which of the following words appears last of all the other three in the English dictionary ?
(A) Opportune (B) Opponent
(C) Oppress (D) Opposite

84. How many rectangles are there in the following figure ?



(A) 6 (B) 9
(C) 12 (D) 15

85. If 'new school' is coded as '23', 'school and teacher' as '304' and 'good teacher' is coded as 14, then 'good new teacher and school' would be coded as—
(A) 12403 (B) 21034
(C) 20431 (D) 14320

86. Some equations are solved on the basis of a certain system. On the same basis, find out the correct answer from amongst the four alternatives for the unsolved equation—
$4 \Delta 5 = 29, 6 \Delta 7 = 55, 7 \Delta 8 = ?$
(A) 35 (B) 44
(C) 63 (D) 71

87. Which of the following fills the gap in the series ?
11, 31, 41, ...?..., 71, 91
(A) 43 (B) 47
(C) 51 (D) 61

88. If 121 : 1331 and 169 : 2197, then 289 : ?
(A) 2057 (B) 2873
(C) 4913 (D) 6859

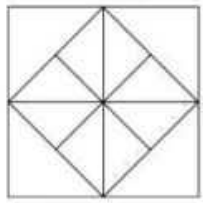
89. In a certain code language PARK is coded as RCTM and SPARE is coded as URCTG, then BUCKET would be coded as—
(A) CVDLFU (B) FXEMGZ
(C) EXFNHW (D) DWEMGV

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90. A man walks 6 m towards south and then turns right. After walking 4 m, he again turns right and walks 6 m. In which direction is he now from the starting point ?
(A) West (B) East
(C) North (D) South

91. What will be the order of appearance of following words in English dictionary ?
1. Breath 2. Breast
3. Breadth 4. Breach
(A) 1, 2, 3, 4 (B) 4, 2, 1, 3
(C) 4, 3, 2, 1 (D) 3, 1, 4, 2

92. What is the number of triangles in the following figure ?



(A) 12 (B) 16
(C) 20 (D) 24

93. Five students are sitting in a row. Tushant is on the right of Ravi. Manoj is on the left of Ravi but on the right of Lokesh. Tushant is on the left of Kunal. Who is sitting in the middle ?
(A) Ravi (B) Tushant
(C) Lokesh (D) Manoj

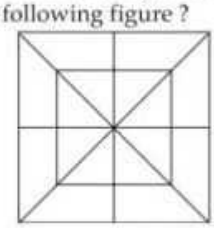
94. Identify the diagram that best represents the relationship among classes given below—
Liquids, Milk, Oil
(A) 
(B) 
(C) 
(D) 

95. Find the number which does not fit in the series—
2, 3, 5, 7, 9, 11, 13
(A) 5 (B) 7
(C) 9 (D) 13

96. Which two numbers do not fit in the series ?
13, 23, 33, 43, 53, 63, 73
(A) (23, 43) (B) (33, 63)
(C) (13, 53) (D) (53, 73)

97. The sum of ages of three brothers born at intervals of 5 years, is 36 years. The difference between the ages of eldest and the youngest brother is—
(A) 5 years (B) 10 years
(C) 12 years (D) 15 years

98. How many triangles are there in the following figure ?



(A) 12 (B) 20
(C) 28 (D) 32

99. CAPE is coded as 1243 and HOLD is coded as 5867, then HEAD would be coded as—
(A) 7632 (B) 5327
(C) 8247 (D) 5627

100. If 312 is written as 6 and 654 is written as 15, then 978 would be written as—
(A) 17 (B) 19
(C) 24 (D) 27

101. A man walks 3 km towards north of his house and turns left and walks 2 km. Then he turns right and walks 1 km. Then he again turns right and walks 5 km. How far is he now from his house ?
(A) 4 km (B) 5 km
(C) 8 km (D) 11 km

102. Mukesh is the brother of Satish. Deepti is the sister of Saurabh. Satish is the son of Deepti. How is Mukesh related to Deepti ?
(A) Nephew (B) Son
(C) Brother (D) Father

103. Which of the following is the next term in the series ?
ABZ, CDX, EFV, GHT, ...?...
(A) JLT (B) IKS
(C) JKR (D) IJR

104. STOP : POTS and RATS : STAR, then START : ...?...
(A) TRATS (B) RATTS
(C) STRTA (D) TRTSA

105. What is related to 'Hockey' in the same way as 'Umpire' is related to 'Cricket' ?
(A) Captain (B) Player
(C) Spectator (D) Referee

106. Find the missing number '?'—

7	9	8
12	2	?
5	13	6

(A) 14 (B) 12
(C) 10 (D) 9

107. Find the missing term in the series given below—
5374261, 537426, 37426, ...?... 742, 74
(A) 5374 (B) 4261
(C) 3742 (D) 7426

108. Find the missing terms in the given series in their natural order—
2, 4, 3, ...?..., 5, 25, ...?..., 49, 11, ...?...
(A) 9, 7, 121 (B) 9, 6, 144
(C) 6, 36, 121 (D) 5, 125, 144

109. Which of the following numbers continues the series given below ?
0, 7, 26, 63, 124, ...?...
(A) 192 (B) 200
(C) 208 (D) 215

110. Which number does not belong to the class to other three ?
(A) 5202 (B) 3411
(C) 2431 (D) 1413

(3) Teaching Methodology

111. If it is said that students of class VII are not able to read and write, what could be the most important reason for this situation ?
(A) Less intelligent children
(B) Carelessness of parents
(C) No detention policy
(D) Insensitive implementation of CCE

112. In Educational technology, application of psychology is known as—
(A) Software approach
(B) Hardware approach
(C) Pedagogic approach
(D) Systems analysis

113. Moral values can be best inculcated amongst students by—
(A) arranging lectures of eminent persons
(B) co-curricular activities
(C) relevant literature
(D) teacher as a role model

114. Operation Black Board was initiated as a follow up of recommendations of—

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(A) NPE 1986
(B) CABE
(C) Kothari Commission (1964–66)
(D) National Curriculum for Elementary and Secondary Education—A Framework 1988

115. In the modern era of fast technological advancement, what could be its most serious side effect ?
(A) Role of teachers would vanish
(B) Class-rooms would become smart
(C) Learning would become easier
(D) Moral values would get eroded]

116. Teacher should begin a new topic or lesson with—
(A) teacher's own experiences
(B) some interests already possessed by students
(C) an overview of the subject
(D) explaining the importance of the subject

117. Which measure of central tendency represents a point and not a value ?
(A) Mean (B) Median
(C) Mode (D) Average

118. If the students are classified on the basis of intelligence level, the average group will comprise of middle .....
(A) 33·33 per cent
(B) 40·00 per cent
(C) 50·00 per cent
(D) 68·26 per cent

119. A good 'Head of School' is one who—
(A) understands educational administration and applies its principles in toto
(B) does not compromise with misconduct
(C) is flexible in approach and works cooperatively with human touch
(D) allows freedom to teachers and students in their affairs

120. Best way to monitor progress is—
(A) monitoring by superiors
(B) self monitoring
(C) monitoring by peers
(D) societal monitoring

121. As per RTE Act 2009, preparation of the school development plan is the responsibility of—
(A) School Head Teacher
(B) School Management Committee
(C) Block Education Officer
(D) Cluster Resource Person

122. As per RTE Act 2009, a full time head-teacher is provided in a school having classes sixth to eighth where admission of children is above—
(A) 80 (B) 100
(C) 120 (D) 130

123. Continuous and Comprehensive Evaluation (CCE) is the school context, implies—
(A) continuous monitoring of teacher's performance
(B) assessment not to be spread over the total instructional time
(C) assessment of both scholastic and co-scholastic aspects of children's learning
(D) making teacher accountable to both parents and school authorities

124. The corporal punishment in schools has been prohibited by the—
(A) Child Labour Prohibition Act
(B) National Policy on Education 1986
(C) National Curriculum Framework 2005
(D) RTE Act, 2009

125. Critical pedagogy does not entail the following—
(A) acceptance of multiple views on social issues
(B) supremacy of role models to follow
(C) democracy as a way of life
(D) collective decision making through open discussion

126. Behaviour indications are used in the learning theory given by—
(A) Kohler (B) Hull
(C) Thorndike (D) Skinner

127. Conditions of learning were given by—
(A) Skinner
(B) Robert Gagne
(C) Watson
(D) Maslow

128. The concept of primary mental abilities was given by—
(A) Guilford (B) Thurstone
(C) Spearman (D) Vernon

129. Children take more interest in classroom activities when—
(A) teacher behaves in a friendly manner
(B) subject matter is very easy to comprehend
(C) teacher commands a good personality
(D) classroom activities closely relate to their own experience

130. Which one of the following constitutes first step in the sequence of concept formation ?
(A) Abstraction
(B) Experiecing
(C) Differentiation
(D) Generalization

131. Students respect their teacher primarily owing to his/her—
(A) legal authority
(B) personal integrity and goodwill
(C) popularity and influence
(D) adult status

132. Social mobility does not promote—
(A) higher positions to deserving persons
(B) welfare and happiness
(C) pride and snobbery
(D) remedy for maladjustment

133. Which of the following information about the child need not be emphasized in guidance ?
(A) Child's previous experiences and examination results
(B) Child's interest, aspiration and other qualities
(C) Parents' religions, caste and Social status
(D) Parental aspirations

134. Which one of the following is not an element of creativity ?
(A) Frequency
(B) Conservation
(C) Flexibility
(D) Elaboration

135. Which of the following was not the main consideration of Rabindranath Tagore while conceptualizing a World University – Viswa Bharti ?

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(A) Going beyond aggressive nationalism
(B) Building friendship with all nations
(C) Emphasize cooperation between east and west
(D) Emphasizing oriental philosophy

136. Kilpatrick's Project method is an outcome of—
(A) Pragmatism alone
(B) Pragmatism and Realism
(C) Realism alone
(D) Realism and Idealism

137. In a good school time-table, which one of the following is not desirable ?
(A) Assignment of subjects as per qualification of teachers
(B) Fixed provision of time and place for activities by teachers and students
(C) Opportunity for equipment utilization
(D) Provision for both longer and shorter periods

138. Which one of the following is not a projective test of personality ?
(A) Personality inventories
(B) Sentence completion test
(C) Rorscha Ink Block test
(D) Thematic Apperception test

139. Minimum Levels of Leaning (MLLs) (1991) were identified to—
(A) combine quality with equity
(B) help every child pass the class
(C) make aware the parents about children's learning levels
(D) reduce the work load of teachers

140. Role of teacher in Front Line Curriculum happens to be of a/an—
(A) Academic Leader
(B) Pace Setter
(C) Neutral person
(D) Co-learner

141. Identify the correct sequence in the Taxonomy Affective Domain given by Bloom, Krathwohl and Masiz (1964)—
(A) Receiving, valuing, responding, characterization and organization
(B) Receiving, responding, valuing, organization and characterization
(C) Receiving, valuing, organization, characterization and responding
(D) Receiving, responding, organization, valuing and characterization

142. What is the main reason for programmes like Sarva Shiksha Abhiyan not being able to yield desired educational outcomes ?
(A) Teachers are in short supply
(B) Inspection and supervision is weak
(C) Quality dimensions are not monitored properly
(D) Children come from impoverished backgrounds

143. Which one of the following is not an aim of Sarva Shiksha Abhiyan ?
(A) All children to be in school
(B) Most of the children get vocational education
(C) Bridging all gender and social category gaps
(D) All children complete eight years of schooling

144. If the steps in an institutional planning are assigned codes as under—
1. Formulation of objective
2. Activities planned
3. Situational analysis
4. Monitoring mechanisms
5. Evaluation and feedback
What is the correct sequence of events ?
(A) 2, 1, 3, 5, 4
(B) 3, 1, 2, 4, 5
(C) 1, 2, 3, 4, 5
(D) 3, 2, 1, 5, 4

145. Action Research is done by—
(A) Scholars for a degree
(B) Social workers for implementing projects
(C) Practitioners for improving their practices
(D) Educational planners and administrators

146. Which one is not considered a theory of motivation ?
(A) Self Actualization Theory
(B) Psychoanalytic Theory
(C) Interference Theory
(D) Achievement Motivation Theory

147. If one of your students complains of injustice that she/he has been awarded less marks, you would—
(A) justify the evaluation done
(B) ask him/her to mind his/her business
(C) ask her to report to the principal as per rules
(D) allow comparison of her/his script with other

148. How can reliability of a test be increased ?
(A) By seeking experts agreement
(B) By increasing the test length
(C) By shortening the test length
(D) By arranging items in order of difficulty

149. A good diagnostic test tells us about—
(A) The level of accomplishment of children
(B) The quality of classroom instruction
(C) The area of child's weakness and the plaussible reasons
(D) The effectiveness of the teacher

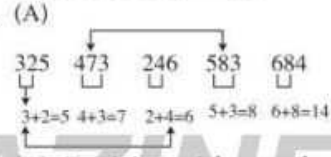
150. Which philosophy of education termed the role of a teacher as mere guide and observer ?
(A) Naturalism (B) Idealism
(C) Realism (D) Pragmatism

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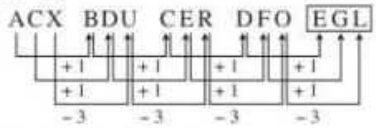
Answers with Hints

1. (D) 2. (B)
3. (C) when-than
4. (A) is-has been
5. (C) can-could
6. (A) 7. (C) 8. (B) 9. (D) 10. (A)
11. (A) 12. (C) 13. (C) 14. (B) 15. (A)
16. (B) सर्वनाम शब्द है–वह
17. (A) उन्मूलन का विपरीतार्थक है–रोपण. उन्मूलन = उखाडना, रोपण = रोपना.
18. (C) अशुद्ध वाक्य है–बादशाह खाँसती है.
19. (D) दोपहर का समय = मध्याह्न.
20. (A) आँखें चार होना = प्रेम होना.
21. (B) अक्ल पर पत्थर पडना = बुद्धि भ्रष्ट होना.
22. (A) शीला आई और अंधे को सहारा दिया = संयुक्त वाक्य.
23. (C) देवालय = देव + आलय – दीर्घ संधि.
24. (D) 'फ' वर्ण का उच्चारण स्थान है–ओष्ठ.

25. (C) नाच न आवे **आँगन** टेढा.
26. (B) अमर शब्द में 'अ' उपसर्ग है. अतिशय में अति, अधिभार में अधि उपसर्ग है. अनेक में अन उपसर्ग है.
27. (A) छात्रावास = छात्र + आवास – दीर्घ संधि.
28. (C) 'ने' कर्ता कारक की विभक्ति है.
29. (B) अनुगृह शब्द अशुद्ध है. इसके स्थान पर अनुग्रह होना चाहिए. शेष तीनों शब्द शुद्ध हैं.
30. (C) शक्ति का उपासक = 'शाक्त'.
31. (D) The **'United Nations Educational, Scientific and Cultural Organisation' (UNESCO)** Headquarter (Hq.) is located in Paris (France), which organisation was established on 4th Nov., 1945.
32. (B) The International Court of Justice **(ICJ)** Hq. is located at the Hague (Netherland), which is the **'Justice Court of United Nations'**.
33. (B) 34. (C)
35. (A) The **'WHO'** (World Health Organisation) is located at its Hq. Geneva (Switzerland); which was established on 7th April, 1948, with the main objectives to improve the health of world through assistance to Governments. Obviously, the **'World Health Day' (WHO)** is celebrated on 7th April each year, since 1950.
36. (D) 37. (B) 38. (A) 39. (C) 40. (B)
41. (D) 42. (C) 43. (C) 44. (A) 45. (B)
46. (D) In the year 2017, **'UNESCO'** observed **'World/International Teacher's Day'** on 5th October. The United Nations Educational, Scientific & Cultural Organization (UNESCO) started to organize this day w.e.f. 1994.
47. (A) 48. (C) 49. (A)
50. (D) On March 20, 2017, the **'International Day of Happiness'** was observed. In earlier year-2016, on March 20, it was observed as the **Ist** International Day of Happiness throughout the world.
51. (B) 52. (B) 53. (C) 54. (A) 55. (C)
56. (B) 57. (B) 58. (A) 59. (B) 60. (A)
61. (A)
62. (C) On 24th January, 2017, the **'National Girl Child Day'** was celebrated with the theme/subject of **'Beti Bachao, Beti Padhao'**, so as to educate Girls and safe them.
63. (B) 64. (B)
65. (C) The **'International/World Literacy Day'** in 2017 was observed on September, 8 (as 51th year ceremony), which was declared by **'UNESCO'** on 17th Nov., 1965.
66. (A) 67. (D) 68. (A) 69. (B)
70. (C) Pakistan country is still showing records of **Polio** disease, according to **WHO** (World Health Organisation). Infact, **Polio** is caused by Virus, which enters in the body with food and water.
71. (B) Day of Sunday ⇒ 1, 8, 15, 22, 29.
72. (C) 0, 4, 18, 48, **100**, 180, 294.
⇒ $(1^3-1^2), (2^3-2^2), (3^3-3^2), (4^3-4^2), \mathbf{(5^3-5^2)}, (6^3-6^2), (7^3-7^2)$.
73. (A) 125, 343, 512, **476,** 216
⇒ $(5)^3, (7)^3, (8)^3, 476, (6)^3$
74. (A)



75. (A) Total days of the month = 3 + 28 = 31
76. (D) If 253 – 352
and 475 – 574
then, 2317 = 7132
77. (C) Days of Tuesday
= 2, 9, 16, 23, 30
= 5 Tuesday
78. (B)



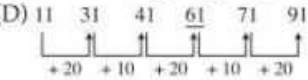
79. (B) 1, 8, **9,** 64, 25, 216
⇒ $(1)^2, (2)^3, (3)^2, (4)^3, (5)^2, (6)^3$
80. (D) MANNER word cannot be formed.
81. (A) If

R	A	C	E	and	L	E	A	R	N
|	|	|	|		|	|	|	|	|
3	1	2	4		5	4	1	3	6

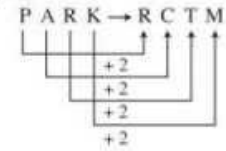
then CLEAR = 25413
82. (C) Number of children in the class
= (9 + 24) – 1
= 33 – 1 = 32
83. (C) 84. (C)
85. (A) If new **School** = 23
School and **teacher** = 304
and good **teacher** = 14
then, good new teacher and school.

↓	↓	↓	↓	↓
1	2	4	0	3

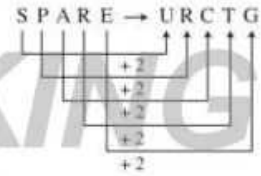
86. (D) As, $4\Delta5 = (4\times5)+(4+5)$
$= 29$
and $6\Delta7 = (6\times7)+(6+7)$
$= 55$
Same as, $7\Delta8 = (7\times8)+(7+8)$
$= 56 + 15 = 71$
87. (D)



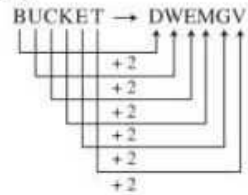
88. (C) If 121 : 1331 ⇒ $(11)^2 : (11)^3$
and 169 : 2197 ⇒ $(13)^2 : (13)^3$
then, 289 : **4913** ⇒ $(17)^2 : (17)^3$
89. (D) If



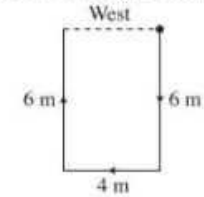
and



then,



90. (A) He is now in west direction from the starting point.



91. (C) 4, 3, 2, 1
⇒ Breach, Breadth, Breast, Breath.
92. (C)
93. (A)



94. (C)
95. (C) 9 is not a prime number, where as all others are prime numbers.

MAGAZINE KING

96. (B)

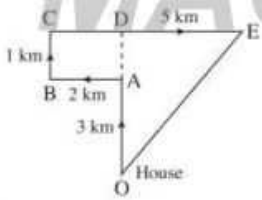
97. (B) Let present age of brothers
$= x, (x+5), (x+10)$
then, $x + x + 5 + x + 10$
$= 36$
$3x = 36 - 15$
$x = \frac{21}{3} = 7$
Required difference
$= (x + 10) - x$
$= 10$ years.

98. (D)

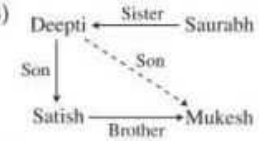
99. (B) If C A P E and H O L D
1 2 4 3 5 8 6 7
then, H E A D
5 3 2 7

100. (C) If 312 ⇒ 3 + 1 + 2 = 6
and 654 ⇒ 6 + 5 + 4 = 15
then, 978 ⇒ 9 + 7 + 8 = 24

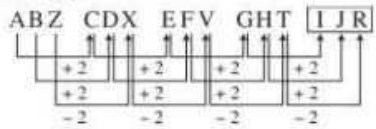
101. (B) $OE = \sqrt{OD^2 + DE^2}$
$= \sqrt{4^2 + 3^2}$
$= \sqrt{16 + 9}$
$= \sqrt{25}$
OE = 5 km



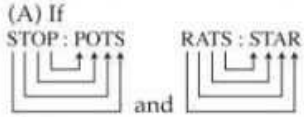
102. (B)



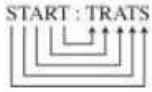
103. (D)



104. (A) If



then,



105. (D)

106. (C) ∵ 7 + 9 + 8 = 24
12 + 2 + **10** = 24
5 + 13 + 6 = 24

107. (C) 5374261, 537426, 37426, **3742,** 742, 74

108. (A) 2, 4, 3, **9,** 5, 25, **7,** 49, 11, **121**
⇒ 2, $(2)^2$, 3, $\mathbf{(3)^2}$, 5, $(5)^2$, **7**, $(7)^2$, 11, $\mathbf{(11)^2}$

109. (D) 0, 7, 26, 63, 124, **215**
⇒ $(1^3 - 1)$, $(2^3 - 1)$, $(3^3 - 1)$, $(4^3 - 1)$, $(5^3 - 1)$, $\mathbf{(6^3 - 1)}$

110. (C) ∵ 5202 ⇒ 5 + 2 + 0 + 2 = 9
3411 ⇒ 3 + 4 + 1 + 1 = 9
2431 ⇒ 2 + 4 + 3 + 1 = 10
1413 ⇒ 1 + 4 + 1 + 3 = 9

111. (C) As per the current education system in India, all the students up till class 8 will automatically be promoted to next class. No one can be failed as per the Right to Education Act. This is known as the **'No-Detention Policy'**.

112. (A) Software approach uses the principle of psychology for the purpose behaviour modification. In software approach, the basis of all thinking and working is behavioural science and psychology of learning.

113. (D)

114. (A) Operation Blackboard is a centrally sponsored programme which was started in 1987 immediately after the Rajiv Gandhi NPE of 1986 was released to supply the basic minimum crucial facilities to all primary schools in the country.

115. (D) 116. (B)

117. (B) The **median** is the value separating the higher half of a data sample, a population, or a probability distribution, from the lower half. The median is a commonly used measure of the properties of a data set in statistics and probability theory.

118. (D) 119. (C)

120. (B) **Self-monitoring** is a concept introduced during the 1970s by Mark Snyder, that shows how much monitor their self-presentations, expressive behaviour, and nonverbal affective displays.

121. (B) 122. (B)

123. (C) **Continuous and comprehensive evaluation** was a process of assessment, mandated by the Right to Education Act. This approach to assessment has been introduced by state governments in India, as well as by the Central Board of Secondary Education, for students of sixth to tenth grades and twelfth in some schools.

124. (D) The Right of Children to Free and Compulsory Education **Act** or Right of Education **Act (RTE),** is an **Act** of the Parliament of India enacted on 4 August, 2009, which describes the modalities of the importance of free and compulsory education for children between 6 and 14 in India under Article 21a of the Indian Constitution.

125. (B)

126. (B) In learning theory, **drive reduction theory** is a type of motivational theory. Drive Reduction Theory, developed by Clark Hull in 1943, was the first theory for motivation.

127. (B) **Conditions of Learning,** by Robert M. Gagne, was originally published in 1965 by Holt, Rinehart and Winston and describes eight kinds of learning and nine events of instruction. This theory of learning involved two steps. The theory stipulates that there are several different types or levels of learning.

128. (B) Primary Mental Abilities refer to 7 factors identified by **Louis Leon Thurstone**. These 7 factors, or primary mental abilities, are word fluency, verbal comprehension, spatial visualization, number facility, associative memory, reasoning, and perceptual speed.

129. (D) 130. (C) 131. (B)

132. (C) **Social mobility** is the movement of individuals, families, households, or other categories of people within or between social strata in a society. It is a change in social relative to one's current social location within a given society.

133. (C) 134. (B) 135. (B)

136. (B) The **project method** is a genuine product of the American progressive education movement. It was described in detail and definitively delimited for the first time by William Heard **Kilpatrick** in his essay, "The **Project Method,**" which became known worldwide.

Continued on Page 155

MAGAZINE KING

Solved Paper

IBPS-RRB PROBATIONARY OFFICERS (Pre.) EXAM., 2018 (Scale-I)

(Held on 17-8-2018)

Reasoning

(Based on Memory)

Directions—(Q. 1–5) Study the following information carefully and answer the given questions :

Eleven boxes A, B, C, D, E, F, G, H, I, J, K are kept one above the other. Box G is kept at fifth position from the top. Two boxes are kept between G and H. Box D is kept just above box H. There are as many boxes above box D as below box B. Five boxes are kept between box F and box K, which is kept at one of the positions below box G. Box A is a kept at one of the positions above box F. Only one box is kept between Box G and Box C. Box I is kept above box E but not just above. Box E is not kept immediately above or immediately below box C.

1. What is the position of box I ?
   (A) 8th from the bottom
   (B) 7th from the top
   (C) 3rd from the top
   (D) 6th from the bottom
   (E) None of these
2. How many boxes are kept between box E and Box H ?
   (A) seven (B) six
   (C) five (D) four
   (E) eight
3. Which among the following statement is true regarding box J ?
   (A) it is 7th from the bottom
   (B) Box K is placed above box J
   (C) Only two boxes are kept between box B and box J
   (D) It is kept just below box H.
   (E) All are true
4. Which of the following represents the boxes kept between boxes A and I ?
   (A) C, B (B) A, K
   (C) F, G (D) J, D
   (E) None of these
5. Which of the following box is kept just above box B ?
   (A) C (B) K
   (C) F (D) D
   (E) None of these

Directions—(Q. 6–8) Study the following information carefully and answer the given questions.

Point B is 14 m east of point A. Point C is 9 m north of point B. Point D is 12 m east of point C. Point E is 15 m south of point D. Point F is 30 m west of point E. Point G is 10 m north of point F. Point H is 18 m east of point G.

6. If point X is 6 m south of point A then which point is at shortest distance from point X ?
   (A) E (B) A
   (C) F (D) B
   (E) G
7. What is the distance of point C from point H ?
   (A) 9 m (B) 5 m
   (C) 4 m (D) 6 m
   (E) 7 m
8. Point B is in which direction with respect to point F ?
   (A) South (B) South-east
   (C) North (D) North-east
   (E) North-west

Directions—(Q. 9–13) Study the following information carefully and answer the given questions.

Eight persons A, B, C, D, E, F, G, H are sitting around a circular table such that five of them are facing towards the centre and the rest are facing away from the centre. Three persons are sitting between F and H, who is facing centre. C is 2nd to the right of F and faces opposite direction to F. A sits 3rd to the left of C. G is one of the neighbour of E. Two persons sit between G and B, who is not neighbour of H. G does not face C. G and A face same direction but opposite to F.

9. What is the position of E with respect to A ?
   (A) Immediate right
   (B) fifth to the left
   (C) second to the right
   (D) second to the left
   (E) None of these
10. How many persons are sitting between C and H, when counted from the left of C ?
    (A) one (B) two
    (C) three (D) four
    (E) none
11. Four of the five are alike in a certain way, which among the following does not belong to that group ?
    (A) C (B) B
    (C) F (D) D
    (E) E
12. Which of the following represents the immediate neighbour of G ?
    (A) C (B) B
    (C) F (D) D
    (E) A
13. Which of the following is not true regarding F ?
    (A) It faces towards the centre.
    (B) E is to the immediate left of F.
    (C) Two persons sit between F and D, when counted from the right to D.
    (D) All are true
    (E) No one sits between F and B

Directions—(Q. 14–18) Study the following information carefully and answer the given questions.

Certain number of persons are sitting in a row facing north. M sits 4th to the right of S. Five persons sit between M and X. T sits at one of the positions left to S. The number of persons sitting between M and U are same as between S and T. Q is 2nd from one of the extreme ends. Four persons sit between S and U. No one sits to the right of N, who is immediate right to P. X is 3rd left to P. Not more than two persons sit between Q and U.

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14. How many persons are sitting in the row ?
(A) 17 (B) 20
(C) 24 (D) 26
(E) 27

15. How many persons are sitting between S and T ?
(A) seven (B) six
(C) five (D) four
(E) eight

16. What is the position of U from the left end ?
(A) 6th (B) 5th
(C) 4th (D) 2nd
(E) 3rd

17. How many persons are sitting between Q and M ?
(A) seven (B) eleven
(C) ten (D) nine
(E) eight

18. Which of the following represents the person sitting at extreme end ?
(A) M (B) U
(C) X (D) P
(E) T

19. If the second, fourth, seventh and eighth letter of the word 'FRACTION' are combined to form a meaningful word, then what will be the 3rd letter from the left in the so formed word. If more than one meaningful word is formed then the answer is X, if no such word is formed then answer is Z ?
(A) O (B) X
(C) R (D) Z
(E) C

20. How many pair of digits have same number of digits between them in the number "573814269" as in the numeric series ?
(A) five (B) four
(C) six (D) three
(E) more than six

Directions—(Q. 21–25) Study the following information carefully and answer the given questions :

Movies of different duration released on different days starting from Monday to Friday (starting from Monday). Movie A was released on Tuesday. No movie released between A and the one which is of 75-minute duration. Only one movie is released between the one which is of 75-minute duration and the one which is of 100-minute duration. No movie released between the one which is of 100 minute and B. Only one movie released after B. B released immediately after 100-minute duration movie. Movie C released immediately after the one which of 130-minute duration. More than two movies released in between C and D. The movie which is of 90-minute duration released before E. One of movie was of 20 minutes more duration than E.

21. How many movies were released after E ?
(A) One (B) Two
(C) None (D) Three
(E) More than three

22. Which of the following movie was of 150-minute duration ?
(A) E
(B) A
(C) There is no such movie
(D) C
(E) D

23. What is the total duration of movie D and E together ?
(A) 135 (B) 225
(C) 165 (D) 175
(E) 190

24. Which of the following statement is true regarding B ?
(A) The movie released after B is of 120-minute duration
(B) Two movies released in between A and B
(C) Movie B is of 100-minute duration
(D) Total duration of movie B and A is 225 minutes
(E) Movie A released after B.

25. Which of the following statement is true ?
(A) The movie released before A is of 130-minute duration
(B) Three movies released in between A and E
(C) No movies released in between A and E
(D) Total duration of movie C and A is 230 minutes
(E) Movie C released immediately after E.

Directions—(Q. 26–28) Study the following information carefully and answer the given questions :

F is the husband of G. K is the mother-in-law of G. H is the father of F. M is the mother of H, P is the mother of K and B.

26. If Y is the father of H then how is Y related to M ?
(A) Mother (B) Father
(C) Sister (D) Brother
(E) Husband

27. How is P related to F ?
(A) Grandfather
(B) Aunt
(C) Mother
(D) Grandmother
(E) Wife

28. How is B related to H ?
(A) Sister
(B) Brother
(C) Husband
(D) Can't be determined
(E) Wife

Directions—(Q. 29–31) Study the following information carefully and answer the given questions :

There are six persons M, N, O, P, Q, R of different heights. N is shorter than M but taller than Q. Only two person are taller than M. R is taller than Q and O, Q is not shortest. The one who is second shortest is 154 m. P is not the shortest person.

29. If M is 19 m taller than Q, then what is the height of M ?
(A) 190 m (B) 181 m
(C) 175 m (D) 130 m
(E) 173 m

30. If P is 181 m than which of the following is true ?
I. Only one person is taller than P.
II. The different between the heights of P and Q is 27 m.
III. O is the shortest person.
(A) Only I
(B) Only I and II
(C) All are true
(D) Only II and III
(E) Only I and III

31. How many persons are shorter than N ?
(A) One (B) Two
(C) None (D) Three
(E) More than three

Directions—(Q. 32-35) Question consists of some statements followed by two conclusions. Consider the given statements to be true even if they seem to be at variance with commonly known facts. Read all the conclusions and they decide which of the given conclusions does not logically follow from the given statements using all statements together.

MAGNET KING

32. **Statements :** All Grills are Arrow. Some Hat are Grills. Some Cell are Arrow.
Conclusions :
I. Some Cell are definitely not Grills.
II. Some Hat can never be Arrow.
(A) Only I follows
(B) Only II follows
(C) Neither I nor II follow
(D) Both I and II follow
(E) Either I or II follow

33. **Statements :** All Grills are Arrow. Some Hat are Grills. Some Cell are Arrow.
Conclusions :
I. Some Hat are Arrow.
II. Some Grills are Cell.
(A) Only II follows
(B) Only I follows
(C) Either I nor II follow
(D) Both I and II follow
(E) Neither I or II follow

34. **Statements :** Some Doors are Fan. No Door is Rose. No Fan is Shelf.
Conclusions :
I. Some Fans can never be Rose.
II. Some Roses are Shelf is a possibility.
(A) Neither I or II follows
(B) Only I follows
(C) Either I nor II follows
(D) Both I and II follow

35. **Statements :** Some Doors are Fan. No Door is Rose. No Fan is Shelf.
Conclusions :
I. All Doors are Shelf is a possibility.
II. All Shelf can be Doors.
(A) Either I or II follows
(B) Only II follows
(C) Neither I nor II follow
(D) Both I and II follow
(E) Only I follows

Directions—(Q. 36–40) Study the following information carefully and answer the given questions.

Fourteen persons are sitting in two parallel rows such that seven persons are sitting in each row. A, B, C, D, E, F, G are sitting in row-1 facing north while P, Q, R, S, T, U, V are sitting in row-2 facing south.

G sits third to the left of A and neither of them sits at an extreme and of the row. The one faces A sits immediate right to T. Only one person sits between T and Q. The one who faces Q sits third to the right of E. S sits to the immediate left of V. S neither faces G nor E. D is an immediate neighbour of the one who faces S. The one who faces C sits fifth to the left of P. B sits third to the left of F. U sits at one of position to the right of R.

36. Four of the following are alike in a certain way so form a group which of the following does not belong to that group ?
(A) U (B) B
(C) T (D) C
(E) P

37. How many persons sit between F and C ?
(A) One (B) Two
(C) None (D) Three
(E) More than three

38. Which of the following is not true regarding U ?
(A) No one sits to the right of U
(B) U sits third to the right of Q
(C) P is an immediate neighbour of U
(D) E is an immediate neighbour of the one who faces U
(E) Only two persons sit between U and S

39. What is the position of C with respect of A ?
(A) Second to the left
(B) Third to the right
(C) Immediate right
(D) Immediate left
(E) Second to the right

40. What is the position of B with respect to D ?
(A) Third to the left
(B) Second to the left
(C) Fourth to the left
(D) Third to the right
(E) Fifth to the right

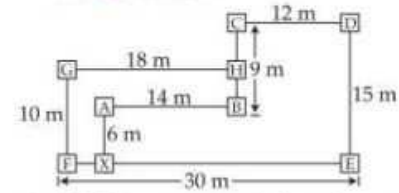
Answers with Hints

For (Q. 1 to 5) :

1 — D	2 — H
3 — A	4 — F
5 — G	6 — I
7 — C	8 — J
9 — E	10 — K
11 — B	

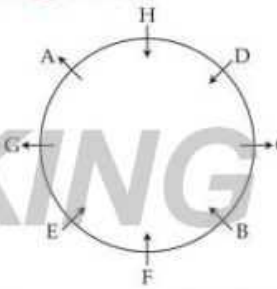
1. (D) Box 'I' is 6th from the bottom.
2. (B) Six boxes are kept between box E and Box H.
3. (C) Only two boxes are kept between box B and Box J.
4. (C) Boxes F and G are kept between boxes A and I
5. (B) Box K is kept just above box B.

For (Q. 6 to 8) :



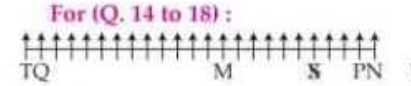
6. (C) Hence, point F has shortest distance from point X.
7. (B) Distance of point C from point H = 15 – 10
= 5 M
8. (D) Point B is in North-east of point F.

For (Q. 9 to 13) :



9. (D) E is second to the left of A.
10. (A) Only D is sitting between C and H.
11. (A) C is facing outside while all other are facing inside.
12. (E) A and E are the neighbour of G.
13. (C) Two persons sit between F and D, when counted from left of D.

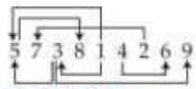
For (Q. 14 to 18) :



14. (C) 24 persons are sitting in the row.
15. (E) Eight persons are sitting between S and T.
16. (B) U is 5th from left end.
17. (B) Eleven persons are sitting between Q and M.
18. (E) T and N are sitting at extreme end.
19. (C) Second, Fourth, Seventh and Eight letter of the word 'FRACTION' are R, C, O, N.
The meaningful word ⇒ CORN.

MAGAZINE KING

20. (E)

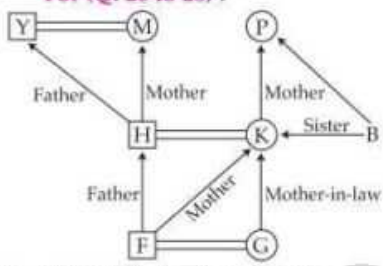


For (Q. 21 to 25) :

Day	Movie	Duration
Monday	D	75
Tuesday	A	90
Wednesday	E	100
Thursday	B	130
Friday	C	120

21. (B) Two movies were released after E.
22. (C)
23. (D) Total duration of movie D and E = 75 + 100
= 175
24. (A) 25. (C)

For (Q. 26 to 28) :



26. (E) Y is the husband of M.
27. (D) P is the maternal grandmother of F.
28. (D) Gender of B is not given.

For (Q. 29 to 31) :

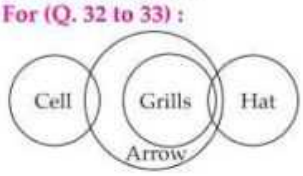
R, P > M > N > Q > O

↓

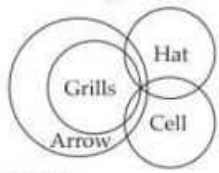
154

29. (E) Height of M = 154 + 19
= 173 m
30. (D)
31. (B) Only two persons, Q and O are shorter than N.

For (Q. 32 to 33) :

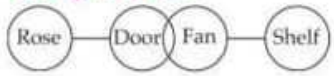


or

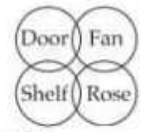


32. (C) 33. (B)

For (Q. 34 to 35) :

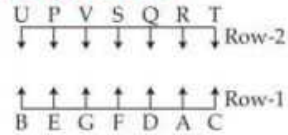


or



34. (D) 35. (B)

For (Q. 36 to 40) :



36. (E) U, B, T and C are sitting at extreme ends.
37. (B) Two persons sit between F and C.
38. (B) U sits fourth to the right of Q.
39. (C) C sits immediate right of A.
40. (C) B sits fourth to the left of D.

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Continued from Page 142

85. (D) $18 \times 9 = 162$
$13 \times 9 = 117$
$19 \times 9 = 171$
$16 \times 9 = 144 \neq 304$
86. (C) 87. (D)
88. (C) = (5 + 0·5 + 0·005 + 0·0005 + 0·05) × 2
= 5·5555 × 2 = 11·111
89. (C) sin 60° cos 30° + cos 60° sin 30°
= sin (60 + 30)
= sin 90 = 1
90. (A) As,

C O L O U R E D
↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
X D P D N A Q Z

Same as,

O R D E R
↓ ↓ ↓ ↓ ↓
D A Z Q A

91. (A) 92. (D) 93. (D)
94. (D)

$A \xrightarrow{+1} B \xrightarrow{+1} C \xrightarrow{+1} D \xrightarrow{+1} E$
$B \xrightarrow{+1} C \xrightarrow{+1} D \xrightarrow{+1} E \xrightarrow{+1} F$
$Z \xrightarrow{-1} Y \xrightarrow{-1} X \xrightarrow{-1} W \xrightarrow{-1} V$

95. (A) $\sqrt{16} = 4$
$\sqrt{36} = 6$
$\therefore \sqrt{64} = 8$
or $15 - 11 = 4$
$13 - 7 = 6$
$11 - 3 = 8$
96. (B) 97. (B) 98. (C)
99. (C) Quantity of milk in the initial mixture
$= \frac{3 \times 20}{5} = 12$ litre
Quantity of milk in the mixture after first process
$= \frac{3 \times 10}{5} + 10$
$= 6 + 10 = 16$ litre
Quantity of milk in the mixture after second process
$= \frac{16}{2} + 10$
$= 8 + 10 = 18$ litre
∴ Final ratio of milk and water.
Milk : Water = 18 : 2 = 9 : 1
100. (B)

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Continued from Page 151

137. (C)
138. (B) **Sentence completion tests** are a class of semi-structured projective techniques. Sentence completion tests typically provide respondents with beginnings of sentences, referred to as 'stems', and respondents then complete the sentences in ways that are meaningful to them.
139. (A) 140. (A) 141. (B) 142. (C)
143. (B) 144. (C)
145. (C) **Action research** is either research initiated to solve an immediate problem or a reflective process of progressive problem solving led by individuals working with others in teams or as part of a 'community of practice' to improve the way they address issues and solve problems.
146. (C) **Inference theory** is a psychological theory proposed by Edward E. Jones and Keith E. Davis (1965) that 'systematically' accounts for a perceiver's inferences about what an actor was trying to achieve by a particular action. The purpose of this theory is to explain why people make internal or external attributions.
147. (D) 148. (D) 149. (C)
150. (D) Pragmatism considers thought an instrument or tool for prediction, problem solving and action, and rejects the idea that the function of thought is to describe, represent, or mirror reality. Pragmatists contend that most philosophical topics—such as the nature of knowledge, language, concepts, meaning, belief, and science—are all best viewed in terms of their practical uses and successes.

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MAGAZINE KING

Solved Paper

LIC A.A.O. (Pre.) EXAMINATION, 2019

(Held on 5-5-2019)

Reasoning

(Based on Memory)

Directions—(Q. 1 to 5) Study the following information and answer the questions given below :

Ten persons *i.e.*, A, B, C, D, E, P, Q, R, S and T are sitting in a single row and all are facing to the North direction, but not necessarily in the same order.

A is fourth from the extreme end. Three persons sit between A and B. C sits to the immediate right of B. Two persons sit between C and D. Three persons sits between R and C. R sits immediate left of P. E sits to the right of R. Two persons sit between S and T. S sits to the left of T.

1. Who among the following persons sits third to the left of P ?
   (A) C (B) T
   (C) Q (D) A
   (E) None of the above

2. How many persons sit between R and T ?
   (A) None (B) One
   (C) Two (D) Three
   (E) More than three

3. Who among the following persons are sitting at extreme end ?
   (A) A and B (B) B and C
   (C) C and D (D) D and E
   (E) None of these

4. Who among the following persons sits second to the right of S ?
   (A) A (B) B
   (C) C (D) E
   (E) F

5. The number of persons sitting to the left of B is same as the number of persons sitting right to which of the following persons ?
   (A) P (B) R
   (C) Q (D) S
   (E) None of these

Directions—(Q. 6 to 8) Study the following information and answer the question given below :

Point A is 20 m east of B. Point D is 15 m west of Point C. Point E is 45 m south of Point D. Point C is 30 m north of Point B.

Point F is 15 m north of Point A. G is the mid-point of point B and point C.

6. If H is the 15 m south of Point D, then what is the distance between point E and point H ?
   (A) 20 m (B) 25 m
   (C) 30 m (D) 45 m
   (E) 60 m

7. Four of the five belongs to a group as per the given arrangement. Which is the one that does not belong to the group ?
   (A) F, C (B) A, G
   (C) A, C (D) E, B
   (E) B, D

8. In which direction and what distance is point G, with respect to point F ?
   (A) 20 m east (B) 30 m west
   (C) 30 m east (D) 20 m west
   (E) None of these

Directions—(Q. 9 to 13) In this question, relationship between different elements is shown in the statements. The statements are followed by two conclusions. You have to decide which conclusion follows the statement. Give answer as—

(A) Only Conclusion I follows
(B) Only Conclusion II follows
(C) Both Conclusions I and II follows
(D) Either Conclusion I or II follows
(E) Neither Conclusion I nor II follows

9. **Statements :**
   $A \geq M \geq H \geq K \geq L < N \leq B$
   Conclusions : I. $A > L$
   II. $B \geq K$

10. **Statements :**
    $A \geq M \geq H \geq K \geq L < N \leq B$
    Conclusions : I. $A \geq B$
    II. $B < K$

11. **Statements :**
    $P < A \leq R = K$; $S \leq R \leq N$
    Conclusions : I. $N > P$
    II. $K \leq N$

12. **Statements :**
    $M \leq E \leq L \leq T > S$; $L > V$
    Conclusions : I. $V \geq S$
    II. $S > V$

13. **Statements :**
    $P < A \leq R = K$; $S \leq R \leq N$
    Conclusions : I. $K > A$
    II. $A \leq K$

Directions—(Q. 14 to 18) Study the following information carefully and answer the questions below :

Six teacher *i.e.* P, Q, R, S, T and U attends seminar on two different dates 15th and 28th of three given months *viz.* January, April and July. They all attend the seminar of different subjects. *i.e.* Physics, Economics, History, Chemistry, Biology and Geography, but not necessarily in the same order.

T attends the seminar in the month having only 30 days. Only one person attends the seminar between T and the one who attends seminar of the Geography. Only three teachers attend the seminar between History and Geography. Number of persons attending the seminar Before Q is same as the number of persons attending the seminar after the one who attend seminar of History. Only two person attends the seminar between Q and the one who attend the seminar of Physics. R attends the seminar of Biology. U attends the seminar immediately after S. S does not attend the seminar in the month having less then 31 days. Q and P

MAGAZINE KING

does not attend the seminar of Economics and Geography.

14. Who among the following teacher attends the seminar on 15th of April ?
(A) Q (B) U
(C) S (D) T
(E) None of the above

15. Who among the following teacher attends seminar immediately after T ?
(A) R (B) U
(C) S (D) P
(E) None of these

16. How many teachers attends seminar between S and P ?
(A) One (B) Two
(C) Four (D) Three
(E) None of the above

17. Q attends seminar on which of the following date and month ?
(A) 15 July (B) 28 January
(C) 15 April (D) 28 July
(E) None of these

18. Which of the following teachers' pair attends seminar on the same month ?
(A) S and U (B) P and U
(C) U and R (D) T and P
(E) Q and S

19. How many such digits are there in the number '6384257' in which the digits are same as in the number series (both from backward and forward directions) ?
(A) None (B) One
(C) Two (D) Three
(E) More than three

20. Four of the following five follows a certain pattern. Which of the following does not follow the pattern ?
(A) ECA (B) QOM
(C) GEC (D) FBD
(E) MKI

Directions—(Q. 21 to 25) Study the following information carefully and answer the questions given below :

Seven persons *i.e.* P, Q, R, S, T, V and W are buying different items one after another but not necessarily in the same order. One person buys item between Q and R. Three persons buy items between S and Q. T buys item immediate before V. S buy before T. More than two persons are buying items between T and S. W buy before P.

21. How many persons buy items before R ?
(A) None (B) One
(C) Two (D) Three
(E) More than three

22. Who among the following buy items just before T ?
(A) P (B) Q
(C) R (D) W
(E) None of these

23. Number of persons buy items before W is same as the number of persons who buys items after which of the following ?
(A) T (B) V
(C) P (D) Q
(E) S

24. Which of the following is true regarding W ?
(A) No one buys items before W
(B) W buys before S
(C) Two persons buys items between W and Q
(D) One person buys between R and W
(E) None is true

25. Four of the following five are alike in a certain way based on the given arrangement. Which is the one that does not belong to that group ?
(A) T-P (B) V-Q
(C) P-W (D) Q-T
(E) S-R

Directions—(Q. 26 to 30) In this question two/three statements followed by two conclusions numbered I and II have been given. You have to take the given statements to be true even if they seems to be at variance from commonly known facts and then decide which of the given conclusions logically follows from the given statements and answered as :
(A) Only conclusion I follows
(B) Only conclusion II follows
(C) Either conclusion I or II follows
(D) Both conclusion I and II follows
(E) Neither conclusion I nor II follows

26. **Statements** : Only a few books are reading. All readings are journal.
Conclusions :
I. All books are journal.
II. Some journal are reading.

27. **Statements** : Only a few woods are trees. Only a few woods are stems.
Conclusions :
I. Some stems are trees is a possibility.
II. Some stems are tree

28. **Statements** : All jungles are parks. All parks are lake. Only a few lakes are rivers.
Conclusions :
I. All jungles are lakes.
II. Some rivers are parks is a possibility.

29. **Statements** : No centers are venues. All places are venues. No places are laboratory.
Conclusions :
I. No places are centers.
II. No center are laboratory.

30. **Statements** : Some guns are steel. All steels are iron. All iron are silver.
Conclusions :
I. All guns are silver
II. Some guns are not silver.

Directions—(Q. 31 to 35) Study the following information carefully and answer the questions given below :

Nine persons *i.e.* A, B, C, D, E, F, G, H and J are sitting in a circular table not necessarily in the same order. All are facing towards center.

A sits second to the right of B. F sits fourth to the left of A. Two persons sit between C and F. G is an immediate neighbour of J. G sits second to the right of H. D sits second to the left of E. E is not an immediate neighbour of A.

31. Who among the following person sits third to the right of E ?
(A) B (B) A
(C) C (D) F
(E) None of the above

32. How many persons sit between E and F when counted from the left of E ?
(A) Two (B) One
(C) Three (D) None
(E) More than three

MAGAZINE KING

33. Who among the following person sits exactly between C and E ?
(A) B (B) A
(C) D (D) F
(E) H

34. Who among the following person sits to the immediate left of A ?
(A) B (B) C
(C) D (D) G
(E) A

35. Four of the following five are alike in a certain way based on their pattern, which of the following does not belong to that group ?
(A) E-C (B) B-F
(C) D-J (D) A-C
(E) C-H

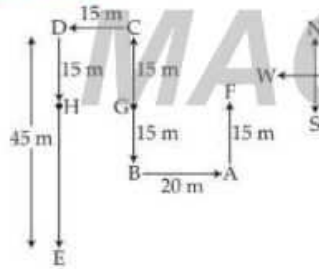
Answers with Hints

For (Q.1-5) :

D S B C T Q A R P E ↑

1. (C) 2. (C) 3. (D) 4. (C) 5. (B)

For (Q. 6–8) :



6. (C) Distance between point E and point H = 45 – 15 = 30 m.
7. (D) 8. (D)
9. (E) **Statement :**
A ≥ M ≥ H ≥ K ≥ L < N ≤ B
Conclusions :
I. A > L → A ≥ M ≥ H ≥ K ≥ L (×)
II. B ≥ K → B ≥ N > L ≤ K (×)
10. (E) **Statement :**
A ≥ M ≥ H ≥ K ≥ L < N ≤ B
Conclusions :
I. A ≥ B (×)
II. B < K → B ≥ N > L ≤ K (×)
11. (C) **Statement :**

S
∧
P < A ≤ R = K
∧
N

Conclusions :
I. N > P → N ≥ R ≥ A > P (√)
II. K ≤ N → K = R ≤ N (√)
12. (D) **Statement :**

M ≤ E ≤ L ≤ T > S
∨
V

Conclusions :
I. V ≥ S → V < L ≤ T > S
II. S > V → S < T ≥ L > V
Either Conclusion I or II follows.
13. (B) **Statement :**

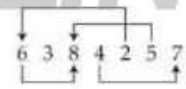
S
∧
P < A ≤ R = K
∧
N

Conclusions :
I. K > A → K = R ≥ A (×)
II. A ≤ K → A ≤ R = K (√)

For (Q. 14 – 18) :

January (31)	15th	Q	Chemistry
	28th	S	Geography
April (30)	15th	U	Economics
	28th	T	Physics
July (31)	15th	R	Biology
	28th	P	History

14. (B) 15. (A) 16. (D) 17. (E) 18. (E)
19. (E)



⇒ 68, 47, 58, 26

20. (D)

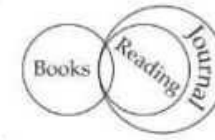
E C A Q O M G E C [F B D] M K I
-2 -2 -2 -2 -2 -2 -4 +2 -2 -2

For (Q. 21 – 25) :

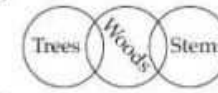
S W R P Q T V

21. (C) 22. (B) 23. (A) 24. (C) 25. (D)

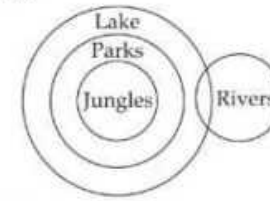
26. (B)



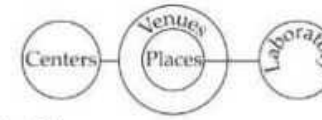
27. (A)



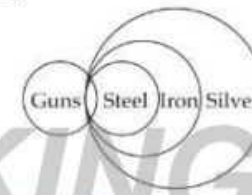
28. (D)



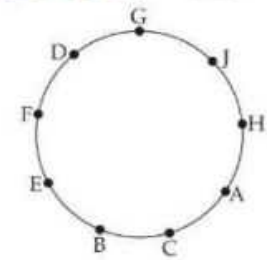
29. (A)



30. (C)



For (Q. 31 – 35) :



31. (B) 32. (D) 33. (A) 34. (B) 35. (D)

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Solved Paper

IBPS POs/MTs (Pre.) EXAM., 2017

(Held on 15-10-2017)

Quantitative Aptitude

(Based on Memory)

Directions—(Q. 1–6) Study the table and answer the given questions.

Total number of students in 4 different schools and percentage of students participating in Dance and Play in 4 different classes.

Classes	Total Students	% of Students Participating	
		Dance	Play
VI	500	15	8
VII	400	10	6
VIII	360	25	10
IX	250	10	12

1. What is the ratio of students participating in Dance from Class VII and IX together to the students participating in Play from class VI and VIII together ?
   (A) 43 : 53 (B) 65 : 76
   (C) 44 : 57 (D) 63 : 71
   (E) 62 : 77

2. What is the average of students in Play from all the classes ?
   (A) $32\frac{1}{2}$ (B) $34\frac{1}{2}$
   (C) $27\frac{1}{2}$ (D) $35\frac{1}{2}$
   (E) $30\frac{1}{2}$

3. Students who are participating in dance from class VII are what per cent more or less than students who are participating in play from class IX ?
   (A) $12\frac{2}{7}\%$ (B) $14\frac{2}{7}\%$
   (C) $33\frac{1}{3}\%$ (D) $16\frac{2}{3}\%$
   (E) $66\frac{2}{3}\%$

4. What is the sum of students who do not participate in dance and play from class VI and IX together ?
   (A) 720 (B) 480
   (C) 620 (D) 580
   (E) Other than those given as options

5. If 20% of students who participate in dance from class VI also participate in play then find the ratio of students from class VI who participated only in Dance to students participated only in play ?
   (A) 12 : 5 (B) 16 : 25
   (C) 19 : 20 (D) 20 : 19
   (E) 15 : 11

6. Students participating in Dance from class VII is what per cent of students participating in play from class IX ?
   (A) $33\frac{1}{3}\%$ (B) $120\frac{2}{7}\%$
   (C) $114\frac{2}{7}\%$ (D) $133\frac{1}{3}\%$
   (E) $116\frac{2}{3}\%$

Directions—(Q. 7–11) In the following questions two equations numbered (I) and (II) are given. You have to solve both equations and answered as :
   (A) $x > y$
   (B) $x < y$
   (C) $x \geq y$
   (D) $x \leq y$
   (E) $x = y$ or relationship cannot be established

7. I. $x^2 - 5x + 6 = 0$
   II. $3y^2 + 3y - 18 = 0$
8. I. $x^2 - 11x + 30 = 0$
   II. $y^2 = y - 20 = 0$
9. I. $2x^2 + 2x - 4 = 0$
   II. $y^2 - 5y + 4 = 0$
10. I. $x^2 + 6x - 16 = 0$
    II. $y^2 - 6y + 5 = 0$
11. I. $x^2 - 4 = 0$
    II. $y^2 - 9y + 20 = 0$

12. $\left(\sqrt{80.997} - \sqrt{25.001}\right) \times \left(\sqrt{120.90} + \sqrt{16.02}\right) = ?$
    (A) 50 (B) 60
    (C) 75 (D) 70
    (E) 55

13. $55.01 - 345.02 \div 22.99 = 2 \times ?$
    (A) 20 (B) 25
    (C) 22 (D) 15
    (E) 18

14. $\sqrt{3099.85 \quad 62.001 + 14.001} = ?$
    (A) 7 (B) 8
    (C) 6 (D) 9
    (E) 5

15. $(111.99 \times 5) \div 14.02 - 11.002 + ?$
    (A) 34 (B) 19
    (C) 39 (D) 28
    (E) 29

16. 24.97% of $84.01 \div 6.995 = ?$
    (A) 3 (B) 4
    (C) 5 (D) 7
    (E) 6

17. $\left(184.002 - \frac{29}{5}\right) \times 29.99 = ?$
    (A) 4950 (B) 4820
    (C) 5520 (D) 5340
    (E) 5260

18. Sum of the present ages of A, B, C and D is 76 years. After 7 years ratio of their ages is 7 : 6 : 5 : 8. What is C's present age ?
    (A) 14 (B) 12
    (C) 13 (D) 8
    (E) 10

19. Sum of the length of two trains A and B is 660. The ratio of the speeds of A and B is 5 : 8. Ratio between time to cross an electric pole by A and B is 4 : 3. Find the difference in the length of two trains ?
    (A) 50 (B) 60
    (C) 80 (D) 75
    (E) 90

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20. A mixture of milk and water in a jar contains 28 L milk and 8 L water. X L milk and X L water are mixed to form a mixture. If 40% of the new mixture is 20 L, then find the value of X ? (in litres)
(A) 7 (B) 8
(C) 6 (D) 5
(E) 9

21. A alone can do a work in 24 days. Time taken by A in completing $\frac{1}{3}$ of work is equal to the time taken by B in completing $\frac{1}{2}$ of the work. In what time A and B together will complete the work ?
(A) 9 days (B) 10 days
(C) 12 days (D) $\frac{48}{5}$ days
(E) 8 days

22. Marked price of A is ₹ 1600 more than its cost price. When discount on A is 500 a profit of 25% is obtained. At what price should A be sold to obtain a 30% profit ?
(A) 4800 (B) 5600
(C) 5400 (D) 5200
(E) 5720

23. The ratio of diameter and height of a right circular cylinder is 4 : 3. If diameter of the cylinder get reduced by 25% then its total surface area reduced to 318·5π square meter. What is the circumference of the base of the cylinder ? (in cm)
(A) 28π (B) 14π
(C) 37π (D) 7π
(E) Other than those given as options

24. The ten's digit of a three digit number is 3. If the digit of x are interchanged and the number thus formed is 396 more than the previous one. The sum of unit digit and hundred digit is 14, then what is the number ?
(A) 480 (B) 539
(C) 593 (D) 935
(E) Other than those given as options

25. S1 is a series of 4 consecutive even numbers. If the sum of reciprocal of first two numbers of S1 is $\frac{11}{60}$, then what is the reciprocal of third highest number of S1 ?
(A) $\frac{2}{13}$ (B) $\frac{1}{14}$
(C) $\frac{2}{17}$ (D) $\frac{1}{13}$
(E) Other than those given as options

26. A, B and C invested in a business in the ratio 6 : 8 : 9. If B invested for a period whose numerical value is 112·5% of B's investment but A and C invested for one year. If profit of B at the end of the year is 16750, then what is the share of profit of C ?
(A) 20225
(B) 22125
(C) 25225
(D) 25125
(E) 23125

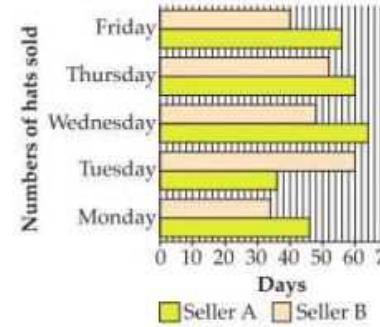
27. A boat covers 18 km downstream in 3 hours. If speed of current is $\frac{1}{3}$ of its downstream speed. In what time will it cover a distance of 100 km upstream ?
(A) 50 hours
(B) 40 hours
(C) 30 hours
(D) 60 hours
(E) 25 hours

28. The ratio of cost price to the selling price of an article is 5 : 6. If 20% discount is offered on marked price of the article then marked price is what per cent more than cost price ?
(A) $\frac{100}{3}$% (B) 50%
(C) 40% (D) $\frac{200}{3}$%
(E) 60%

29. Ramesh has 20% savings with him from his monthly salary. If expenditure on clothing is 25% of overall expenditure and his total expenditure except clothing is 3600 then find his saving.
(A) 1000 (B) 1500
(C) 1600 (D) 1200
(E) 900

Directions—(Q. 30–35) Study the bar graph and answer the given questions.

Two types of hats sold by Seller A and Seller B on five days



30. The total number of hats sold by A and B together on Wednesday is how much percentage more than the number of hats sold by A and B together on Tuesday ?
(A) $15\frac{2}{3}$% (B) $8\frac{1}{3}$%
(C) $16\frac{2}{5}$% (D) $16\frac{2}{3}$%
(E) $21\frac{3}{7}$%

31. If number of hats sold on Friday by A is increased by $14\frac{2}{7}$% then what will be the average no. of hats sold on Monday, Wednesday, and Friday by A ?
(A) 85 (B) 58
(C) 56 (D) 82
(E) 52

32. Find the number of hats sold on Saturday by A and B together, if number of hats sold on Saturday is $7\frac{1}{7}$% more than the hats sold on Thursday by A and B together ?
(A) 110 (B) 114
(C) 116 (D) 118
(E) 120

33. What is the difference between the number of hats sold on Monday and Wednesday by B to the number of hats sold on Friday by both A and B together ?
(A) 9 (B) 12
(C) 14 (D) 21
(E) 24

34. A sold 80% defective hats on Thursday and B sold 75% defective hats on the same day. Find the number of hats sold by A and B on Thursday that are not defective ?

MAGAZINE KING

(A) 25 (B) 20
(C) 18 (D) 32
(E) 40

35. Find the ratio of number of hats sold by A on Tuesday and Friday together to number of hats sold by B on same days.
(A) 25 : 23 (B) 23 : 25
(C) 21 : 25 (D) 25 : 21
(E) 18 : 17

Answers with Hints

1. (B) $\frac{\left(400\times\frac{10}{100}\right)+\left(250\times\frac{10}{100}\right)}{\left(500\times\frac{8}{100}\right)+\left(360\times\frac{10}{100}\right)}$

$= \frac{(40+25)}{(40+36)} = \frac{65}{76}$

2. (A)

$\frac{\left(500\times\frac{8}{100}\right)+\left(400\times\frac{6}{100}\right)+\left(360\times\frac{10}{100}\right)+\left(250\times\frac{12}{100}\right)}{4}$

$= \frac{40+24+36+30}{4} = \frac{130}{4}$

$= 32{\cdot}5 \text{ or } 32\frac{1}{2}$

3. (C) $\frac{\left(400\times\frac{10}{100}\right)-\left(250\times\frac{12}{100}\right)}{\left(250\times\frac{12}{100}\right)}\times 100$

= % less

$\Rightarrow \frac{40-30}{30}\times 100 = 33\frac{1}{3}\%$

4. (D) Students who participate in dance and play from class VI

$= \left(500\times\frac{15}{100}\right) + \left(500\times\frac{8}{100}\right)$

$= 75 + 40 = 115$

Students who participate in dance and play from class IX

$= \left(250\times\frac{10}{100}\right) + \left(250\times\frac{12}{100}\right)$

$= 25 + 30 = 55$

Students who do not participate in dance and play from class VI and IX together

$= (500 - 115) + (250 - 55)$

$= 385 + 195 = 580$

5. (A) Students who participate only in dance from class VI

$= \frac{15}{100}\times 500 - \frac{20}{100}\times\frac{15}{100}\times 500$

$= 60$

Students who participate only in play from class VI

$\frac{8}{100}\times 500 - 15 = 25$

Ratio $= 60 : 25 = 12 : 5$

6. (D) $\frac{40}{30}\times 100 = 133\frac{1}{3}\%$

7. (C) I. $x^2 - 5x + 6 = 0$

$\Rightarrow x^2 - 2x - 3x + 6 = 0$

$\Rightarrow x(x-2) - 3(x-2) = 0$

$\Rightarrow x = 3, 2$

II. $3y^2 + 3y - 18 = 0$

$\Rightarrow y^2 + y - 6 = 0$

$\Rightarrow y^2 + 3y - 2y - 6 = 0$

$\Rightarrow y(y+3) - 2(y+3) = 0$

$\Rightarrow y = -3, 2$

$x \geq y$

8. (A) I. $x^2 - 11x + 30 = 0$

$\Rightarrow x^2 - 6x - 5x + 30 = 0$

$\Rightarrow x(x-6) - 5(x-6) = 0$

$\Rightarrow x = 5, 6$

II. $y^2 + y - 20 = 0$

$\Rightarrow y^2 + 5y - 4y - 20 = 0$

$\Rightarrow y(y+5) - 4(y+5) = 0$

$\Rightarrow y = -5, 4$

$x > y$

9. (D) I. $2x^2 + 2x - 4 = 0$

$\Rightarrow x^2 + x - 2 = 0$

$\Rightarrow x^2 + 2x - x - 2 = 0$

$\Rightarrow x(x+2) - 1(x+2) = 0$

$\Rightarrow x = 1, -2$

II. $y^2 - 5y + 4 = 0$

$\Rightarrow y^2 - 4y - y + 4 = 0$

$\Rightarrow y(y-4) - 1(y-4) = 0$

$\Rightarrow y = 1, 4$

$x \leq y$

10. (E) I. $x^2 + 6x - 16 = 0$

$\Rightarrow x = \frac{-6\pm\sqrt{36+64}}{2}$

$\Rightarrow x = \frac{-6\pm 10}{2}$

$\Rightarrow x = \frac{-16}{2}, \frac{4}{2}$

$\Rightarrow x = -8, 2$

II. $y^2 - 6y + 5 = 0$

$\Rightarrow y = \frac{6\pm\sqrt{36-20}}{2}$

$\Rightarrow y = \frac{6\pm 4}{2}$

$\Rightarrow y = \frac{10}{2}, \frac{2}{2}$

$\Rightarrow y = 5, 1$

11. (B) I. $x^2 - 4 = 0$

$\Rightarrow x^2 = 4$

$\Rightarrow x = \pm 2$

II. $y^2 - 9y + 20 = 0$

$\Rightarrow y = \frac{9\pm\sqrt{81-80}}{2}$

$\Rightarrow y = \frac{9\pm 1}{2}$

$\Rightarrow y = \frac{10}{2}, \frac{8}{2}$

$\Rightarrow y = 5, 4$

$x < y$

12. (B) $\left(\sqrt{80{\cdot}997} - \sqrt{25{\cdot}001}\right) \times \left(\sqrt{120{\cdot}90} + \sqrt{16{\cdot}02}\right)$

$= (9 - 5) \times (11 + 4)$

$= 4 \times 15 = 60$

13. (A) $55{\cdot}01 - 345{\cdot}02 \div 22{\cdot}99 = 2 \times x$

$\Rightarrow 55 - \frac{345}{23} = 2x$

$\Rightarrow 55 - 15 = 2x$

$= \frac{40}{2} = x$

$\Rightarrow x = 20$

14. (B) $\sqrt{3099{\cdot}85 \div 62{\cdot}001 + 14{\cdot}001}$

$\Rightarrow \sqrt{\frac{3100}{62} + 14}$

$= \sqrt{64} = 8$

15. (E) $(111{\cdot}99 \times 5) \div 14{\cdot}02 = 11{\cdot}002 + x$

$\Rightarrow \frac{560}{14} = 11 + x$

$\Rightarrow 40 - 11 = x$

$\Rightarrow x = 29$

16. (A) $\frac{25}{100}\times 84 \times \frac{1}{7} = 3$

17. (D) $\left(184 - \frac{29}{5}\right)\times 30$

$\Rightarrow 178 \times 30 = 5340$

18. (C) Let their ages after 7 years is $7x$, $6x$, $5x$ and $8x$ years

Given,

$7x - 7 + 6x - 7 + 5x - 7 + 8x - 7 = 76$

$\Rightarrow 26x - 28 = 76$

$\Rightarrow 26x = 104$

$\Rightarrow x = 4$

C's present age $= 5x - 7$

$= 20 - 7$

$= 13$ years

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19. (B) Sum of length of train = 660

$$t_1 + t_2 = 660$$

$$S_A : S_B = 5 : 8$$

Let speed be $5x$ and $8x$ respectively and time taken to cross pole be $4y$, $3y$.

So, $5x \times 4y + 8x \times 3y = 660$

$$\Rightarrow \quad 44\,xy = 660$$

$$\Rightarrow \quad xy = 15$$

$$l_1 - l_2 = 24\,xy - 20\,xy$$

$$= 4xy$$

$$= 4 \times 15 = 60$$

20. (A) 40% of new mixture = 20 L

$$100\% \text{ of new mixture} = \frac{20}{40} \times 100$$

$$= 50 \text{ L}$$

$$28 + x + 8 + x = 50$$

$$\Rightarrow \quad 2x = 50 - 36$$

$$\Rightarrow \quad x = 7 \text{ L}$$

21. (D) Time taken by A is completing $\frac{1}{3}$ of work

$$= 24 \times \frac{1}{3} = 8 \text{ days}$$

8 days = time taken by B in completing $\frac{1}{2}$ of work

B alone will complete the work = 16 days

Required time $= \frac{16 \times 24}{40} = \frac{48}{5}$ days.

22. (E) M. P. = 1600 + CP ...(1)

$$\text{M. P.} - 500 = \frac{125}{100}\ \text{CP}$$

$$\text{M. P.} = \frac{5}{4}\ \text{CP} + 500$$

$$4\text{MP} = 5\ \text{CP} + 2000 \quad \ldots(2)$$

On Solving, we get CP = 4400

Required selling price

$$= \frac{130}{100} \times 4400 = 5720$$

23. (A) Let $d = 4x$ and $h = 3x$

Total surface area of right circular cylinder $= 2\pi r(r + h)$

$$\therefore\ 2\pi \left[2x(2x + 3x) - \frac{3x}{2}\left(\frac{3x}{2} + 3x\right)\right]$$

$$= 318{\cdot}5\pi$$

$$\Rightarrow\ 2\,[10x^2 - 6{\cdot}75\,x^2] = 318{\cdot}5$$

$$\Rightarrow \quad 6{\cdot}5\,x^2 = 318{\cdot}5$$

$$\Rightarrow \quad x^2 = 49$$

$$\Rightarrow \quad x = \pm 7$$

$$\therefore \quad \text{Radius } (r) = 14$$

$$\text{Height } (h) = 21$$

$\therefore$ Circumference of base of cylinder $= 2\pi r$

$$= 28\pi \text{ cm}$$

24. (B) Let digit be xyz

so, acc. to ques., $y = 3$

$$(100z + 10y + x) - (100x + 10y + z) = 396$$

$$\Rightarrow \quad 99z - 99x = 396$$

$$\Rightarrow \quad z - x = 4 \quad \ldots(1)$$

and given that $z + x = 14$ ...(2)

On solving, $z = 9, x = 5$

So, number = 539

25. (B) Let 4 consecutive even numbers is x, $x + 2$, $x + 4$, $x + 6$

$$\frac{1}{x} + \frac{1}{x+2} = \frac{11}{60}$$

$$\Rightarrow \quad \frac{x + 2 + x}{x(x+2)} = \frac{11}{60}$$

$$\Rightarrow \quad \frac{2(x+1)}{x^2 + 2x} = \frac{11}{60}$$

$$\Rightarrow \quad 120x + 120 = 11x^2 + 22x$$

$$\Rightarrow\ 11x^2 - 98x - 120 = 0$$

$$\Rightarrow \quad x = \frac{-24}{22}, 10$$

$$\Rightarrow \quad x = \frac{-12}{11}, 10$$

$\therefore$ Third number is 14 and reciprocal third highest number

$$= \frac{1}{14}$$

26. (D) Profit will be shared in ratio

$$= 12 \times 6 : 8 \times \left(\frac{9}{8} \times 8\right) : 9 \times 12$$

$$= 2 : 2 : 3$$

$$\text{C's Profit} = \frac{16750}{2} \times 3 = 25125$$

27. (A) Downstream speed $= \frac{18}{3}$

$$= 6 \text{km/hr}$$

$$\text{or} \quad x + y = 6$$

$$\text{Speed of current} = \frac{1}{3} \times 6$$

$$= 2 \text{ km/hr}$$

Speed of boat in still water

$$= 4 \text{ km/hr}$$

$$\text{Required time} = \frac{100}{(4-2)}$$

$$= 50 \text{ hr}$$

28. (B) Let M. P. = x

and cost price and selling price be 5y and 6y

So, 80% of $x = 6y$

$$\Rightarrow \quad x = \frac{30y}{4}$$

$$= 7{\cdot}5\,y$$

$$\% = \frac{7{\cdot}5y - 5y}{5y} \times 100$$

$$= \frac{2{\cdot}5y}{5y} \times 100 = 50\%$$

29. (D) Total expenditure = 80% of salary

Expenditure excluding clothing (%)

$$= \frac{80}{100} - \frac{25}{100} \times 80\%$$

$$= \frac{60}{100} = 60\%$$

$$\text{Ramesh savings} = \frac{3600}{60} \times 20$$

$$= ₹\ 1200$$

30. (D) Total no. of hats sold on Wednesday = 64 + 48 = 112

Total no. of hats sold on Tuesday

$$= 60 + 36 = 96$$

$$\% = \frac{112 - 96}{96} \times 100$$

$$= 16\,\frac{2}{3}\%$$

31. (B) No. of hats sold on Friday by A after increase

$$= 56 \times \frac{800}{700} = 64$$

Average no. of hats sold on Monday, Wednesday and Friday by A $= \frac{46 + 64 + 64}{3}$

$$= \frac{174}{3}$$

$$= 58$$

32. (E) No. of hats sold on Saturday

$$= 112 \times \frac{15}{14} = 120$$

33. (C) No. of hats sold on Monday and Wednesday by

$$B = 34 + 48$$

$$= 82$$

No. of hats sold on Friday by A and B together = 56 + 40 = 96

difference = 96 − 82 = 14

34. (A) Hats sold on Thursday that are not defected

$$= \frac{20}{100} \times 60 + \frac{25}{100} \times 52$$

$$= 12 + 13$$

$$= 25$$

35. (B) No. of hats sold on Tuesday and Friday by A = 36 + 56 = 92

and No. of hats sold on Tuesday and Friday by B

$$= 60 + 40$$

$$= 100$$

$$\text{Ratio} = 92 : 100$$

$$= 23 : 25$$

MAGAZINE KING

Test Your Knowledge

Answers with Hints

1. (C) Food historians, critics, and chefs across the country agreed that Hyderabad deserved the accolade not just for the varied range of dishes that it has to offer, but also for its use of home-grown ingredients and its cooking techniques. The city boasts of the famous 'kacche gosht ki biryani' and its meat 'kormas', 'gosht ke kebab' cooked in cold curd, 'roti pe boti', 'sookha mutton', 'nihaari' and 'haleem' are equally popular. The Deccan city is a "melting pot of northern influences and southern flavours".
2. (D) Article 44 is a part of Directive Principles of State policy of the Indian Constitution. According to Article 37 of the Indian Constitution, Directive principles of state policy are not justiciable (*i.e.*, not enforceable by any court) but the principles laid down therein are fundamental in governance. Recently, the Supreme court of India has shown its displeasure over ineptness of the government regarding the implementation of Uniform civil code despite several judgements and directions. Recently, the Supreme Court described State of Goa as a 'shining example of uniform civil code available to all, regardless of religion.
3. (A) Sarkaria Commission was set up in 1983 by the central government of India to examine the central-state relationship on various portfolios and suggest changes within the framework of the Constitution of India. It delt in detail the powers of the governor in the matter of imposition of president rule in the state , appointment of the governor, and power to dismiss legally elected government. The Government of India constituted a Commission on Centre-State Relations under the chairmanship of Justice Madan Mohan Punchhi, former Chief Justice of India on 27th April, 2007 to look into the new issues of Centre-State relations. Veerappa Moily Commission was the Second administrative reforms commission.
4. (A) An Exclusive Economic Zone (EEZ) is a concept adopted at the Third United Nations Conference on the Law of the Sea (1982), whereby a coastal State assumes jurisdiction over the exploration and exploitation of marine resources in its adjacent section of the continental shelf, taken to be a band extending 200 miles from the sea coastline.
5. (C) Global Liveability Index is released by the Economist Intelligence unit. It provides a complete overview of liveability ratings for 140 cities of the world on the basis of stability, healthcare, culture and environment, education, and infrastructure.
6. (D) To strive to make our beaches clean and create awareness amongst citizens about the importance of coastal ecosystems, the Ministry of Environment, Forest and Climate Change (MoEF&CC) are undertaking a mass cleanliness-cum-awareness drive in 50 identified beaches under the "Swachh – Nirmal Tat Abhiyaan", from 11th -17th November, 2019. For beach cleaning activities which will be a duration of two hours on daily basis, a minimum of one Kilometre stretch of the beach shall be identified. Beach sand cleaning machines shall also be deployed at about identified 15 beaches. Thereafter, collected waste will be processed as per extant Waste Management Rules, 2016.
7. (A) Under the provisions of United Nations Convention on the Law of Sea Territorial Sea extends outwards to 12 nautical miles from the baseline. In this area coastal nations enjoy sovereignty over airspace, sea, seabed, and subsoil and all living and non-living resources therein. One nautical mile is equal to 1·852 kilometre.
8. (C) Besides these Acts, Preventive Detention Act, 1950 (Expired in 1969; Maintenance of Internal Security Act, 1971 (MISA) (Repealed in 1978); and The Prevention of Terrorism Act, 2002 (POTA) (Repealed in 2004 were also used to detain any person as a measure of prevention.
9. (D) Twenty two languages are there in the eighth Schedule of Indian Constitution, namely- Assamese, Bangali, Bodo, Dogri, Gujarati, Hindi, Kannad, Kashmiri, Konkani, Maithili, Malayalam, Manipuri, Marathi, Nepali, Oriya, Punjabi, Sanskrit, Santhali, Sindhi, Tamil, Telugu, Urdu.
10. (B) Collegium system was introduced in Indian judiciary system in the verdict of Second Judges Case. It ruled that the advice of Chief Justice of India is binding on the President of India in the matter of appointment of the judges of Supreme Court. Now the Collegium comprises the CJI and four senior most judges of the Supreme Court. The Collegium recommends the name of the person to be appointed as the judge of the supreme Court/ Chief Justice of the High Court as well as the transfer of the Judges.
11. (A) 'Sangam' age refers to an assembly of Tamil scholars and poets which flourished under the royal patronage of the Pandya King at Madurai. The Sangam age spans from C. 6th century BCE to C. 3rd century CE. Three Sangms, known as Muchchangam were held—the first one at Madurai, second one at Kapadapuram and the third one of Madurai.
12. (A) Mamallapuram was the ancient port city of east coast under the Pallava dynasty in Tamil Nadu. The town has been declared UNESCO World Heritage Site by the name "Group of Monuments at Mahabalipuram—Shore temple complex, Ratha temples, Rock-cut caves and open Air Rock Reliefs. The town was in the news in October 2019 for an informal Summit between Prime Minister Narendra Modi and Chinese President Xi Jinping.
13. (A) National Animal Disease Control Programme aimed at eradicating Foot and Mouth Disease and Brucellosis by 2030. Each animal would be vaccinated twice a year. Vaccinated animals will have RFID tags to track past history and exposure to the virus.

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14. (C) Athlete's food is caused by Tinea pedis a fungi while small pox is caused by Variola Virus, Cholera is caused by Vibrio Cholerae and Night blindness is caused by Vit. 'A' deficiency.
15. (D) Kwashiorkor is form of sever protein malnutrition characterised by oedema and an enlarged liver with fatty infiltrates. It is caused by poor protein intake.
16. (C) DDT–Dicholoro diphenyle Trichloroethan is an insecticide, while BCG–Bacillus Calmette Guerin is a vaccine for tuberculosis, DPT and DT are also vaccines against Diphtheria-Pertussis-Tetanus.
17. (B) BHC–Benzene Hexachloride is a powerful insecticide, while AIDS–Acquired Immune Deficiency Syndrome is HIV infection, ELISA–Enzyme-linked immunosorbent assay is a commonly used analytical biochemistry assay and THR–Total Hip Replacement.
18. (C) As per Article 239 AA(4). Chief Minister of National Capital Territory Delhi is appointed by the President of India. So is the case with Chief Minister of Puducherry, while the Chief Minister of UT of J&K will be appointed by Lieutenant Governor.
19. (C) Since the Anti-defection Law was a Constitutional Amendment Bill, but was not related to make any change in Chapter IV of Part V, Chapter V of Part VI, or Chapter I of Part XI or any of the list of VII schedule, the representation of State in Parliament or in the provisions of Article 368 so it did not require ratification by the State Assemblies.
20. (D) Constituent Assembly was Constituted in November 1946 under the Cabinet Mission Plan, 1946 to frame the Constitution of India. The Constituent Assembly had adequate representation of all the sections of the society and political affiliation.
21. (D) Council of Ministers is collectively responsible to the Lok Sabha/State/UT Legislative Assembly as the case may be. The Ministry resigns if it loses the confidence of the Lower House. Vote of no confidence passed against any minister leads to the resignation of the entire council of Minister. Collective responsibility of Council of Minister is to the Lower House even though some of the ministers may be from the Upper House.
22. (A) British government arrested almost all major leaders of Indian National Congress working committee during Quit India Movement. The young Aruna Asaf Ali took lead and hoisted the Congress flag at Gowalia Tank Maidan.
23. (C) Basically Indian Constitution is an amalgamation of all the important Constitutions of the world by adopting the best provisions from them. Although, majority of the provisions have been adopted from the Government of India Act, 1935, yet even after that certain other provisions were borrowed, the latest one was the concept of Fundamental duties which were added through 42nd Constitutional Amendment. These have been borrowed from the Constitution of the USSR.
24. (C) Fundamental duties were added in the Constitution of India, on the recommendations of Sardar Swarn Singh Committee, through 42nd Constitutional Amendment, 1976. The concept has been borrowed from the Constitution of undivided USSR.
25. (D) Chemical reaction is a process that involves rearrangement of the molecular or ionic structure of a substance, as distinct from a change in physical form or a nuclear reaction. Melting candle wax is a state of change of wax from solid to liquid. Thus, it is not a chemical reaction.
26. (A)
27. (D) The condition produced by aerial oxidation of fats and oils in foods marked by unpleasant smell and taste is called rancidity. It can be prevented or retarded by protecting the fried food items from oxidation.
28. (A) When a honey-bee stings a person, it injects an acidic liquid into the skin which causes immense pain and irritation. Rubbing a mild base like baking Soda solution on the sting area of the skin gives relief.
29. (C) Bleaching powder is an arrangement for storing chlorine which is used in many chemical industries as an oxidising agent.
30. (D) The arrangement of lights and various other electrical appliances in series circuit is not used in domestic wiring because of single switch arrangement, reduced power current, loss of power with increase in resistance.
31. (B) Calorific value of Petrol is 50 kJ/g; Methane 55 kJ/g; Charcoal 33 kJ/g and Natural gas 33 to 50 kJ/g.
32. (B) Kudankulam Nuclear Power Plant (Tamil Nadu) is Pressurised water reactor, while the other three are Pressurised Heavy Water Reactors.
33. (B) Since the convex mirror has virtual focus which is situated behind the mirror so it diverges the rays after being reflected from it.
34. (A) Bile juice is a greenish yellow liquid made in the liver and is normally stored in the gall bladder. Bile is alkaline, and contains, salts which help to emulsify or break the fats (or lipids) present in food.
35. (D) The main organs of human respiratory system are : Nose, Nasal passage, Trachea, Bronchi, Lungs and diaphragm.
36. (C) Blood is a fluid connective tissue.
37. (B) Alpha diversity is known as local diversity and it includes variety of organisms local to a particular habitat.
38. (C) The small lizards called skinks do not lay eggs. They give births to live young. Solomon island skinks, blue-tongue skinks and shingleback skinks are some of the species that give birth live.
39. (A) Jaundice or hepatitis is the disease of liver. It is by viral infection. The types of hepatitis are—Hepatitis A, Hepatitis B, Hepatitis C, Hepatitis D, Hepatitis E or Hepatitis G. Except for Hepatitis B which is DNA virus, all the other are RNA viruses. AIDS–Acquired Immune deffiiciency Syndrome, Malaria affect the blood, while rabies affects the throat and chest.
40. (A) Aedes aegypti is a daytime biting mosquito that can spread dengue fever, Chikungunya and yellow fever.

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Solved Paper

NABARD GRADE 'A' OFFICER (Pre.) EXAM., 2019

(Held on 15-6-2019)

English Language

(Based on Memory)

Directions—(Q. 1–5) In this question, a sentence is given, a part of which is highlighted in **bold**. Below the sentence options have been given. Select the option which can REPLACE the phrase given in **bold** without changing the meaning of the sentence. If 'None' can replace the phrase given in **bold** grammatically and in terms of meaning then mark 'None of those given as options' as the answer. If 'all' can replace the phrase given in **bold** grammatically and in terms of meaning then mark 'All those given as options' as the answer.

1. The local testing agency was **complimented for** its accuracy and speed in the completion of the high stake project.
   (A) found on
   (B) assured by
   (C) supported to
   (D) None of these given as options

2. For approximately 63 million people **in the world** Italian is the first language.
   (A) worldwide
   (B) within the planets
   (C) around the globe
   (D) across country
   (D) None of these given as options

3. It is said that many new jobs **would be created,** however, most of those jobs would be low paying in nature.
   (A) will be create
   (B) espected in
   (C) None of those given as options
   (D) is likely
   (E) will be transformed

4. The committee for financial reform **is made up of** representatives from the central government and the Central Bank.
   (A) Consists of
   (B) has
   (C) comprises
   (D) All those given as options
   (E) includes

5. Though the initial research on the hybrid plant is almost over, **the bigger challenge** now is in popularising it as an ingredient.
   (A) an ongoing question
   (B) the undermining
   (C) None of those given as options
   (D) the major problem
   (E) an ever increasing

Directions—(Q. 6-11) This question has a sentence with one blank indicating that something has been omitted. Below each sentence the options have been given (a), (b) and (c). Choose the options for the blank which fits both grammatically and makes the sentence meaningfully complete. If none of the given options fits the blank to make it grammatically correct and meaningful then mark 'None' as the answer.

6. School education must focus on all the aspects, which .....to the development of the young minds as they step into adulthood.
   (a) portray
   (b) contribute
   (c) support
   (A) Only (b)
   (B) All (a), (b) and (c)
   (C) None
   (D) Only (c)
   (E) Only (a) and (c)

7. Globalization has broadened career opportunities and ..... a foreign language is the order of the day.
   (a) learning
   (b) picking up
   (c) studying
   (A) Only (a) and (b)
   (B) All (a) and (c)
   (C) None
   (D) Only (c)
   (E) All (a), (b) and (c)

8. Due to drought conditions in the food grain producing region, the production of rabi crops is..... to be lower.
   (a) entrusted
   (b) expected
   (c) accepted
   (A) Only (a) and (b)
   (B) Only (b)
   (C) All (a), (b) and (c)
   (D) Only (b) and (c)
   (E) None

9. A manufacturing revival may not necessarily.....into increased employment as it requires improved productivity at lowered costs.
   (a) lead
   (b) return
   (c) translate
   (A) All (a), (b) and (c)
   (B) Only (b) and (c)
   (C) Only (a)
   (D) None
   (E) Only (c)

10. Post recession many people were worried that the new jobs ..... would not be as good as the jobs in the past.
    (a) offer
    (b) created
    (c) lost
    (A) Only (b)
    (B) All (a), (b) and (c)
    (C) Only (a) and (b)
    (D) Only (b) and (c)
    (E) None

11. Many manufactures try to ..... costs by not shipping ingredients over long distances and using local substitutes.

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(a) minimize
(b) reducing
(c) cut

(A) Only (b)
(B) Only (b) and (c)
(C) None
(D) Only (a) and (c)
(E) Only (a)

Directions—(Q. 12-18) In the given passage there are blanks, each of which has been denoted by (a), (b), (c), (d), (e), (f) and (g). Against each five words have been given, Read the passage carefully and decide which of the given words will come in place of the blank in each case.

Manufacturing is essential to maintain the (a) of an economy. It both fuels and results from innovation. It is natural in the course of economic activity that "factory jobs" are tradable on international labour markets. They especially follow the migration of manufacturing activity involving jobs requiring lower skills and compensation. Efforts to (b) high value-added manufacturing will have to be based on higher productivity, not necessarily more of those good 'factory jobs' of the past. They may not have the (c) results if the goal is to create more jobs.

Germany was cited by some as a country that has pursued an enlightened strategy towards manufacturing, through its continued support of a system of (d) that provides the changing mix of skills demanded by today's-not yesterday's-manufacturing. German producers have (e) those customers who require the most exacting, high-performance, costly products. As a result, they have created some of the least tradable manufacturing jobs.

Regardless of the number of jobs it can create, manufacturing activity will be (f) to the continued development of the world's leading economies. But will it continue to receive the (g) of policymakers once they conclude that it is not the creator of the 'factory jobs' of our memory and imagination ? What do you think ?

12. What will replace (a) in the passage ?
(A) resilient (B) stable
(C) health (D) political
(E) ongoing

13. What will replace (b) in the passage ?
(A) secluded (B) stall
(C) obtains (D) pause
(E) revive

14. What will replace (c) in the passage ?
(A) assure (B) any
(C) important (D) valuable
(E) desired

15. What will replace (d) in the passage ?
(A) existed
(B) knowledgeable
(C) apprenticeship
(D) interring
(E) unnecessary

16. What will replace (e) in the passage ?
(A) done away (B) targeted
(C) randomly (D) open
(E) restore

17. What will replace (f) in the passage ?
(A) knowing
(B) newly
(C) importance
(D) vitality
(E) critical

18. What will replace (g) in the passage ?
(A) attention (B) tendency
(C) root (D) stature
(E) intrigue

Directions—(Q. 19-21) Pick the correct sentence with regard to grammar, meaning and usage and mark it as your answer. If all of the given sentences are correct then mark 'All are correct' as the answer. If none of the given sentences is correct mark 'None is correct' as the answer.

19. (A) Linking product designers to manufacturers facilitated by the new technology park, has led to fast-response product development.
(B) To facilitate fast-response product development, the new technology park has linked product designers to manufacturers.
(C) All are correct
(D) The new technology park has facilitated fast-response product development by linking product designers to manufactures.
(E) Fast-response product development has been facilitated by the new technology park which links product designers to manufactures.

20. (A) His/her best behaviour shows by a child only when exposed to other children of same age as per studies.
(B) Only when expose to other same age individuals, a child may learn to be at his/her best behaviours as per study.
(C) As per studies a child may learn to be on his/her best behaviour only when exposed to other individuals of the same age.
(D) Studies suggest that children learns to be at his/her behaviour only when exposed to other same-aged individuals.
(E) None is correct

21. (A) 3 year old children, up to that age, doctors recommending that they should not be exposed to touchscreens and monitors.
(B) Doctors recommend that up to 3 years of age children must not be exposed regularly to touchscreens and monitors.
(C) Touchscreens and monitors must be keep away from children till they reach 3 years age as per the recommendation of doctors.
(D) None is correct
(E) As per the recommendation of doctors, Children must not exposed to touchscreens and monitors till they turn 3 years old.

Directions—(Q. 22-28) Read the given passage carefully and answer the given questions. Some words have been given in **bold** to help you locating them for answering some of the questions.

Paragraph 1 : Over the last century, the global population has quadrupled. In 1915, there were 1·8 billion people in the world. Today, according to the most recent estimate by the UN, there are 7·3 billion people-and we many reach 9·7 billion by 2050. This growth is obviously driving up global food demand as well. Food demand is expected to increase anywhere from 59% to 98% by 2050. This will shape agricultural markets in ways we have not seen

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before. Farmers worldwide will need to increase crop production, either by increasing the amount of agricultural land to grow crops or by enhancing productivity on existing agricultural lands.

Paragraph 2 : However, the ecological and social trade-offs of clearing more land for agriculture are often high, particularly in the tropics. And right now, crop yields-the amount of crop harvested per unit of land cultivated-are growing too slowly to meet the predicted demand for food. Even if some regions increase their output and traders reduce the mismatch supply and demand, doubling food production by 2050 will undeniably be a major challenge.

Paragraph 3 : Thus the last resort for farmers would be to grow more on the land they currently operate through what is called "sustainable intensification". This means using precision farming tools, such as GPS fertilizer dispersion, **advanced** irrigation systems, and environmentally optimized crop rotations. These methods can help produce more crops, especially in parts of Africa, Latin America and Eastern Europe with large yield gaps. They can also reduce the negative environmental impacts from over-stressing resources-preventing groundwater depletion and the destruction of fertile lands through over-use of fertilizer.

Paragraph 4 : In order to attract more investments in agriculture, the risks need to be reduced by governments. Regulators need to overhaul policies that .....inclusion of small, rural farmers into the financial system. More supportive policies, laws and public spending on infrastructure would *help create a favourable investment climate for agriculture.*

22. Which of the given words is most similar to the word ADVANCED given in bold in the passage ?
    (A) detrimental
    (B) peculiar
    (C) conventional
    (D) ongoing
    (E) progressive

23. Which of the following pairs given in the options can conclude Paragraph 3 and start Paragraph 4 respectively ?
    (a) Over the last 30 years, investment in agriculture has declined resulting in low productivity and stagnant production.
    (b) Thus, as banking sectors in developing countries give fewer loans to farmers, farmers are bearing huge losses.
    (c) If we have to use such methods extensively more agricultural research is needed which further highlights the need of investments in agriculture.
    (A) c-a (B) c-b
    (C) a-b (D) b-a
    (E) None of the given sequences can conclude Paragraph 3 and start Paragraph 4

24. Which of the given words is most similar to the word MISMATCH given in bold in the passage ?
    (A) gap
    (B) harmony
    (C) influence
    (D) compatibility
    (E) drawback

25. Which of the following should replace the blank '.....' in paragraph 4 both grammatically and in terms of meaning in the context of the passage ?
    (A) output (B) limit
    (C) allow (D) interests
    (E) adept

26. What does the author want to convey by, 'would help create a favourable investment climate for agriculture' as mentioned in the passage in the passage in italics ?
    (a) The climatic conditions need to be improved to improve food production.
    (b) With supportive policies and laws investments in agriculture are likely to increase.
    (c) Lower returns in agriculture are the main reason behind low investment.
    (A) Only (a) and (c)
    (B) Only (a) and (b)
    (C) Only (b)
    (D) Only (b) and (c)
    (E) All (a), (b) and (c)

27. Which of the following is/are true according to the passage ?
    (a) Paragraph 2 only highlights how food demand can easily be met in the near future.
    (b) Rising food demand is likely to affect developed countries more severely than the developing countries.
    (c) Increasing land under agriculture, can impact the ecology negatively.
    (A) Only (a) and (b)
    (B) Only (b) and (c)
    (C) Only (c)
    (D) Only (b)
    (E) None

28. What is the author's view about 'sustainable intensification' mentioned in Paragraph 3 ?
    (A) It is only useful for countries which have small, yield gaps.
    (B) It may increase food production to meet the rising demands.
    (C) It will have a tremendous negative impact on the environment.
    (D) It is hyped and may not work in the long run.
    (E) All those given as options.

29. Which of the given words is most similar to the word 'optimized' used is the passage ?
    (A) revamp (B) diminish
    (C) useless (D) get
    (E) stop

Directions—(Q. 30–33) In this question, a sentence is divided into four parts denoted by (A), (B), (C) and (D). Read the sentence to find out whether there is any error in it. The error, if any, will be in two parts of the sentence. The option which reflects these parts is the answer. If there is No Error, the answer is 'No Error'.

Please Note : The error must be present in both parts of the answer combination.

30. Growth of a country is parallels (A)
    to / the future of the country and / (B)
    it is reflected through the quality (C)
    of / the presents education (D)
    system. No error (E)

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(A) No error (B) B-C
(C) A-B (D) C-D
(E) A-D

31. As per recent figures / apples
(A)
alone constitutes / 54 per cent of
(B) (C)
the / state's fruit economies.
(D)
No error
(E)
(A) A-D (B) B-D
(C) No error (D) B-C
(E) A-B

32. Simply put a country's GDP is
(A)
the sum of / several transaction
(B)
in which / ones person's expen-
(C)
diture / becomes another person's
(D)
income. No error
(E)
(A) C-D (B) A-B
(C) A-D (D) No error
(E) B-C

33. When one is exposed / to various
(A)
cultures, / his/her view of the
(B) (C)
world and / experience becomes
(D)
varied. No error
(E)
(A) B-C (B) C-D
(C) A-D (D) No error
(E) A-B

34. The allegations make / in court
(A)
must be back by / evidence as the
(B) (C)
court relies / only on solid proof.
(D)
No error
(E)
(A) C-D (B) No error
(C) B-C (D) A-D
(E) A-B

35. When a borrower receives credit, /
(A)
he is able to increase / his expen-
(B)
diture and spending / thereby
(C)
driving the economy. No error
(D) (E)
(A) B-C (B) No error
(C) B-D (D) A-D
(E) A-B

Directions—(Q 36-40) Read the given passage carefully and answer the given questions. Some words have been given in bold to help you locate them for answering some of the questions.

Sleep disruption has been associated with all major psychiatric conditions, including depression, anxiety and increased suicidal ideation. Research of over the past 20 years also suggests that in most major psychiatric conditions sleep is abnormal. Science is thus proving the prophetic wisdom of Charlotte Bronte, who stated that "a ruffled mind makes a restless pillow".

Add the above physical and mental health consequences up, and a scientifically validated link becomes easier to accept : the shorter your sleep, the shorter your life. Recent findings demonstrate that individuals who routinely sleep five hours a night have a 65% increased risk of dying at any moment in time, relative to those getting seven to nine hours a night. The elastic band of sleep deprivation can stretch only so far before it snaps.

It is therefore no coincidence that countries where sleep time has declined most dramatically over the past century, such as the US, the UK, Japan and South Korea, and several countries in western Europe, are also those suffering the greatest increase in the rates of the aforementioned physical diseases and mental disorders.

Studies show that after 22 hours without sleep, human performance is impaired to the same level as that of someone who is legally drunk.

Young doctors themselves can become part of the compromised health-care equation caused by long hours. After a 30-hour continuous shift (the norm for most young doctors), trainee doctors are 73% more likely to accidentally stab themselves with a hypodermic needle or cut themselves with a scalpel, risking a blood-borne infectious diseases, compared with their careful actions when adequately rested. And when a doctor finishes a long overnight shift and drives home, their chances of being involved in a car crash are increased by 168% because of insufficient sleep. Sleep should therefore be considered a life-support system, a universal national health-care plan still waiting to be fully embraced by medicine, and society at large.

..... become the voice that educates society about sleep. Health-care systems have launched worderful.

36. Which of the following is/are true about young doctors as mentioned in the passage ?
(a) Sleep deprivation increases the risk of accidents among young doctors who drive home after long overnight shifts.
(b) Most young doctors leave their profession owing to long hours.
(c) A 30 hour work shift is not unheard of among young doctors.
(A) Only (a) and (b)
(B) All (a), (b) and (c)
(C) Only (b) and (c)
(D) Only (a) and (c)

37. Which of the following can come in place of the blank '.....' both grammatically and in the context of the passage ?
(a) Government and health institutes must
(b) Rising hypocrisy is the field of medicine
(c) We must therefore aim to
(A) Only (c)
(B) Only (b) and (c)
(C) Only (a) and (c)
(D) All (a), (b) and (c)
(E) Only (b)

38. Why has the author given the examples of some countries in the passage ?
(A) To negate the idea that sleep deprivation may lead to increased death rate.
(B) To bring to light the fact that people in developing nations are more sleep deprived than those in developed nations.
(C) To illustrate how people in those countries have a 'healthy' approach to mental illness.

Continued on Page 178

MAGNET KING

Essay Contest

The Real Joy of Life Lies in Living in Accordance with Law—the Law of Life, the Law of Society, and the Law of the State

—Avdhesh Kumar Singh

Law of Life

To find the real joy of life we have to first understand what is life ? This topic has three segments. 'The Law of Life', 'The Law of Society' and 'The Law of the State', out of which most important segment is 'The Law of Life' and the rest two are manmade rules meant to serve the purpose of life. So the question is what is life essentially ? What is purpose of life ? If we look to religion for the answer, then we will find that almost every religion has given some sets of moral rules in the name of God for people to follow. Basically all religions teach us God-fearing morality. So the point is that if we follow our religious principles and morals strictly, will it serve the purpose of life ? Is any joy contained in it ? The answer will be no as these sets of principles and morals are imposed upon us since birth and are helpful only in maintaining the order of society.



Avdhesh Kumar Singh

Now come to spirituality. Spirituality is somewhat different from religion as religion is an organised set of rules for society to follow outward while spirituality is intellect part or inward thinking process which generates curiosity about life and existence. According to spirituality, the real purpose of life is to find truth of life which is generally referred to as self-realisation or Enlightenment. Though Buddha and other similar persons have talked about Enlightenment as a state of inner peace, ecstasy and joy yet in reality we don't have any idea about what Enlightenment is.

Now come to material world. Material world is full of carnal pleasures and physical comforts. If one has money one can enjoy all riches of life. But the point is whether this is real joy of life. If we look with certain awareness of our mind, then we will find that all the joy and pleasure of material life is actually a temporary one.

Though it gives pleasure till we are engaged to it, afterwards it withers away. So can we call it real joy of life ? Certainly not ! 'Flickering of mind' cannot be called real joy of life and this fact is also established by our Hindu scriptures. Also real joy should emanate from a person from within. That's why Lord Buddha and Mahaveera renounced all material pleasures and riches of life in order to search for real meaning of life.

Then what should be the real joy of life ? If we just plainly observe the people around us we will find that everybody is born with some 'passion' or some 'particular instinct' to progress in life. It is just that most people are engaged in outer world so profoundly that they never find time to look within. But those who find their in-born passion and give priority and attention to that passion definitely succeed in life, with inner joy and satisfaction, while the rest just become common one. So if one follows one's inborn passion or instinct to progress in life, then one always feels inner peace, contentment and joy. So finding and following one's inborn passion is the real joy of life. So we cannot fix any definite rules or laws for real joy of life. As nature and genes vary from people to people, so real joy or passion of life will differ from person to person.

A pilot finds real joy and satisfaction in flying high in the sky if he was inborn with passion to fly. A mountaineer will feel cheerful in scaling the highest point of Mount Everest. A cricketer will find his inner joy when he hits a century on the field to make his team win. An actor will feel satisfied when his performance was appreciated by audience in cinema. A politician will find real joy if public makes him win in election provided that he has real and inborn passion to serve the country. A scientist will feel delighted if he discoveres something new formula or theory which could bring change in the lives of people. A true spiritual seeker has 'inborn curiosity' to know what is truth of life and devotes his whole life in search of it. Mother Teresa finds happiness and bliss in service to the poor and needy.

Likewise a painter will find real joy in painting. A poet will be lost in joy if he found some lyrics of his poem while observing nature. A mother finds real joy and love in fostering her child only. A singer finds real joy in singing while a dancer finds inner joy in dancing to the heart.

Law of Society

What should be the law of society ? As we know laws or rules of society should be such that they serve the material as well as real purpose of life. Hindu view of life conforms best to the current subject of discussion. According to Hinduism, the meaning or purpose of life is four fold viz., Dharma (Religion), Artha (material wealth), Kama (Sensual Pleasure), Moksha (Spiritual). Out of these Dharma and Moksha conform to the 'Law of Life' and Artha and Kama conform to the 'Law of Society'. Hinduism says that Life should be lived in a way that all the four-fold purpose of life should be achieved.

Law of the State

Law of state refers to the rules and laws made by state to maintain law and order within country and to run the nation successfully on the path of development and advancement on global level. As mentioned above, the goal of life is to achieve Dharma, Artha, Kama and Moksha. And all four have to be achieved with 'lawful means' only and through four 'ashrams' or stages of life *viz.*, Brahmcharya (Religion and Character), Grihastha (Artha and Kama), Vanaprastha (Spiritual Search) and Sannyasa (Moksh or Enlightenment). So Hinduism conforms best to all three segments of the topic. 'The Law of Life', 'The Law of Society' and 'The Law of the State'.

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Debate Contest

In Politics Expediency is All; Morality Takes the Back Seat

In Favour

—Ananya Roy

"Politics have no relation to morals."
—Nicolo Machiavelli

Nicolo Machiavelli in his **The Prince** had made this brutally honest remark which although a bit anachronistic and harsh to certain degrees speaks the truth. Political ethics consists of the section of morality where the call of the hour pushes the moral considerations to the backseat as political expediency takes charge of the wheel of governmental administration. Ever since time immemorial politicians and the entire ambit of politics have learnt it the hard way that moral alliance and leniency have ended up in fatal consequences.


Ananya Roy

Political expediency is by no means a negative platform for politics to take the lead rather it is the 'iron-hand' that prevents the security of the country from being jeopardized under the naivety of morality. Aligning with morality and being lenient on the affairs of administration from the political context poses a severe and serious threat of improper means of administration as crooks, rogues and delinquents are bound to take advantage of such tom foolery. So it is better to act sharp and quick when the iron is hot so that law-breakers within and without the boundaries of the state get no opportunity to escape.

The feral, aggressive tenor of political expediency has become the call of day as terrorism and similar acts of anti-nationalism are threatening to shatter the sphere of safety within which citizens are protected and feel safe. Kindness and morality in the face of bestiality posed to humanity is simply an act of utter foolishness and derangement, hence despite the harsh conditions imposed by political expediency it is the 'necessity' and the 'need of the state' at present.

Political expediency works on the concept of the proper attainment of national safety and integrity and has the best interests of the state in its heart. The aim of such an attitude is fully driven by the Machiavellian concept of attaining the state of affairs necessitated by the situation at hand. The draconian concept of political expediency wears off when public conscience comes in conflict with the necessary requirement of the state, as a result of which restrictions and limitations imposed by the Government on the freedom of speech and expression, on moment, become justified in the light of the events unfolding, in present day society. Free and fair trial suffers a setback in such a backdrop but does anyone expect terrorists to take a seat and enjoy when their hands are still sullied with the blood of thousands of innocents. Heavy-handedness in extradition becomes important to bring to justice criminals who have escaped the law of the land only to be deported and handed over to the law(s) of justice that would reign supreme.

This very issue brings to the forefront the burning Kashmir issue over which India and Pakistan have been going on a diplomatical tussle of supremacy with India's scrapping out Article 370 which gave Kashmir the freedom of autonomy and Pakistan the passage to terrorist activities and such other acts of dismantling democracy by misleading and fooling the Kashmiri youth ! Years of injustice will be righteously corrected as stated by former Governor of J&K Satyapal Malik and Jaishankar. It is high time we leave rotten memories and mistakes and take control over the issue that concerns the nation in toto. It is not just Kashmiris but as Indians, the wrongs committed in the past be rectified. Through political expediency the line of amoral and moral withers into 'righteousness' and 'neces-sity' to justify the means of attaining the end. In the face of political turmoil India must hold firm on her stance and not waver, as to secure national integrity, harsh political measures must be undertaken and let the international community caw its rant. Enemies would be lurking everywhere but the contender must defend strategically.

Hence, it is my belief and opinion that in present day scenario where the dangers of globalization and the evils of socialization are rapidly encroaching upon national security, political expediency takes the charge of the entire system while morality as a drawback and disadvantage takes the back seat stuck like a sore thumb !

Against

—Raj Verma

'Morality' and 'Expediency', have always been perceived as two misaligned and incongruous virtues which can never be practised simultaneously in dimensions governing power and politics ! But this sheer emphasis misses out the proper, realisable and true concept of morality. To sum up Niccolo Machiavelli, the mental disposition or the characteristic of behaving in a manner intended to produce morally good results, is called morality. Morality is associated with a play of guiding principles, grounds of righteousness and wrongness, good and evil, virtuous and debasing, etc. When these sets of pronouncements dominate social rules, customs, traditions or practices, a specific proper code of conduct is meted out. The law of land had been fabricated in the most thoughtful scenarios suitable for any historical timeline.


Raj Verma

For morality, a take for-granted generic judgement always comes in

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that it is weak, vulnerable, enchroachable and vincible too. The practitioners of morality do also at most of the times disallow any escalation of retaliation against their exploitative opponents. To maintain a decorum of moral establishment, expediency cannot be parted away from morality.

Expediency at its core and foundational substance approves only those pursuits of manipulation which conclusively support moral manifestations.

The Power Play of Politics

Over a due course of period, the meaning of 'political' has changed, with the advent of political complexities and dynamism, the term 'power' became poignant ! with which came up a repugnant and hopeless conception that power of some groups turns manipulative to subjugate others in order to realise not the good of the entire community but their narrow interests. Thus, it was understandably fine to infer that morality will have a little say ever to discern the power play of politics. With these wrong conceptions of morality and power, in which both of them lost their classical meaning, the political dimension was and is viewed being corrupt, immoral, tactical and a game of derogating expediency ! Politics is thought to be charged with unscrupulous, unalterable, ruthless game of turncoats.

But over a past few years, this thought has begun to lose its currency. Conscious voters have realised that the foundational essentiality needs a will of righteous restoration. The gamut of the entire political activity will lose its motif when only manipulation, competition, hyper-pragmatism and positivism are the players.

In today's convoluted geo-politics, transnational tangles and power struggle, politics must expedite forseeable decisions to counter major threats like terrorism, cross border infiltration and technological malpractices. It is in no way uncommon that political expediency comes into being to counter such bizarre global issues. But the parameters of such actions taken must be tested on the waters of morality. The difference between an immoral opportunism and moral expediency emerges in the long run. Thinkers often misconfuse in placing morality on the back seat; demeaning its utility they forget that expediency had entered the play of politics to save the morale of morality from nefarious and destructive elements of the state machinery. Moral authority empowers expediency in its political dimension. One can truly question as to, what purpose and conclusive end will any sort of political expediency serve or strive to attain, when political values, ethics, decorum and sanctity of political wisdom are not the guiding principles of the expedient effort. The moment the expedient pursuit is contaminated by vices, the purpose intended turns shockingly deplorable and wicked ! The machinery of state cannot exist longer in such circumstance. One day, either internal or the external aggression will cripple the entire foundation structure of social, economic, administrative and political institutions.

A return to moral awakening has been happening, either to mitigate their anticipation of a near future breakdown or to stop other countries profiting still in the manner in which they did, once upon a time.

Multipolar World and Morality

Over the years International Relations are becoming more and more complex. With the growing chain of interdependence, internationalization of world economic ties, changing balance of power, war is not working as an effective means for conducting foreign policy. One cannot believe that moral and ethical standards have never played a role in international life. Notions of "moral duty", 'justice', 'dharma', have always exerted a certain influence on states' policies. Frequent occurrings of moral-ethical manipulations often become a form of cover-up for political aspirations rather than an inspiration. But the rules of the power play of politics do not operate in the manner it does in a multi-polar world. Today's cultural development has led to strengthen us spiritually and facilitates our moral development as individuals. The expansion of the mass media, widening social base and eradication of spiritual isolation have given way beyond barriers to understand the commonality of our values and aspirations. As the stretch of knowledge has expanded and is still in progress, it has become more difficult to manipulate moral values. Politics cannot betray and stay aloof from moral judgements while morals too cannot remain apolitical. Multipolar world has many players who can only treatise an agreement based on equal benchmark values, norms, aspirations and limits. Expediency is nothing more than a moral necessity stemming from the task of preventing the destruction of our civilization.

The Conjugation of Expediency and Morality

One must refrain from perceiving the present political world as being in a simplified black-and-white state structure, where all moral values are collected from one group or state, while all vices at the other. In other words, morality and expediency are tied in a nuptial bond, whereby one gathers security and legitimacy while the other provides security of predominant existence to the other. 'An Expedient effort's legitimacy rests on the sanction of morality'. The objective definition of morality may not cover the comity and the strength of an authoritative moral verdict; a deeper, thoughtful understanding may adduce a feature of moral application which is called expediency. It in no way mitigates and repudiates the power of morality. Values are not meant to sit back in silence and let ruining forces excruciate, loot, demote and ravage institutions of eminent glories. Colonies have had much of silence in the name of moral limits, but the bitter reality rests upon the truth as to how moral values were moulded to perpetuate imperial empires across the world. Hence, it must be remembered that political expediency in no way weakens morality and its tenets, instead it entails a struggle to re-establish, retain and incorporate moral standards in different times keeping the essential base intact.

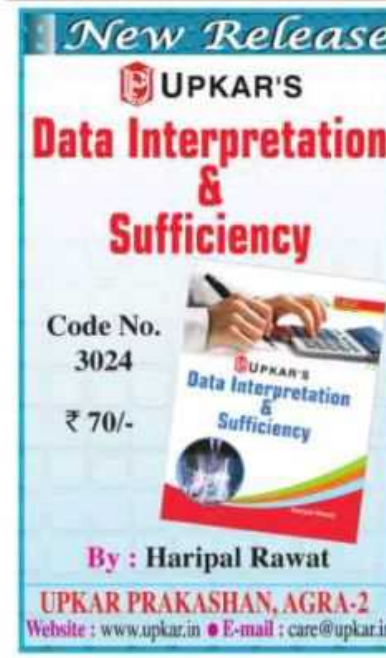
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Concentric QUIZ

Special on Oceanography

1. Which of the following seas obtains highest annual range of temperature ?
   (A) Baltic Sea
   (B) Sea of Cambay
   (C) Mediterranean Sea
   (D) None of the above
2. The largest coral reefs of the coastal platforms are called—
   (A) Fringing reef
   (B) Barrier reef
   (C) Atoll
   (D) None of the above
3. Which of the following seas obtains highest salinity ?
   (A) Mediterranean sea
   (B) Baltic sea
   (C) Red sea
   (D) Yellow sea
4. Which is called the phatic or Euphatic zone ?
   (A) Bottom of oceans
   (B) Upper surface of oceans
   (C) Middle surface of oceans
   (D) None of the above
5. Which of the following are the major sources of marine deposits ?
   (A) Terrigenous sources
   (B) Volcanic eruptions
   (C) Marine plants and animals
   (D) All of the above
6. What is the ideal depth for growth of coral reefs ?
   (A) 200 to 300 feet
   (B) 250 to 400 feet
   (C) 150 to 300 feet
   (D) None of the above
7. Which of the following is not the organic material of ocean deposits ?
   (A) Calcareous Oozes
   (B) Pteroped Oozes
   (C) Globigerina Oozes
   (D) None of the above
8. What type of sediments are found in the oceans ?
   (A) Organic sediments
   (B) Inorganic sediments
   (C) Calcareous sediments
   (D) All of the above
9. Which is not the inorganic precipitate in the ocean deposit ?
   (A) Dolomite
   (B) Amorphous silica
   (C) Iron
   (D) None of the above
10. Who postulated the subsidence theory of origin of coral reefs ?
    (A) Charles Darwin
    (B) Daly
    (C) W.M. Davis
    (D) Murray
11. Which of the following is the major sources of oceanic salinity ?
    (A) Volcanic ashes
    (B) Rivers
    (C) Oceanic currents
    (D) None of the above
12. Density of ocean water increases—
    (A) From equator towards pole
    (B) From pole towards equator
    (C) East to West
    (D) West to East
13. Among the following water plants, heterophylly is found in—
    (A) Free floating
    (B) Rooted emergent
    (C) Submerged floating
    (D) None of the above
14. Inert ecosystems represent—
    (A) Destroyed ecosystems
    (B) Matured ecosystems
    (C) Mixed ecosystems
    (D) Succession ecosystems
15. The difference in distribution of sea water density is due to—
    (A) Cold water current
    (B) Warm water current
    (C) Two watermasses of different densities
    (D) None of the above
16. Which of the following is not the type of tides ?
    (A) Spring tide
    (B) Neap tides
    (C) Tropical and equatorial tides
    (D) Apogean and perigean tides
17. General movement of a mass of oceanic water in a definite direction is called—
    (A) Ocean waves
    (B) Ocean currents
    (C) Streams
    (D) None of the above
18. What are the most important effects of oceanic currents ?
    (A) Modification of coastal climate
    (B) Supplying planktons for fishes
    (C) Effects on trade and navigation
    (D) None of the above
19. Which of the following currents affects the summer monsoon ?
    (A) Peru current
    (B) Elnino current
    (C) Brazil current
    (D) East Australian current
20. Progressive waves theory is related to the—
    (A) Origin of the Earth
    (B) Origin of the coral reefs
    (C) Origin of tides
    (D) All of the above

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CONCENTRIC QUIZ

(Special on Oceanography)

ENTRY FORM

Pratiyogita Darpan

Last date for sending January 15, 2020

Name Mr./Miss/Mrs. .....

Full Address .....

.....

.....

State ..... Pin Code No. ☐☐☐☐☐☐

Age..... Academic Qualification.....

Competition examination for which preparing

.....

- How would you rate our magazine on a scale of 1 to 5?

  ☐ ☐ ☐ ☐ ☐

- Topics/Features you would like to see in forthcoming issues

  .....

  .....

- No. of Questions Solved

  .....

I have read and understood the rules of Concentric Quiz of Pratiyogita Darpan and agree to abide by them.

.....

(Signature)

ANSWERS FORM

Q. No.	A	B	C	D	Q. No.	A	B	C	D
1.	☐	☐	☐	☐	11.	☐	☐	☐	☐
2.	☐	☐	☐	☐	12.	☐	☐	☐	☐
3.	☐	☐	☐	☐	13.	☐	☐	☐	☐
4.	☐	☐	☐	☐	14.	☐	☐	☐	☐
5.	☐	☐	☐	☐	15.	☐	☐	☐	☐
6.	☐	☐	☐	☐	16.	☐	☐	☐	☐
7.	☐	☐	☐	☐	17.	☐	☐	☐	☐
8.	☐	☐	☐	☐	18.	☐	☐	☐	☐
9.	☐	☐	☐	☐	19.	☐	☐	☐	☐
10.	☐	☐	☐	☐	20.	☐	☐	☐	☐

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Rules and Regulations

- All students or those appearing in competitive examinations can take part in this contest.
- Candidates taking part in quiz contest will necessarily have to send their entries by a fixed date. Entries are to be sent by ordinary post. Please mark your envelope **'Quiz–Pratiyogita Darpan'** on the top left hand side.
- Answers given only on the Entry Form of the magazine will be admissible.
- In the form there are four squares against each question number. Contestants should put a Tick (√) in the square for the answer they think is correct. Giving more than one answer to a question will disqualify it.
- Contestants should essentially write the number of questions they have solved.
- Marks will be deducted for wrong answers.
- The candidate sending the maximum number of correct answers will be given ₹ 800 as first prize. Next two candidates after that will get ₹ 600 and ₹ 400 as second and third prize respectively. If there are more than one candidate eligible for a prize, the amount will be equally distributed among them.
- Write your name in English in Capital Letters. The name must be one which appears in your bank account. Also, write the bank account number, IFSC code of the bank and your mobile phone number.
- The decision of the editor will be final and binding in all cases, and will not be a matter for consideration of any court and no correspondence will be entertained in this concern.
- Names of prize winners of Concentric Quiz alongwith the answers will be published in next issue of Pratiyogita Darpan.
- Pratiyogita Darpan reserves the right to terminate or extend the period of quiz, or to accept or reject any or all the entries at their absolute discretion without assigning any reason.
- Pratiyogita Darpan is not responsible for any postal delays, transit losses or mutilation of entries.
- Last date for the receipt of the entries of CONCENTRIC QUIZ in the office of Pratiyogita Darpan, 2/11A, Swadeshi Bima Nagar, Agra–282 002 (U.P.) is January 15, 2020.

PD/January/2020/173

RESULTS

Essay Competition

Topic : The Real Joy of Life Lies in Living in Accordance with Law—the Law of Life, the Law of Society, and the Law of the State

Winners

First Prize Winner



Avdesh Kumar Singh
Room No. 202C,
Second Floor, C.R.
Building, I.P. Estate
New Delhi–110 002

Second Prize Winner



Sudhir Khullar
B-8, Hemavati
New Mandala
Anushaki Nagar
Mumbai–400 094

Third Prize Winner



Muskan Srivastava
Prem Nagar, Chandanwari
Dehradun
Uttarakhand

Debate Competition

Topic : In Politics Expediency is All; Morality Takes the Back Seat

Winners

In Favour



Ananya Roy
Rani Sagar
South Burdwan
West Bengal

Against the Topic



Raj Verma
House No. 428-A
Civil Lines, Jaunpur
Uttar Pradesh–222 002

Quiz Contest

CONCENTRIC QUIZ

(Special on Climate)

First Prize Winner

Ayushi Yadav
Sipri Bazar, Jhansi
Uttar Pradesh–284 003

Second Prize Winner

Shubham Chinchkhede
Near Patil Coaching Class,
Kishor Nagar, Amravati
Maharashtra–444 606

Third Prize Winner

Rishi Pratap
Room 1002, KC Hostel, L&T Knowledge City, NH-8, Ajwa Waghodia Crossing, Vadodara
Gujarat–390 019

Answers

1. (A)	2. (A)	3. (D)	4. (A)	5. (A)
6. (D)	7. (B)	8. (A)	9. (C)	10. (B)
11. (A)	12. (C)	13. (B)	14. (D)	15. (A)
16. (C)	17. (C)	18. (A)	19. (D)	20. (A)

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Continued from Page 68

PD—In your opinion what role do the Competition Magazines play when you are preparing for an examination like Civil Services ?

Shri Ajay—Competition magazines play a vital role in Civil services examination preparation. It provides current affairs study material in concise and topicwise manner, which saves much of our time.

PD—How do you find Pratiyogita Darpan ? Do you find it close to your expectations ?

Shri Ajay—Pratiyogita Darpan is the appropriate magazine for civil services preparation. Its annual edition helped me to cover all those parts of current affairs which I was not able to cover because of corporate industry work load. It is very close to my expectations.

PD—Please give your comments on the PD Extra Issues Series on 'General Studies' and a few Optional Subjects ?

Shri Ajay—I went through PD Extra edition of Economics. It was very helpful in covering various portions of Economics in a quick manner.

PD—What is the secret of your success ?

Shri Ajay—Hard and Smart work, Dedication, Target oriented study and Optimistic about life.

PD—To whom would you like to give the credit for your success ?

Shri Ajay—My hard work alongwith blessings and guidance from my parents, brother, sister teachers and colleagues.

PD—Any suggestion/advice you would like to give to the future aspirants.

Shri Ajay—If you are honest with your hard work and passion for civil services, you will succeed. Success may be delayed in the process but never denied.

PD—Thank you very much and wishing you all the best for your future endeavours.

List of Books/Magazines

Preliminary Exam.

Paper-I (General Studies) :

- NCERT Books
- Bihar Ek Parichay by Emitiaz Ahmed
- Samagra Bihar
- Pratiyogita Darpan
- GK Today
- Lucent
- Spectrum for Modern History
- Last 10 years' BPSC Question Bank

Main Exam.

General Studies :

- Vision Monthly Magazine for Selected Topic
- For Art and Culture-KBC Nano & Nitin Singhania
- Spectrum for Modern History
- Last 10 years' BPSC Question Bank of Mains

Optional-I

Geography :

- India and World Geography by Majid Hussain

Mental Exercise

Test Your Knowledge



1. Which Indian city has bagged the UNESCO title of "Creative City of Gastronomy" ?
   (A) Jaipur (B) Delhi
   (C) Hyderabad (D) Bhopal
2. Which Article of the Indian Constitution lays down that the State shall endeavour to secure a Uniform Civil Code for citizens throughout the country of India ?
   (A) Article 29 (B) Article 32
   (C) Article 37 (C) Article 44
3. Powers and functions of the Governor of a state have been discussed in detail in the report of—
   I. Sarkaria Commission
   II. Punchhi Commission
   III. Veerappa Moily Commission
   (A) Only I and II
   (B) Only I and III
   (C) Only II and III
   (D) I, II and III
4. The concept of ' Exclusive Economic Zone ' is related to—
   I. Country's exclusive rights for fishing, drilling, and other economic activities along the coastline.
   II. An economic zone established for the manufacturing and trading activities of a particular commodity
   Which of the following codes is correct ?
   (A) Only I
   (B) Only II
   (C) Both I and II
   (D) Neither I nor II
5. Which of the following cities is the most liveable city of the world as per the Global Liveability Index 2019 ?
   (A) New York (B) London
   (C) Vienna (D) Paris
6. Which of the following statements is correct about the "Swachh – Nirmal Tat Abhiyaan" ?
   (A) It was undertaken from 11th -17th November, 2019
   (B) It was a mass cleanliness-cum-awareness drive to clean the sea coasts in 50 identified beaches
   (C) The cleaning drives in all beaches have been undertaken, involving school/college students of Eco-clubs, district administration, institutions, volunteers, local communities and other stakeholders
   (D) All of the above
7. Territorial Sea extends outwards to .....from the baseline of a country.
   (A) 12 nautical miles
   (B) 50 kilometres
   (C) 200 nautical miles
   (D) 100 kilometres
8. Which of the following laws have preventive detention provisions ?
   I. Conservation of Foreign Exchange and Prevention of Smuggling Act, 1974 (COFEPOSA).
   II. National Security Act, 1980 (NASA).
   III. Prevention of Black-marketing and Maintenance of Supplies of Essential Commodities Act, 1980.
   Correct code is :
   (A) Only I and II
   (B) Only II and III
   (C) I, II and III all
   (D) Only III
9. Which of the following languages has not been included in the Eighth Schedule of the Indian Constitution ?
   (A) Nepali (B) Bodo
   (C) Rajasthani (D) Maithili
10. 'Collegium System' has been introduced in Indian Judiciary system through—
    (A) First Judges Case (1981)
    (B) Second Judges Case (1993)
    (C) Third Judges Case (1998)
    (D) 99th Constitutional Amendment Act (2014)
11. Sangam Age is related to ancient—
    (A) Tamil Literature
    (B) Malyalam Literature
    (C) Telugu Literature
    (D) Kannada Literature
12. Which of the following towns is known as 'Mamallapuram' ?
    (A) Mahabalipuram
    (B) Kanchipuram
    (C) Viluppuram
    (D) Cholapuram
13. Prime Minister Narendra Modi launched on September 11, 2019 National Animal Disease Control Programme in Mathura to eradicate—
    I. Foot and Mouth Disease (FMD)
    II. Brucellosis
    III. Rinder Paste
    IV. Mucosal
    (A) Only I and II
    (B) Only III and IV
    (C) Only I, II and III
    (D) I, II, III and IV all
14. Which of the following pairs is/are matched correctly ?
    I. Small Pox—Virus
    II. Cholera—Bacteria
    III. Athlete's foot—Protozoa
    IV. Night Blindness—Vit. 'A' Deficiency
    (A) Only I, II and III
    (B) Only I, II and IV
    (C) I, II, III and IV all
    (D) Only II, III and IV
15. Which of the following is a disease mostly of children ?
    (A) Tuberculosis
    (B) Malaria
    (C) Filariasis
    (D) Kwashiorkor
16. Which of the following is not a vaccine ?
    (A) BCG (B) DPT
    (C) DDT (D) DT
17. Which of the following pairs is not correctly matched ?
    (A) AIDS—Non-communicable killing disease

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(B) BHC—An Antibiotic
(C) ELISA—A diagnostic test
(D) THR—A surgical procedure of hip replacement

18. Consider the following statements and choose the correct code given below—
I. Chief Minister of National Capital Terroritory of Delhi is appointed by the President of India.
II. Chief Minister of UT, Puducherry is appointed by the President of India.
III. Chief Minister of UT, Jammu & Kashmir is appointed by Lieutenant Governor.
(A) Only I
(B) Only I and II
(C) I, II and III all
(D) Only III

19. Anti-defection law in India was enacted in 1985. It was—
(A) An act of Parliament passed by Lok Sabha and Rajya Sabha through a simple majority
(B) Constitution (52nd Amendment) Act, 1985 passed by both the houses of Parliament through a simple majority
(C) 52nd Constitutional Amendment Act 1985 passed by each house of the Parliament by a majority of the total membership of that house and by a majority of not less than two-thirds of the members of that house present and voting
(D) 52nd Constitutional Amendment Act 1985 passed by the Lok Sabha and Rajya Sabha and ratified by more than half State Assemblies

20. Consider the following statements about the Constituent Assembly and choose the correct code given below—
I. Constituent Assembly had 389 members.
II. Out of 389 members, 296 members were elected members from British India.
III. 93 members were nominated by princely states.
IV. Elected members were indirectly elected by the members of Provincial Assemblies.
(A) Only I is correct
(B) Only I, II and III is correct
(C) Only IV is correct
(D) I, II, III and IV all are correct

21. The term 'Collective Responsibility' is related to—
(A) Council of Ministers of Union Executive
(B) Council of Ministers of State Executives
(C) Council of Ministers of Union Territories
(D) All of the above

22. Who among the following was called "Grand Old Lady of the Independence Movement" ?
(A) Aruna Asaf Ali
(B) Sarojini Naidu
(C) Sucheta Kriplani
(D) Begum Hazarat Mahal.

23. Match the List-I (Provision of the Constitution) and List-II (Borrowed from other country's Constitution) and choose the correct code given below—

List-I
(a) Cooperative federalism
(b) Fundamental duties
(c) Judicial Review
(d) Rule of Law

List-II
1. USSR 2. USA
3. Australia 4. UK

	(a)	(b)	(c)	(d)
(A)	1	2	3	4
(B)	4	3	2	1
(C)	3	1	2	4
(D)	1	3	2	4

24. Which of the following is not a Fundamental Duty as defined in the Article 51A(a) of the Indian Constitution ?
(A) Respect National Flag and National Anthem
(B) Protect Sovereignty and integrity of India
(C) Protect National Monuments
(D) Develop scientific temper

25. Which of the following does not involve a chemical reaction ?
(A) Digestion of food in animal's body
(B) Process of Respiration
(C) Burning Candle wax when heated
(D) Melting of Candle Wax on being heated

26. Which of the following is not oxidation ?
(A) The addition of hydrogen to a substance
(B) The addition of oxygen to a substance
(C) The removal of hydrogen from a substance
(D) None of the above

27. Rancidity can be prevented or retarded by—
(A) By adding anti-oxidants to foods containing fats and oils
(B) By packaging fat and oil containing foods in nitrogen gas
(C) By keeping food in a refrigrator
(D) All of the above

28. Bee sting contains—
(A) An acid liquid
(B) A salt solution
(C) An alkaline liquid
(D) An Alcohal

29. Which of the following is not a use of Bleaching power ?
(A) Bleaching cotton and linen in textile industry
(B) Bleaching of woolen clothes to make them unshrinkable
(C) Healing the wounds
(D) Disinfecting the drinking water

30. Series circuits are disadvantageous for domestic wiring. Why ?
(A) In series circuit, if one electrical appliance stops working the remaining appliances would stop working
(B) All the connections have a single switch
(C) Uniform power supply is not possible
(D) All of the above

31. Which of the following fuels has the highest calorific value ?
(A) Petrol (B) Methane
(C) Charcoal (D) Natural gas

32. Which of the following nuclear power plants in India differs from the group ?
(A) Kaiga Nuclear Power Plant
(B) Kudankulam Nuclear Power Plant
(C) Narora Nuclear Power Plant
(D) Rawatbhata Nuclear Power Plant

33. A diverging mirror is a—
(A) Plane mirror
(B) Convex mirror
(C) Concave mirror
(D) Shaving mirror

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34. Bile juice is secreted in—
(A) Liver (B) Pancreas
(C) Gall Bladder (D) Kidney

35. Which of the following organs is not a part of human respiratory system ?
(A) Nose
(B) Trachea
(C) Lungs and Diaphragm
(D) Pancreas

36. Consider the following statements about blood and choose the correct code given below—
I. Blood is a fluid connective tissue.
II. Red blood corpuscles (RBCs) and white blood cells are living.
III. Plasma and platelets are non-living.
(A) Only I is correct
(B) Only I and II are correct
(C) I, II and III all are correct
(D) Only II is correct

37. Which of the following pairs is not matched correctly ?
(A) Point diversity—The diversity of micro-habitats
(B) Alpha Diversity—The diversity within the species
(C) Gamma diversity—The diversity of an island or a landscape
(D) Epsilon diversity—Regional diversity

38. Which of the following reptiles does not lay eggs ?
(A) Chelone (Green-turtle)
(B) Hemidactylus (House wall-lizard)
(C) Skinks (Small Lizard)
(D) Crocodilus (Muggar)

39. Which of the following diseases affects the liver ?
(A) Jaundice (B) AIDS
(C) Malaria (D) Rabies

40. Which of the following mosquitoes is daytime biting mosquito ?
(A) Aedes aegypti
(B) Anopheles
(C) Culex
(D) None of the above

[See Answer See Page 163]

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(D) To highlight the link between lower sleep and health problems.
(E) To show how hard work and sleepless nights can positively impact nations.

39. What does the author want to convey by the prophetic wisdom of Charlotte Bronte, 'a ruffled mind makes a restless pillow' as mentioned in the passage in Italics ?
(A) Restless Sleep does not necessarily indicate restless mind.
(B) When the mind is hassled about something, it impacts sleep.
(C) All those given as options
(D) Peace of mind is not obtained by those who while away their time.
(E) Sleep is the only basic need which can be compromised without worrying the mind

40. Which of the given words is most opposite to the word IMPAIRED given in bold in the passage ?
(A) enhanced (B) despaired
(C) hysterical (D) rushed
(E) None of those given as options

Answers

1. (D) 2. (C) 3. (C) 4. (D) 5. (D)
6. (A) 7. (E) 8. (B) 9. (C) 10. (A)
11. (D) 12. (C) 13. (E) 14. (E) 15. (C)
16. (B) 17. (E) 18. (A) 19. (C) 20. (C)
21. (D) 22. (E) 23. (B) 24. (A) 25. (C)
26. (C) 27. (C) 28. (B) 29. (A) 30. (E)
31. (B) 32. (E) 33. (D) 34. (E) 35. (B)
36. (D) 37. (C) 38. (D) 39. (B) 40. (A)

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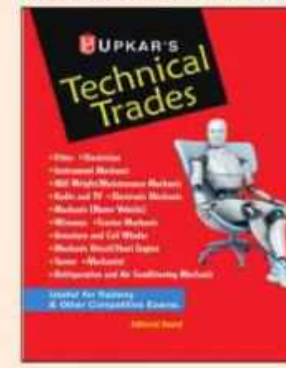
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Conclusion

The ideal view of life which we are searching today had already been given by Hinduism many centuries ago on spiritual countryland India. Though centuries have passed yet those views are relevant in today's scenario. By discarding or labelling backward the knowledge and wisdom of our ancient 'Rishimunis' in name of modernity we made everything chaotic today. The need is not to discard the wisdom but to bring flexibility in it to make it more apt and appropriate to suit the current need of time. Like our youth cannot practise Brahmcharya ashram (celibacy) easily in today's internet life. But if they find their inborn passion early and devote their total energy towards it, they will easily excel in life with knowledge and character.

So to sum up we can say that until one finds one's 'true passion' and channelise that 'passion into profession' one can't get real joy of life ! Then one's profession becomes no more profession or work but brings inner joy, peace and contentment in life.

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