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J.E. CBT

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- ★ UP PSC Range Forest Officer Exam., 17
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- ★ UGC-NET/JRF Exam., 18



**JUNAID AHMAD**  
CSE 2018 (3rd Rank)

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**11**

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**HARI SHANKAR**  
RANK **428**



**ANUJ PRATAP SINGH**  
RANK **441**

## Marks in Philosophy

Students	Marks
Garima Agrawal	274
Veer Pratap Singh	306
Jasleen Kaur	296
Sidharth Goyal	298
Siddhartha Nahar	276
Singhvi R Kundanmal	286
Shaikh Md Zaib Zakir	283
Alok Kumar Tiwari	270
Hari Shankar	295
Anuj Pratap Singh	288
Sudhambika R.	301

**Final Result 22+**

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**EDITOR**

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**REGISTERED OFFICE**

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**ADMINISTRATIVE AND EDITORIAL OFFICE**

1, State Bank Colony  
Opp. Van Chetna Kendra  
Agra-Mathura Bye pass, Agra-282 005  
Tel.: 2531101, 2530966, 4053333  
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Website: www.pdggroup.in  
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Editorial: publisher@pdggroup.in  
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# To Our Readers

Dear Readers,

It is with a sense of great delight that we are presenting to you the June issue of your favourite magazine **Pratiyogita Darpan**. As usual the present issue of the magazine also contains useful material relevant to competitive examinations. Our editorial board and the team of qualified authors take painstaking efforts to present the study material keeping in view the requirements of our esteemed readers. We are sure that if you read it intelligently and wisely, it will go a long way in equipping you with knowledge to face the gruelling battle of the examination and bring you sure success.

We always try to understand the demands and requirements of our readers, their suggestions and changes in the pattern and contents of the competitive examinations. We make all efforts to include them, as far as possible, in further issues of the magazine. It gives us great satisfaction to know that our readers have unanimously endorsed the utility of the magazine.

In the present issue a number of core articles on important national and international events contributed by reputed authors have been given. Some of the representative articles in the present issue of this magazine are : ISRO Launches EMISAT, 28 Foreign Satellites Successfully; PM Modi Honoured with Russia's Highest State Decoration; Subsonic Cruise Missile 'Nirbhay' Successfully Test-fired; US Ends Waiver for India on Iran Oil; India Suspends Cross-LoC Trade with Pakistan; France, Germany Form Alliance to Promote Unity; Parliamentary Elections in Israel : Incumbent PM Netanyahu Pulls off Historic Victory; Nepal in Space : Nepal Launches Its First Satellite; China's Belt and Road Initiative (BRI) Meet in Beijing; Pulitzer Prizes-2019.

The most important section of the Magazine contains a number of question papers selected from various competitive examinations. These are fully solved with relevant hints and short, but clear-cut explanations. All efforts are made to give their error-free solutions. A careful study of and practice session with these papers will be very useful to face any competitive examination.

The columns **Compendium**, **Test Your Knowledge**, **Memorable Points** and **Concetric Quiz** have been widely appreciated as trusted tools for the benefit of our readers. An intelligent study and memorizing of their contents will be highly useful in solving questions in any future examination.

**Pratiyogita Darpan** gives you the best guidance and reading material. It is upto you to make the best use of it for a bright success in any competitive examination.

**Read Pratiyogita Darpan regularly and intelligently. It gives you the power to master your career and shape your destiny.**

With best wishes for your brilliant success and bright future.

Sincerely yours,

**MAHENDRA JAIN**

(Editor)

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## Reward of Good Work is More Work

The great English novelist Charles Dickens said : It is better to wear out than to rust out. What he meant by his statement was that it is better to work to the best of your potential until you die than to sit idle and lead your life without achieving anything. We should all work with full devotion, dedication and sincerity throughout our lives and give the best of ourselves to the society to which we are indebted in so many ways. God has bestowed on us tremendous powers of mind and heart which should be utilized to the fullest in order to have a meaningful and fruitful life. Wherever we serve, we should not take into consideration what we will receive as recompense for our work. We should do our duty with utmost sincerity and mobilise all our resources to perform the duty. If we do that, rest assured, reward will automatically come to us. We shall succeed in all our vocations, in all our tasks and garner great achievements. If we are in some job, public or private, we should make it a point to work to the utmost of our capacity with the highest of dedication at our command, 'The reward of good work is more work' means that our good work will unfailingly satisfy our seniors or superiors and we will be able to climb the ladder of success in our lives. One success will lead to another success and the process will go on until we reach the top. We will get the precious pearls of success only when we dive deep down into the "dark unfathomed caves of ocean" of life. Certainly unflinching and sustained performance of our duties will lead us to the topmost point of the ladder of success and accomplishment, and perhaps this is the road to self-realisation also.

The person who does not do his work with devotion cannot be called true to himself. Some would go to the extent of saying that such a person is his own enemy. Should that person be called honest to himself who does not do his work with full devotion ? The person who does not put his heart and soul in his duties can perhaps never be successful in his life. One who does not do his work with devotion often leaves his work incomplete and puts forth many excuses.

Some persons consider earning their livelihood as a burden. In our opinion such persons are not aware of the law of nature that first sign of life is metabolism, that is to earn your food for sustenance. This is not only necessary but an indispensable part of life. **While earning one's livelihood the person gets opportunity to learn many things and do progress and development.** This affords opportunity to develop efficiency, and forbearance and politeness. These are such qualities as are considered the signs and blessings of humanity. It is rightly said that through hard work one gets name and fame. One who grumbles and makes complaints is neither able to do his work well nor earn sympathy or goodwill of the people. All complaint is against the law of progress. At the most he can make himself an object of pity and indifference. In short, when we do not do work with heart and soul, we shall never be able to do our work well. On the other hand the society considers us a worthless person and the worst of it happens that our

energy does not work to its full extent. To work continuously means to get purified and do constant progress. One who wants to do progress should think how to do his work in the best way and try to add something new to it. It has been said in **Shrimad-bhagwat Geeta** that "स्वधर्मं विधुर्न श्रेयः" whatever may be the work it should be done with heart and soul or even at the cost of one's life. Generally people do not do work with devotion and display carelessness about their work. Such persons either consider that they would lose nothing if the work is left incomplete or they think themselves superior to the work in hand. In our opinion such persons neither know the sanctity of the work nor do they have any knowledge of dealing of the society.

In short good work brings more work and pays good dividends. Meaningless to add that good and efficient work is always the result of hard work. A person who does a work in a good manner and puts in it hard labour naturally makes himself important and catches the eye of the people. The art of the artist would be called **defective** to whom lovers of art do not go and assemble around.

In official life if an officer asks a particular subordinate to do various things, it means the officer is pleased with his work and places full faith in him. In practical life everyone loves work and not the person. History tells us that only those persons have been successful in life who have put in hard labour and devotion in their work. Examples are many where

persons have made spectacular progress in their service career. As a matter of fact our working field is the laboratory where latent powers are developed and the man sets new standards and the best part of the personality is brought out.

Your work is your duplicate form and you cannot be separate from it. The work may be of any type. You can make it respectable by doing it in a respectable way. The form you impart to a work gives you your social image, that is, your image in the society is formed according to the way you carry out your work or duties. Whatever work you do, you should ensure that it does maximum good of the maximum number and people develop the feeling of respect for you. For this it is necessary that your feelings and tendencies are always of a high order. You should always keep in mind whether the place or post which you occupy is getting higher esteem or not in the eyes of the people.

Generally it happens that the person does not have interest in his work if the same is not to his liking. So the person must learn to develop interest in any and every work which he is asked to do. This gives extra confidence and social respect to the man. If one does not do it and confines himself to his likings then the gates of success will not open before him. If you feel the work is not up to your standard then it is necessary that you do it in such a way that it acquires higher standards and comes to your status.

Florian

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# Nation This Month

## ISRO Launches EMISAT, 28 Foreign Satellites Successfully

- **ISRO Launches EMISAT, 28 Foreign Satellites Successfully**
- **US Approves \$ 2.6 Billion Sale of 24 Naval Choppers to India**
- **UPSC Civil Services Exam., 2018 Final Result Announced; Kanishk Kataria Tops Exam., 10 Women in Top 25 List**
- **India Doesn't Subscribe to China's Belt and Road Initiative (BRI), Spurns Its Invite Again**
- **India, Brazil Ink Treaty for Repatriation of Prisoners**
- **India Retains Top Position in Remittances : World Bank Report**
- **PM Narendra Modi Honoured with Russia's Highest State Decoration**
- **Unprecedented US Support for India's A-Sat Test**
- **Sub-Sonic Cruise Missile 'Nirbhay' Successfully Test-fired**
- **India, Sweden Announce Collaboration**
- **India Suspends Cross-LoC Trade with Pakistan**
- **Portuguese Defence Minister Visits India (April 17-18, 2019)**
- **US Ends Waiver for India on Iran Oil**

In a first in India's space history, Indian Space Research Organisation's PSLV-C45 on April 1, 2019 injected electro-magnetic intelligence satellite EMISAT, 28 foreign satellites and three experimental payloads integrated with the last rocket stage in three different orbits in a single mission.

EMISAT, developed by the Defence Research and Development Organisation (DRDO) has the ability to detect radars and sensors and will boost the surveillance capabilities of the country.

After the successful lift-off of the rocket at 9-27 am from the Sriharikota launch centre, ISRO chairman K. Sivan said, "Today, PSLV-C45 has successfully injected ISRO-made EMISAT in 748 km orbit as well as 28 customer satellites in the 504 km orbit. After completing its main function, the PS4 (fourth stage) is now marching towards the 485 km orbit to do its function as orbital platform for experiments."



The Indian Space Research Organisation (ISRO) scripted history on April 1, 2019 by successfully launching EMISAT, a military satellite and 28 foreign nano satellites on-board its polar rocket from Sriharikota in Andhra Pradesh. This is the first time a PSLV will place objects in three different orbits, ISRO chairperson Dr. K. Sivan said.

### Contributions of Industry

Elaborating on the experimental payloads, the ISRO chief said, "This time three innovative experiments have been attached. One is AMSAT (Radio Amateur Satellite Corporation, Automatic Identification System and the third one is built by the students of IIST (Indian Institute of Space Science and Technology)." He said, "Today's mission is special for ISRO on many counts as it was the first time a PSLV rocket was launched with four strap-on motors. The mission has three different orbits for the very first time. The fourth stage was made an orbital platform for experiments and there was also a new team for the PSLV." Sivan said the industry contributed a lot for the building of the rocket and satellite "Ninety-five per cent of the rocket hardware and 60-65% of satellite components were fabricated by the industry," he said.

### Viewer Gallery

For the first time ISRO set up a viewer gallery for the public and around 1,200 viewers enjoyed the show.

"As many as 1,200 viewers enjoyed the mission launch today. The next mission we will allow 5,000 viewers and subsequently, it will be increased to 10,000 in future," Mr. Sivan said. The PSLV-C45 carried 28 international customer satellites from four countries—Lithuania, Spain, Switzerland and the US. All these satellites were launched under commercial arrangements.

On the future missions lined up for ISRO, Sivan said after completing all these wonderful missions, the space agency was scheduled to launch 30 missions by the year.



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### Pride of Place

PSLV-C45, carrying EMISAT and 28 international satellites, marked the first mission of PSLV-QL, a new variant of PSLV with four strap-on motors.

**EMISAT** : It is a satellite built around ISRO's Mini Satellite-2 bus. It is intended for electromagnetic spectrum measurement

436 kg	748 km	800 W
Lift-off weight	Altitude	Power

### Next Mission

PSLV-C46 will launch RISAT-28 in May 2019.

### Payloads

The payloads carried by PSLV-C45 are Automatic Identification System from ISRO, Automatic Packet Repeating System from AMSAT, India and Advanced Retarding Potential Analyzer for ionospheric studies from the Indian Institute of Space Science and Technology.

### Customer Satellites

Country	Name	No. of satellites
Lithuania	Blue Walker1	1
	M6P	1
Spain	Aistechsat-3	1
Switzerland	Astrocast-2	1
US	Flock-4A	20
	LEMUR	4

## US Approves \$ 2.6 Billion Sale of 24 Naval Choppers to India

### Key Highlights

- The choppers are armed with Hellfire missiles for anti-submarine warfare.
- India had also inked the over \$ 3 billion deal with Russia for the 10 year lease of an Akula-class nuclear powered submarine.
- The new chopper deal of the US with India will be through the FMS (foreign military sales) route of the US.

The US has approved the \$ 2.6 billion sale of 24 naval multi-role MH-60 'Romeo' helicopters, armed with Hellfire missiles, MK-54 torpedoes and precision kill rockets for patent anti-submarine warfare capabilities to India. The actual deal is expected to be inked by September, 2019.

A section of the media was the first to report in November last year that the NDA government had issued the 'letter of request' to the US government for the mega acquisition of the heavy-duty helicopters manufactured by Sikorsky-Lock heed Martin, which are slated for delivery in the 2020-24 time frame.



The Trump administration on April 2, 2019 notified the US Congress that it has approved the sale of 24 MH-60R multi-mission helicopters.

The Navy is desperate to induct the MH-60R helicopters because its warships are virtually bereft of such helicopters at a time when Chinese nuclear and diesel-electric submarines are making regular forays into the Indian Ocean Region (IOR). The 140 warship force has just about a dozen old Sea King and 10 Kamov-28 anti-submarine warfare helicopters operational as of now.

The Trump administration on April 2, 2019 notified the US Congress that "it has approved the sale of 24 MH-60R multi-mission helicopters, which will "help strengthen the US-India strategic relationship and improve the security of a major defence partner, which continues to be an important force for political stability, peace and economic progress in the Indo-Pacific and South Asia region".

### Government-to-Government Deal

"The proposed sale will provide India the capability to perform anti-surface and anti-submarine warfare missions along with the ability to perform secondary missions including vertical replenishment, search and rescue and communications relay," said the US Congressional notification. With the **government-to-government chopper** deal, India hopes to provide yet another sweetener to the Trump administration, which is yet to grant a waiver for New Delhi's \$ 5-43 billion acquisition of the Russian S-400 Triumf missile systems through a contract inked October last year.

Since then, India has also inked the over \$ 3 billion deal with Russia for the 10-year lease of an Akula-class nuclear powered submarine. Under its new CAATSA (Countering America's Adversaries Through Sanctions Act) law, the US seeks to prevent countries from buying Russian weapons or Iranian oil.

The US, incidentally, has made military sales worth \$ 17 billion to India since 2007. The new chopper deal will also be through the FMS (foreign military sales) route of the US. India has brought most of its weapon systems from the US, like the C-17 Globemaster-III strategic airlifters, C-130J 'Super Hercules' planes and M-777 ultra-light howitzers, through the FMS programme.

## UPSC Civil Services Exam., 2018 Final Result Announced; Kanishak Kataria Tops Exam., 10 Women in Top 25 List

Union Public Service Commission (UPSC) declared the final result of Civil Services Examination, 2018 on April 5, 2019.

**Kanishak Kataria** B.Tech. from IIT Bombay, bagged the first rank in the result. **Srushti Jayant Deshmukh** was the topper among women candidates, securing an overall fifth rank.

**Akshat Jain**, IIT Guwahati graduate, bagged second rank in the UPSC 2018 exam. He was followed by Junaid Ahmad of Jamia Millia Islamia's Residential Coaching Academy.

Kanishak Kataria, who topped India's highest examination, hails from a **Dalit family**, a feat that is testimony to the progress clocked by the socially disadvantaged and which could upend the popular notions of 'merit'.

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This is the second instance in four years of a Dalit topping in one of the most intensely competitive examinations, with the Tina Dabi achieving the feat in 2015.

The top 25 candidates comprise 15 men and 10 women. It was the first attempt for 23 year old Srushti, a chemical engineer from Rajiv Gandhi Proudhyogiki Vishwavidyalaya.

In all 759 candidates—577 men and 182 women—have been recommended for appointment to various All India services like the IAS and IPS.

The first ranker Kataria hopes to put his qualifications to good use by helping with digitisation in the government.

The UPSC Civil Services main exam, 2018 was conducted from September 28 to October 7, 2018. The interview rounds along with the personality tests began February 4, 2019.

The candidates have been recommended for appointment to : (i) Indian Administrative Service; (ii) Indian Foreign Service; (iii) Indian Police Service; (iv) Central Services, Group 'A' and Group 'B', the official notification reads.

A total of 10,65,552 candidates applied for this examination, out of which 4,93,972 candidates actually appeared.

A total of 10,468 candidates qualified for appearance in the written (main) examination. A total of 1994 candidates qualified for the personality test conducted in February-March, 2019. In all 759 candidates made it to the selected list.



Kanishk Kataria (L) topped, while Akshat Jain took the second rank

China was hoping that India would review its position on BRI and participate in the Forum on this occasion, keeping in mind the remarkable turnaround in ties last year, as evident from the first informal summit between PM Narendra Modi and President Xi Jinping in Wuhan in April 2018.

The invite to participate in the Forum meet was delivered to MEA by Chinese authorities in March, 2018 itself but India responded by reiterating its concerns over CPEC.

The 'Wuhan spirit' was dented this year by China's decision to again put on 'technical' hold a UN resolution to ban Pakistan-based terror group JeM chief Masood Azhar.

This was the fourth time China blocked a ban on Azhar. Beijing's action made it even more difficult for India to think in terms of participating even at a junior level in the Forum.

While India is not averse to working with China, it wants certain international norms to be followed including those on transparency, economic feasibility and also "mutual respect for sovereignty and territorial integrity".

### China's Belt and Road outreach to Nepal won't work, says think tank

China's ambitious Belt and Road initiative (BRI) is not likely to work with Nepal due to a number of economic, infrastructure and environmental concerns, according to Amsterdam-based European Foundation for South Asian Studies (EFSAS), which has closely studied the ground situation.

In May 2017, Beijing signed an MoU on the BRI with Kathmandu for the purpose of opening new connectivity routes through building roads, railways, ports and aviation.

At the heart of the deal lies the endeavour of building a railway line through the rugged Himalayan mountains, which will link the Chinese-controlled region of Tibet with Kathmandu.

"On one hand, the question arises whether the transit project is technically feasible considering the complex geological terrain and arduous engineering work, according to a statement from Nepal's railway department, which says 98.5% of the railway line will have bridges and tunnels. On the other hand, the project could cost up to \$ 7-8 billion," argued a research by Amsterdam-based European Foundation for South Asian Studies (EFSAS).

EFSAS research analyst Yoana Barakova said, "Since financial arrangements have not yet been officially made, it remains to be seen whether Nepal will contemplate on the faith of its South Asian neighbours like Pakistan and Sri Lanka, which have fallen prey to Chinese irredeemable debts or will it decide to follow the same doomed path."

### India Doesn't Subscribe to China's Belt and Road Initiative (BRI), Spurns Its Invite Again

India turned down an official invite from China to attend the second Belt and Road (BRI) forum which took place late in April, 2019.

India had also boycotted the first meet held in Beijing in 2017 as the government has resolutely maintained that China's BRI undermines India's sovereignty in the form of the China-Pakistan Economic Corridor (CPEC) which passes through the disputed Gilgit-Baltistan region.



China was hoping India would review its position on BRI keeping in mind the turnaround in ties last year, evident from the 1st informal summit between PM Modi and President Xi Jinping in April 2018.

### India, Brazil Ink Treaty for Repatriation of Prisoners

India and Brazil have sealed a treaty for repatriation of convicted prisoners so that they can serve their remaining jail term in their own country. According to a home ministry notification, the Instruments of Ratification by India and Brazil were exchanged on January 24, 2019. A

# 24 LAKH GOVERNMENT JOBS by 31<sup>ST</sup> MARCH 2020



The jobs crisis in India is now a national emergency! Unemployment is at a 45 year high and more than 3 Crore Indians are looking for employment. The Congress has a plan to solve this crisis.

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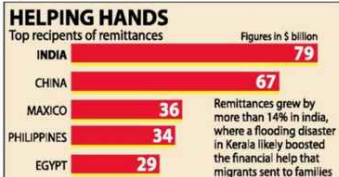
sentenced person will be transferred under this agreement only on the conditions that the sentenced person is a national of the receiving state, the death penalty has not been imposed on the sentenced person, the judgement is final and there is no inquiry, trial or any other proceeding is pending against the sentenced person in transferring State.

### India Retains Top Position in Remittances : World Bank Report

India retained its position as the world's top recipient of remittances with its diaspora sending a whopping \$ 79 billion back home in 2018, the World Bank said in a report on April 8, 2019.

India was followed by China (\$ 67 billion), Mexico (\$ 36 billion), the Philippines (\$ 34 billion) and Egypt (\$ 29 billion), the global lender said.

With this India has retained its top spot on remittances, according to the latest edition of the World Bank's migration and development brief.



Over the last three years, India has registered a significant flow of remittances from \$ 62.7 billion in 2016 to \$ 65.3 billion 2017.

"Remittances grew by more than 14 per cent in India, where a flooding disaster in Kerala likely boosted the financial help that migrants sent to families," the bank said.

In Pakistan, remittance growth was moderate (seven per cent), due to significant declines in inflows from Saudi Arabia, its largest remittance source. In Bangladesh, remittances showed a brisk uptick in 2018 (15 per cent).

According to the report, remittances to low and middle-income countries reached a record high of \$ 529 billion in 2018, an increase of 9.6 per cent over the previous record high of \$ 483 billion in 2017.

Global remittances, which include flows to high-income countries, reached \$ 689 billion in 2018, up from \$ 633 billion in 2017, it said.

The Bank said, remittances to South Asia grew 12 per cent to \$ 131 billion in 2018, outpacing the six per cent growth in 2017.

"The upsurge was driven by stronger economic conditions in the United States and a pick-up in oil prices, which had a positive impact on outward remittances from some GCC countries," it said.

### PM Narendra Modi Honoured with Russia's Highest State Decoration

Prime Minister Narendra Modi has been honoured with Russia's highest state decoration, the **Order of St. Andrew the Apostle** for his role in promoting close ties between the two countries.

The award came days after the United Arab Emirates announced conferring Modi with the 'Order of Zayed'.

#### Exceptional Service

The Russian government said Modi is given the highest state decoration of Russia for 'exceptional service' in promoting special and privileged strategic partnership between Russia and India and friendly relation between the two nations.

### Global Recognition : Major International Awards Conferred on PM Narendra Modi

#### Zayed Medal of UAE

UAE announced its highest decoration for PM Modi on April 4, 2019, in recognition of his 'pivotal role' in strengthening ties between the two nations.

#### Seoul Peace Prize 2018

Conferred on PM Modi for his contributions to the growth of the Indian and global economies, crediting 'Modinomics' for reducing social and economic disparity between the rich and the poor.



#### UN Champions of the Earth Award 2018

The highest environmental honour of the UN. Modi received the award on October 3, 2018 from UN secretary general Antonio Guterres. He was selected in the leadership category for his pioneering work in championing the International Solar Alliance and also as acknowledgement for his unprecedented pledge to eliminate single-use plastic in India by 2022.

#### King Abdullahiz Sash Award of Saudi Arabia

Prime Minister Narendra Modi was on April 3, 2016 conferred with Saudi Arabia's highest civilian honour 'King Abdulaziz Sash' by King Salman bin Abdulaziz at the Royal Court of Saudi Arabia. Among other notable recipients of this honour are former US President Barack Obama and British ex-PM David Cameron.

#### Grand Collar of the State of Palestine

On February 10, 2018, Modi was conferred with the award by Palestinian President Mahmoud Abbas, recognising his contributions in promoting relations between India and Palestine.

#### Amir Abdulla Khan Award of Afghanistan

PM Modi, during his visit to Afghanistan, was on June 4, 2016 conferred with the Amir Amanullah Khan Award, the highest civilian honour of the country by its President, Ashraf Ghani.



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A Russian official said the 'Order of St. Andrew the Apostle' is awarded to prominent statesmen, public figures and those working in the fields of science, culture and arts in recognition of their exceptional services in promoting prosperity and glory of Russia. The order can also be awarded to foreign heads of state for outstanding services.

It is the highest order of the Russian Federation. Its former awardees include President of China Xi Jinping, President of the Republic of Kazakhstan Nursultan Nazarbayev and President of the Republic of Azerbaijan Geydar Aliyev.

### Other Awards

It may be recalled that PM Modi had earlier been honoured with several other prestigious awards. These awards include the following :

(1) **Philip Kotler Presidential Award**, conferred on January 14, 2019 for his outstanding leadership of the nation. This award has been named after Professor Philip Kotler, a world renowned Professor of Marketing at Northwestern University, Kellogg School Management.

(2) South Korea's prestigious **Seoul Peace Prize** 2018 awarded on October 24, 2018 for his contribution to the growth of the Indian and global economies, crediting 'Modinomics' for reducing social and economic disparity between the rich and the poor. PM Modi became the 14th recipient of this coveted award.

(3) **UN Champions of the Earth Award**, 2018 awarded on September 26, 2018. This is the highest environmental honour of the United Nations. Mr. Modi received this award on October 5, 2018 by UN secretary General Antonio Guterres.

(4) **Grand Collar of the State of Palestine** was awarded to Mr. Modi on February 10, 2018 by Palestinian President Mahmoud Abbas recognising his contributions in promoting relations between India and Palestine.

(5) **Amir Amanullah Khan Award of Afghanistan** was conferred on Mr. Modi on June 4, 2016. It is the highest civilian honour of Afghanistan conferred on him by Afghan President Ashraf Ghani.

(6) **King Abdullahiz Sash Award of Saudi Arabia** was conferred on Mr. Modi on April 3, 2016, by Saudi King Salman bin Abdullahiz at the Royal Court of Saudi Arabia.

## Unprecedented US Support for India's A-Sat Test

### Key Highlights

- American leadership says it understands India's concerns about space threats.
- It may be recalled that in the immediate aftermath of the 1998 nuclear tests, the US had sharply castigated India.
- Things have fundamentally changed since then, particularly because US lawmakers and the policy makers have understood India's compulsion in view of the fact that China had already carried out the test in 2007.

Some two decades after Washington came down like a ton of bricks on India for its Shakti nuclear tests, the United States on April, 2019 expressed unprecedented understanding and support for New Delhi's security concern while defending its recent space weapon test.

A hearing of the powerful US Senate Armed Services Committee on the proposal to establish a United States Space Force was the forum for lawmakers and defence officials to voice understanding of India's compulsions in going in for an anti-satellite test while seeking to establish global space norms and protocol that would include New Delhi. "What should the rules environment be and what should we be doing to try to promote rules? India is an ally. We're not talking about an adversary doing something. We're talking about them testing some capacity, but then that creates challenges for all kinds of uses of space. How should we be solving problems like that?" Virginia Senator Tim Kaine asked at the hearing, opening the floor for the Pentagon to express its support for New Delhi.

"The first lesson from the Indian A-Sat is just the simple question of why did they do that. And the answer should be... that they did that because they are concerned about threats to their nation from space. And therefore, they feel they have to have a capability to defend themselves in space."

—General John E. Hyten, Commander  
Gen, US Strategic Command



"The first lesson from the Indian A-Sat is just the simple question of why did they do that. And the answer should be, I think to all the committee looking at it, is that they did that because they are concerned about threats to their nation from space", responded US Strategic Command's commander general John E. Hyten adding, "And therefore, they feel they have to have a capability to defend themselves in space."

It was an unprecedented moment in US-India relations, where despite close ties, administrations spanning both Democrats and Republicans have been leery of any significant advance by New Delhi in the military technology realm. In the immediate aftermath of the 1998 nuclear tests, the US secretary of state Madeleine Albright had castigated India saying it had 'dug a hole' for itself by going overtly nuclear, leading her Indian counterpart Jaswant Singh to retort that "culturally, Indians do not dig holes to bury themselves."

That snarky exchange was a distant memory on April 11, 2019's amicable Senate discussion as American policy makers sought to understand New Delhi's compulsions. General Hyten, in fact, echoed some of the arguments from New Delhi that India went in for a space weapons test because, as it happened with the nuclear non-proliferation regime, it did not want to be left out of any future global protocol or architecture on the subject.

Senator Kaine also drew a distinction between a similar Chinese test in 2007 which generated 100,000 pieces of debris, compared to the 400 from India's test. NASA had initially termed India's test and the debris it created as a 'terrible, terrible thing' before it was told by the White House to reel back criticism and continue cooperation with India.

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## Sub-Sonic Cruise Missile 'Nirbhay' Successfully Test-fired

India on April 15, 2019 successfully test-fired its first indigenously designed and developed long-range and sub-sonic cruise missile 'Nirbhay' from a test range in Odisha.

The state-of-the-art missile, which can be deployed from multiple platforms, was test-fired at 11:44 am from launch complex-3 of the Integrated Test Range (ITR) at Chandipur near Balasore, sources in Defence Research and Development Organisation (DRDO) said.

Describing the trial 'successful', they said that missile, which is capable of loitering and cruising at 0.7 Mach at altitude as low as 100 metre, covered the designated target range in 42 minutes and 23 seconds.

The flight test achieved all the mission objectives, right from lift-off till the final splash, boosting the confidence of all scientists associated with the trial, sources said, adding that it has an engine with rocket booster and turbofan/jet.

The sophisticated missile took off in a programmed manner and all critical operations like launch phase, booster deployment engine start, wing deployment and other parameters were demonstrated through autonomous way point navigation.

"The missile majestically cruised and covered its main range", they said, adding that it was tracked with the help of ground-based radars and other parameters were monitored by indigenous telemetry stations developed by DRDO.

"The last successful trial of 'Nirbhay' cruise missile was conducted on November 7, 2017.



DRDO test-fired indigenously designed and developed Long Range Sub-Sonic Cruise Missile 'Nirbhay' from the Integrated Test Range (ITR) at Chandipur in Odisha on April 15, 2019.

## India, Sweden Announce Collaboration

India and Sweden on April 5, 2019 announced the **India-Sweden Collaborative Industrial Research and Development Programme** on the occasion of the Sweden-India Innovation Partnership AI for All Summit.

The programme will address a range of global challenges through technology and innovation. The joint-programme is co-funded by Indian Department of Science and Technology (DST) and Sweden's Innovation Agency—Vinnova.

The new programme brings together the world class excellence of Sweden and India to address challenges in

the area of Smart Cities and Clean Technologies and Digitalization/Internet of Things (IoT). Full-Scale R&D projects, focused on co-development of new products, processes or technologies; product adaptation projects will be funded under this new programme.



Sweden and India come together to address joint challenges.

Vinnova will provide funding to Swedish side participants upto 2,500,000 Swedish Krona as grant. On the Indian side, conditional grant of upto 50% with a limit of INR 1.5 crores per project to Indian project partners to be provided. The Sweden-India science and innovation partnership has gone from strength to strength in last couple of years and high-level diplomatic visits have boosted interest in bilateral collaboration between the two countries. The Swedish government has earmarked an additional 50 million SEK to its innovation agency Vinnova to commence and inaugurate the innovation partnership with India.

Last year, in April 2018, during Prime Minister Modi's visit to Sweden, India agreed to deepen the collaboration through the **Joint Declaration on Innovation Partnership for a Sustainable Future**. The partnership aims to increase impact of bilateral cooperation in innovation, science and technology.

## India Suspends Cross-LoC Trade with Pakistan

India has suspended the trade across the Line of Control (LoC) with Pakistan from April 19, 2019 after probe agencies found the route was being 'misused' by elements from the neighbouring country to smuggle illegal weapons, drugs and false currency, a government order said on April 18, 2019.

The Ministry of Home Affairs said a probe conducted by the National Investigation Agency (NIA) had revealed that some individuals, who have crossed over to Pakistan and joined militant organisations, have opened trading firms there and these were under the control of militant organisations and were engaged in the LoC trade.

Noting that India had already withdrawn the **Most Favoured Nation (MFN)** status to Pakistan after the Pulwama terror attack, it said the latest action has been taken after receipt of inputs that "in order to evade the constant higher duty, LoC trade is likely to be misused to a much larger extent".



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"It has, therefore, been decided by the government to suspend the LoC trade at Salamabad and Chakkan-da-Bagh in Jammu and Kashmir with immediate effect."

## Portuguese Defence Minister Visits India (April 17-18, 2019)

Portuguese Minister for National Defence Joao Gomes Cravinho was on an official visit to India in the third week of April, 2019. Guard of Honour was accorded to the visiting Portuguese dignitary on April 17, 2019 at Rashtrapati Bhawan in New Delhi. Defence Minister Nirmala Sitaraman was also present during the Guard of Honour. Delegation level meeting was also held to enhance defence and military ties between the two countries.

Portuguese defence minister's visit began with an homage at the National War Memorial followed by the meeting with the Indian counterpart and ended with a meeting with the Chief of Integrated Defence Staff.

India and Portugal are exploring the possibility of joint defence cooperation in the field of aviation including support and maintenance of Embraer aircraft and shipbuilding.

"Portugal has a vibrant defence industry and we are looking to partner India under the **Make in India** programme. Portugal specialises in non-lethal dual use items. We have unit of Embraer in Portugal and India has Embraer in its fleet. Portugal would be willing to assist India's set of Embraer on Indian territory", Portuguese defence minister Joao Gomes Cravinho told ET in an exclusive chat during his visit to India.

Cravinho who had earlier served as EU's envoy to India also identified ship building as another area of potential cooperation. Besides, Portugal is also ready to assist Indian armed forces with state-of-art clothing that uses nano-technology.

## US Ends Waiver for India on Iran Oil

Exemptions from sanctions for a 180-day period enabled imports of commodity.

The US will not renew exemptions from its sanctions for importing oil from Iran, US Secretary of State Mike Pompeo announced on April 22, 2019.

The exemptions were granted last November for a 180-day period for India and were due to expire on May 2, 2019.

### Pressure Campaign

"Today we are announcing the United States will not issue any additional Significant Reduction Exceptions [SREs] to existing importers of Iranian oil. The Trump Administration has taken Iran's oil exports to historic lows and we are dramatically accelerating our pressure campaign in a calibrated way that meets our national security objectives while maintaining well supplied global

oil markets," Mr. Pompeo said via a statement released on April 22, 2019.

"We will continue to apply maximum pressure on the Iranian regime until its leaders change their destructive behaviour, respect the rights of the Iranian people and return to the negotiating table."

India, China and US allies Japan, South Korea and Turkey will be the most impacted by the non-renewal of waivers. The other three exempted countries—Italy, Greece and Taiwan—have already reduced their imports to zero.

"We are going to zero. We are going to zero across the board," Mr. Pompeo told the press.

### US Warns nations against trade with Iran

Mr. Pompeo warned nations against interacting with Iran in violation of the sanctions. "Any nation or entity interacting with Iran should do its diligence and err on the side of caution. The risks are simply not going to be worth the benefits", Mr. Pompeo said.

The US has tried to allay fears that oil markets will be impacted following the decision to stop exemptions. Organization of the Petroleum Exporting Countries (OPEC), the global oil cartel led by Saudi Arabia, has been coordinating with Russia to cut oil supply since January.

"Saudi Arabia and others in OPEC will more than make up the Oil Flow difference in our now Full Sanctions on Iranian Oil," US President Donald Trump tweeted on April 22, 2019.

### India may stop oil imports from Iran

Petroleum Minister Dharmendra Pradhan on April 23, 2019 said the country plans to increase its oil imports from major oil producing nations other than Iran, indicating that it will be according to the US plan to reduce Iran's oil exports to zero.

The US on April 22 announced that it would be cancelling the waivers from sanctions it had granted eight countries, including India, allowing them to import oil from Iran. Following the revocation of this waiver, any country violating the ban would face US sanctions.

Meanwhile, Iran's Supreme leader Ayatollah Ali Khamenei castigated American move. On April 24, 2019 he called the end of oil sanction waivers by the US a 'hostile measure' that won't be left without a response. He said that Iran will continue to export oil.

### Chabahar Port Project not to be impacted

On the other hand, there is some relief for India in as much as the strategic Chabahar port project, being developed by India in Iran, is a separate exception and will not be impacted by US President Trump's decision not to renew exemptions, a State Department Official said.

The Chabahar port, considered a gateway to golden opportunities for trade by India, Iran and Afghanistan with central Asian countries, is located on the Indian Ocean in the Sistan and Baluchistan province of Iran.

The port, which is easily accessible from India's western coast, is increasingly seen as a counter to Pakistan's Gwadar Port which is being developed with the Chinese investment.





# World This Month

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- Trump Vetoes Measure to End US Involvement in Yemen War
- Ukrainians Elect Comedian Zelensky as Next President
- North Korean Leader Kim Jong-un Visits Russia : Kim, Putin Vow to Seek Closer Ties
- China's Belt and Road Initiative (BRI) Meet in Beijing (April 25-27, 2019)

## Pakistan Scraps Trials in Military Courts

Pakistan scrapped terrorism trials before special military courts after the tribunal's mandate expired on April 1, 2019, ending a measure that had been in place for over four years to help authorities curb militant attacks, a government minister said.

The country resumed military trials for terror suspects in 2015 and lifted a moratorium on the death penalty after a Taliban attack in December 2014 on a school in Peshawar killed more than 150 people, mostly young students. Information Minister Fawad Chaudhry said the courts were re-introduced under special circumstances and 'performed well'.

"We were near to eliminating terrorism," he added.

Chaudhry said Prime Minister Imran Khan's government could not bring the matter of extending the courts before Parliament, where opposition parties challenge his every move. The measure had to be backed by two thirds of lawmakers in the 342-seat chamber to pass. Terrorism cases will now be handled by regular courts, notorious for their bureaucracy and slow justice.

Khan came to power after elections last summer, promising to clean house and do away with rampant corruption.

He has repeatedly demanded that former Prime Minister Nawaz Sharif and former President Asif Zardari return 'looted money'. Sharif is currently serving a seven-year jail term for corruption and Zardari is facing a money laundering probe. Zardari's aide Farhatullah Babar said his party would not support extending the military courts. "The government should strengthen the regular court system instead," Babar said.

## France, Germany Form Alliance to Promote Unity

### Key Highlights

- Two foreign ministers meet, discuss ways to promote cooperation.
- The objective is also to support multilateralism as a substitute for narrow nationalism.
- The aim is also to work for tackling climate change and address the consequences of new technologies.
- The alliance is also a response to the risk of shattering the post-World War-2 order.

France and Germany have announced the launch of an **Alliance for Multilateralism** to promote global cooperation at a time of rising nationalism in Europe, the US and elsewhere.

### Objectives

France's foreign minister Jean-Yves Le Drian told a news conference with Germany's foreign minister Heik Mass that their **first objective** is to show that states that "support multilateralism and support the United Nations remain the majority in the world."

**The second objective**, he said, is to create a network of countries ready to support multilateralism and cooperate including to fight inequality, tackle climate change and address the consequences of new technologies.

Le Drian said the alliance also wants "to show the world what could be the consequences of unilateralism and isolationism enabling nationalism and extremist speeches to flourish."

He said the alliance is a response to the risk of shattering the post-World War 2 order that established the United Nations and other international institutions.



**Let's work Together : French President Emmanuel Macron (right) welcomes German Chancellor Angela Merkel before a meeting at the Elysee Palace in Paris on March 26, 2019.**

UN secretary general Antonio Guterres opened last September's annual gathering of world leaders at the General Assembly declaring that global cooperation is the world's best hope and warning that "multilateralism is under fire precisely when we need it most."

US President Donald Trump's speech poured scorn on multilateralism as he touted his 'American First' policy, and rejected "the ideology of globalism".

Nonetheless, **General Assembly President Maria Espinosa Garces** said at the end of the week-long meeting during which all 193 UN member nations spoke that one of its major achievements was strong global backing for the UN and multilateralism.

Le Drian said cooperation is never easy but it is key to security "because there is security only if it is collective, and it is the best guarantee for long-lasting peace."

He said France and Germany will pursue the initiative in the coming months and try to convince as many countries as possible to join before leaders gather this September.

Le Drian noted that he and Maas discussed the alliance with Canada and Japan, but he made no mention of the US.

Asked about possible support from the Trump administration, and whether it had been contacted, Le Drian said "Whoever wants to join us can join us it is against nobody."

Mass said he hasn't talked to Trump about it yet.

"This alliance is an inclusive alliance," he said. "So we don't want a situation where countries are left out. We don't lock out anyone. But, of course, we see multilateralism is under threat... and all of those who want to join such an initiative (they) also declare themselves to be multilateralists."

"We would be happy, of course, if the US were to join such an initiative, but this initiative has the aim to promote and strengthen the rules-based order and strengthen the international order," Mass said.

## Brunei Introduces Stoning to Death for Gay Sex, Adultery

Brunei on April 3, 2019 introduced harsh new Sharia Laws, including death by stoning for adultery and gay sex,

despite a storm of global criticism from politicians, celebrities and rights groups.

The penal code in the tiny country on Borneo island—ruled by the all-powerful **Sultan Hasanal Bolikiah**—fully came into force following years of delays.

The laws, which also include amputation of hands and feet for thieves, make Brunei the first place in East or Southeast Asia to have a Sharia penal code of the national level, joining several mostly Middle Eastern countries.



**Sultan Hassanal Bolkiah called for stronger Islamic teachings in a public address.**

Rape and robbery are also punishable by death under the code and many of the new laws, such as capital punishment for insulting the Prophet Mohammed, apply to non-Muslims as well as Muslims.

The decision to push ahead with the punishments has sparked alarm around the world, with the UN labelling them 'cruel and inhumane' and celebrities, led by actor George Clooney and pop star Elton John, calling for Brunei-owned hotels to be boycotted.

In a public address to mark a special date in the Muslim calendar, the sultan called for stronger Islamic teachings but did not mention the new penal code.

"I want to see Islamic teachings in this country grow stronger," he said in the nationally televised speech at a convention centre near the capital Bandar Seri Begawan.

The sultan, who has been on the throne for over five decades also insisted that Brunei was a 'fair' country.

## Tensions, Conflicts Galore in West Asia Triggering Arms Sales in the Region : Monitor

Saudi-Iran tensions, war in Yemen and hostilities between Qatar and a Saudi-led alliance have triggered a phenomenal increase in arms imports to West Asia, according to Stockholm-based arms trade monitor SIPRI.

During 2014-2018, arms sales to West Asia have gone up by 87% as compared to 2009-2013, showed figures released in March by the **Stockholm International Peace Research Institute (SIPRI)** in its five-yearly report "Trend in International Arms Transfers 2018."

West Asia is the only region that witnessed a rise in arms imports in the 2014-2018 period while the numbers fell in the rest of the world.

North and South America saw a 36% decrease, Europe 13%, Asia and Oceania 6.7%, and Africa 6.5%. But



**Houthi rebels are engaged in a war in Yemen.**

buoyed by West Asia's spike, overall global arms imports went up by 7.8%.

Saudi Arabia's arms imports shot up by 192%, while the figures are even higher for Riyadh's neighbours. Egypt imported 206% more arms than before, Iraq's purchases went up by 139%, while Qatar recorded an increase of 225%.

Israel, perpetually locked in a battle with the Hamas, saw its arms procurements shoot up by a whopping 354%. Lesser-known Oman bought 213% more arms than before, while Kuwait's imports ran up by 348%.

### **Regional Dominance Bid**

Saudi Arabia's fight against arch rival Iran for regional dominance; the Saudi-led intervention and war in Yemen; and the diplomatic standoff between Qatar and the UAE-Saudi alliance are the "key reasons behind these increases" in West Asia's arms imports, the SIPRI report said.

### **Economic Slump**

Interestingly, the spike in arms imports coincided with an economic slump in the Gulf region triggered by a historic oil price shock. From the highs of \$115 a barrel in June 2014, the crude oil price had bottomed out to \$35 by February 2016.

## **Abdelkader Bensalah : Algeria Gets New President in 20 Years**

Lawmakers named the speaker of the upper house as Algeria's first new President in two decades on April 9, 2019 state television reported, after the resignation of Abdelaziz Bouteflika following mass protests. The election of Abdelkader Bensalah as interim President follows constitutional rules but goes against the demands of demonstrators, who have pushed for him and other top politicians to stand down. "I want to work towards fulfilling the interests of the people," Bensalah told Parliament on taking up the 90-day interim presidency. "It's is great responsibility that the Constitution demands of me." Opposition parties refused to back Bensalah's election and boycotted the session, as hundreds protested against him.

Algeria will hold a presidential election on July 4, 2019, the interim President Abdelkader Bensalah's office said.

## **China's Deepening Forays into Sri Lanka : China Builds New Railway Line for Sri Lanka**

China has said that it has funded, built and inaugurated Sri Lanka's new rail track since independence, a nearly 27 kilometer extension in the island nation's south.

The line launched on April 18, 2019 is part of the **Belt and Road Initiative (BRI)**.

The extension connecting Matara and Beliata in southern Sri Lanka was constructed by the **China Railway Group 5 (CR5)** and financed by the Export-Import (Exim) Bank of China.



"A major portion of the construction was carried out by China Railway Group 5 (CRS) and the **Central Engineering Consultancy Bureau** (CECB) which acted as the consultant," Chinese state media reported.

Trains on the track could run at 120 km per hour, the fastest in the country.

"The phase one extension line of the southern railway in Sri Lanka is the first railway project contracted by a Chinese company in Sri Lanka under the Belt and Road Initiative (BRI) and it is indeed the first railway built after the country's independence," foreign ministry spokesperson, Lu Kang said at the regular ministry briefing on April 9, 2019. Sri Lanka became independent in 1948.

### **Boost to Regional Transportation**

The new rail segment will be a boost to Sri Lanka's regional transportation, he said.

"It is now officially opened and it will make regional transportation more convenient and facilitate local economic and social development ... Sri Lanka people are pleased to see that, and China is pleased for the Sri Lankan people," Lu said.

"China will like to expand and deepen our practical cooperation under the BRI and deliver benefits to the people with concrete outcomes," Lu added.

When asked about how much money China pumped into the project, Lu said he didn't know the funding amount.

"... But I can tell you that under the BRI, China encourages companies to engage in cooperation with other countries," he said.

New Delhi will be closely following the developments as Beijing rapidly expands its footprints on the island.

### **Game of One-Upmanship : US Declares Iranian Force a Terror Outfit**

The game of one-upmanship was well in evidence between the US and Iran in April, 2019.

In an unprecedented move that will doubtless stir interest in New Delhi, the US in the second week of April, 2019 declared Iran's Islamic Revolutionary Guard Corps (IRGC) as a Foreign Terrorist Organisation.

### **Pakistan ISI's Case**

The designation marks the first time Washington has branded an official foreign government military entity as a terrorist group, and is certain to engender thoughts in India to seek a similar designation for the Pakistani military, particularly its intelligence unit ISI, which India says has long been involved in terror activities in India.

The ISI has also been implicated legally in the US in a court case that resulted in the conviction of Kashmiri activist Ghulam Nabi Fai : New Delhi has also pointed to ISI finger prints in several terror attacks on India.



Donald Trump

### **Iran's Response**

In response, Iran's Supreme National Security Council declared the US a 'state sponsor of terror' and US forces in the region 'terrorists groups', state media said.

The step to designate the Iranian military unit "recognises the reality that Iran is not only a state sponsor of terrorism, but that the IRGC actively participates in finances and promotes terrorism as a tool of statecraft" US President Donald Trump said in a statement that described the outfit as "The Iranian government primary means of directing and implementing its global terror campaign."

The terrorist designation, which will take effect April, 16, allows the Trump administration to seek criminal penalties against elements of the IRGC and foreign officials deemed to be aiding it. It will also allow Washington to ban travel to the US for individuals associated with IRGC.

Influential voices within US have long cautioned against such a move, warning about the fallout on US military presence in West Asia, but the Trump dispensation is so over the heels with Israel's hardline Prime Minister Benjamin Netanyahu that it chose to ignore such advice.

Remarkably, Iran (as also Afghanistan) shares a tense relationship with Islamabad on the terror issue, accusing Pakistan of cross-border terrorism.

### **Parliamentary Elections in Israel : Incumbent PM Netanyahu Pulls off Historic Victory**

Defying odds Israeli Prime Minister Netanyahu secured record fifth term at the helm despite an incumbency wave and fraud charges following parliamentary elections of April 9, 2019. The main opposition candidate Benny Gantz conceded the defeat.

Netanyahu's Likud party tied with Gantz's Kahol Lavan party with 35 seats each in 120-seats Knesset (Israeli Parliament) In the final count however Likud party's tally rose to 36. Almost all right-wing parties agreed to recommend to the President that Netanyahu form the next ruling coalition. Early on April 10, Naftali Bennet and Ayelet Shaked's Hayamin Hehadash party underwent a political roller coaster when it was announced by the Central Election Committee that it had passed the electoral threshold.

In the right-wing bloc, the parties that made it into the Knesset are Likud, United Torah Judaism, Shas, Yisrael Beiteinu, Unions of Right-Wing Parties and Kulama. In the centre-left bloc, the parties that made it into the Knesset are Kahol Lavan, Hadash-Ta'al, Labour, Meretz and United Arab List Balad. Left-wing party Meretz got five seats.



Benjamin Netanyahu

## Who is Benjamin Netanyahu ?

Benjamin 'Bibi' Netanyahu is Israel's 9th PM and Likud Party chairman. Here's a throwback to his journey into the country's political folklore.

**Born :** Oct. 21, 1949, in Tel Aviv, Israel.

**Education :** MIT (US), Architecture, & Management Studies.

### The Journey

- 1967-1972 : Joins Israeli military as a soldier.
- 1972 : Wounded in a commando operation that freed hostages from a hijacked plane at Tel Aviv airport.
- 1982-1988 : Diplomat in Washington, then ambassador to the UN.
- 1988 : Returns to Israel Elected to Parliament.
- 1993 : Elected Likud Party Chairman.
- 1996-1999 : Serves as Prime Minister.
- 2002-2005 : Foreign Minister, then Finance Minister.
- 2009-2013 : Second stint as Prime Minister.
- 2013-2015 : Third spell as Prime Minister.
- 2015-2019 : Fourth term as Prime Minister.
- April 10, 2019 : Wins fifth term at the top.

Turn out in the Arab community was one of the lowest in history.

Gants's Blue and White party watched the number turned against them in a knife-edge vote; eventually he conceded the defeat.

## New Zealand Lawmakers Approve Tougher Gun Laws

New Zealand lawmakers have almost unanimously passed sweeping gun reforms, paving the way for a ban on military-style semi-automatic weapons to enter into force.

Lawmakers passed the legislation on final reading, less than a month after a gunman entered two mosques in Christchurch killing 50 people.

During the debate Prime Minister Jacinda Ardern told parliamentarians she 'vividly' recalled to moment after the massacre when she, without consulting widely, decided the government had to act.

Ardern, her voice filled with emotion, said it was during a briefing with police commissioner when she was told about the 'nature of the attack', the weapons used and how they were notified but had been obtained legally.


"I could not fathom how weapons that could cause such destruction, and large-scale death could have been obtained legally in this country. I could not fathom that," she told lawmakers.

She could not, she said, face the public or "the victims that had been left behind from this terror attack and tell them hand-on-heart that our system and our laws allow these guns to be available and that was okay. Because it was not."

The new rules amend permissive 1963 gun laws that had the subject of multiple reform attempts.



New Zealand Prime Minister Jacinda Ardern



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 <b>AIR-524</b> <b>RAJESHWAR NARAYAN TADIGADAPA</b> <b>MARKS-294/500</b>	 <b>AIR-632</b> <b>KRISHNAN KUMAR POONIA</b> <b>MARKS-293/500</b>	<p><b>MANY MANY MORE...</b></p>

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## Coup in Sudan : Sudan's Army Overthrows President, Assumes Power

Sudan's military overthrew President Omar-al-Bashir and announced it would rule the oil-producing North African nation through a transitional council for the next two years.

### Three-month emergency

First Vice-President and Defence Minister Ahmad Awad Ibn Auf on April 11, 2019 announced in a nationwide broadcast a three-month state of emergency, a suspension of the Constitution and the release of political prisoners. Al-Bashir who took power in a 1989 coup, is under house arrest, he said.

The army's ouster of Al-Bashir came after four months of nationwide protests and ends the reign of one of Africa's longest-serving rulers. The 75-years-old becomes the second leader in the region to leave in the face of nationwide protests, following Algerian President Abdelaziz Bouteflika's resignation.

Tens of thousands of Sudanese were on the streets of the capital, Khartoum, on April 11, 2019 after conflicting signs of the military's approach to the protests, which began mid-December over soaring living costs amid an economic crisis.

### Series of Copups

More than 45 people were killed in the unrest and 2,600 arrested, according to rights groups. Sudan has seen a series of coups since independence in 1956. Many participants in a sit-in-outside military headquarters expressed discontent with the generals assuming power. "The critical issue is now whether the army will want to monopolize power, and replace one military leadership with another, or whether power will be shared with and transferred to a transitional civilian government," Ahmed Soliman, a research fellow at London-based think tank Chatham House, said in an emailed note. "There is also potential for increased violence and fragmentation, if demands for a genuine transition towards an inclusive transitional civilian government are not met."

### Sudan's Military Leader Steps Down

Ironically, Sudan's Defence Minister stepped down abruptly as the head of the country's transitional ruling military council after only a day in the post, as protesters demanded quicker political change following President Oman al-Bashir's ouster by the armed forces.

Now Abdel Fattah al-Burhan Abdelrahman will be the head of the council, resigning defence minister Awad Ibn said. News of the change sparked joyful celebrations by many thousands in the streets of Khartoum as people chanted, "The second has fallen!" in reference to Bashir, witnesses said.

"What happened is a step in the right direction and is a bow to the will of the masses, and we have become closer to victory," Rashid Saeed, a spokesman for the main protest group, the Sudanese Professionals Association (SPA), told Reuters.

"We are committed to our demands that we submitted to the army," he said. "We call on the masses to stay on the streets until all the demands are met."

The military council said earlier that it expected a pre-election transition to last two years at most or much less if chaos can be avoided. The head of the military council's political committee, Omar Zain al-Abideen, said the council would hold a dialogue with political entities.

The announcement of a future civilian government appeared aimed at reassuring demonstrators who had pressed for months for Bashir's departure and quickly resumed protests against army rule after his ouster on April 11, calling for quicker and more substantial change.

In a challenge to Ibn Auf's military council, several thousand protesters remained in front of the defence ministry compound, and in the other parts of the capital, as a night-time curfew Ibn Auf had announced went into effect.

The SPA said the military council was "not capable of creating change." The group restated its demand for power to be handed immediately to "a transitional civilian government."

Bashir, 75, himself seized power in a 1989 military coup. He had faced 16 weeks of demonstrations sparked by rising food costs, high unemployment and increasing repression during the three decades of autocratic rule.

## Brexit Imbroglio : EU and UK Agree to Delay Brexit Until October 31, 2019

Relief mixed with ennui as the European Council and the Theresa May government on April 10, 2019 agreed a new extension to the Brexit deadline of October 31, by when the UK Parliament is expected to endorse the withdrawal agreement.

The extension will most likely involve the UK participating in the May 23 elections to the European Parliament, a prospect Theresa May and aides want to avoid, but others believe will be an opportunity to gauge if public opinion has shifted from the 2016 referendum.

As tabloids and others played on the fact that the October 31, deadline coincides with Halloween and its custom of trick or treat, May reiterated her hope that Parliament will endorse the agreement soon to avoid joining the May 23 elections.

She said after the council met : "I know that there is a huge frustration from many people that I had to request this extension. The UK should have left the EU by now and I sincerely regret the fact that I have not yet been able to persuade Parliament to approve a deal which would allow the UK to leave in a smooth and orderly way. I do not pretend the next few weeks will be easy or that there



Trick or Treat ? British PM Theresa May leaves a press event after a summit with EU leaders in Brussels.



is a simple way to break the deadlock in Parliament. But we have a duty as politicians to find a way to fulfil the democratic decision of the Referendum, deliver Brexit and move our country forward."

The new deadline avoids the prospect of the UK leaving with the EU on April 12, 2019 without an agreement—the worst-case scenario—which is welcomed by business, but intractable issues remain before any compromise can be reached between the government, its allies and critics.

May is also facing growing demands from within the party that she step down to allow a new leader to carry forward the Brexit talks. Under party rules, she will not face another confidence vote until December, but critics say she should resign on her own.

Former Brexit secretary and senior Conservative leader David Davis told BBC. "The pressure on her to go will increase dramatically. I suspect now."

Labour's shadow Brexit secretary Keir Starmer, who is a key figure in compromise talks with the May government, welcomed the extension, but added: "Negotiations are in good faith. We all feel a deep sense of duty to break the impasse."

It may be recalled that according to the original schedule the UK was to leave the UK by March 29, 2019, but the face-off between the PM Theresa May and Parliament on certain intractable issues embroiled the matter in uncertainty. Hope the Brexit would take place even before the new deadline October 31, 2019.

### No Evidence of Pak Dismantling Terror Infrastructure : Haqqani

Hussain Haqqani, Pakistan's former ambassador to the US, said Prime Minister Imran Khan's statements promising the end of support for militant groups is motivated only by the fear of getting blacklisted by the Financial Action Task Force (FATF) and it does not actually reflect a change of policy.

Speaking in Washington, Haqqani said there's no evidence that the government or the military are dismantling terrorist support infrastructure.

"There is a little change in Pakistan's attitude towards militancy, particularly the one directed against Afghanistan and India," Haqqani said, pointing out that Pakistan failed to initiate any action against Jaish-e-Mohammed or its leader Masood Azhar after the terror attack in Pulwama, India.

Meanwhile, finance minister Asad Umar said a fair decision can't be expected from the FATF as long as India co-chairs the proceedings. Speaking to the media in Washington, Umar remarked, "Are we going to be judged by a rigged (FATF) jury?"

### Government and IMF Near Bailout Deal

Pakistan and the IMF have somewhat, "reached an understanding" on a package for bailing out the country's ailing economy, Finance Minister Asad Umar said.

### IMF : Share Details of Loans from China

Amid talks over a bailout deal, the IMF has asked the Pakistan government to "share details of loans" that it has received from China, according to an Express Tribune report.

### Finland Turns from Suicide Hot Spot to The World's Happiest Country

When the UN crowned Finland as the world's happiest nation in March 2019 for the second year running, there were still quite a few eyebrows raised. How could this Nordic country, better known for its harsh weather and high suicide rate, be the world's happiest?

In 1990, statistics indicated that Finland's suicide rate was the second highest in the world, behind Hungary.

But Timo Partonen at Finland's National Institute for Health and Welfare, warns against the tendency to blame the problem on Finland's dark, cold climate. "If you are depressed in any place in the world, you bear a similar risk of suicide," Partonen argued.



Good Times : People enjoy a sunny day at the Esplanade in Helsinki, Finland.

Suicides in Finland have now fallen to less than half of 1990 levels, thanks largely to a decade-long public health drive to improve treatment and support for those at risk, as well as to make media reporting to the issue more responsible.

These days, it is also much more socially acceptable for Finns, especially men, to open up about their feelings, say Partonen.

"Now it's easier to talk about it if you are depressed for example, and it's easier to get treated and have adequate treatment as well"

According to the World Health Organisation, Finland's suicide rate is now 22nd highest in the world, lower than the US and one spot higher than Australia.

Finland's residents today enjoy a high quality of life, security and public services, with rates of inequality and poverty among the lowest of all OECD countries.

### Malaysia Gets Price Cut for China Rail Line, Rejoins OBOR (One Belt, One Road)

Malaysia has reopened a closed Chinese rail construction project after slashing 30% from the original cost. Under the reworked deal, the 648 km rail link will now cost \$ 10.6 billion.

China appears to have agreed to the hugely lowered price because it was desperate to present a strong global infrastructure programme at the Belt and Road Forum between April 25 and 27. India had already indicated it would stay away from the event.

Malaysian President Mahathir Mohamad shocked China when he shelved the project last July soon after returning to power. Mahathir said the project, contracted by the previous government, was 'unfair' and imposed a major financial burden on the country.

The decision to slash the price might result in a chain effect with several countries implementing the Belt and Road Initiative (BRI), like Pakistan, demanding a price cut. It remains to be seen how China deals with the situation.

### China Building Naval Force Via OBOR : US

China is trying to create its own globally decisive naval force through the multi-billion dollar Belt and Road Initiative, the Pentagon has told the US Congress, warning that Beijing's 'unfavourable deals' strangle a nation's sovereignty like an Anaconda enwrapping its next meal. "China's modus operandi preys off nation's financial vulnerabilities," John Richardson, chief of Naval Operations, told members of House Armed Services Committee on April 11, 2019.

### Parliamentary Elections in Maldives : Its Ex-President Makes Come Back with Poll Win

**News Dawn : Mohamed Nasheed vow reforms and fight against corruption.**

Parliamentary elections were held in the Indian ocean archipelago Maldives on April 6, 2019. The results were declared on April 7, 2019.

The former Maldives President Mohamed Nasheed vowed sweeping reforms and end to government corruption after leading his party to a landslide victory just five months since returning from exile.



**Back with a Bang : Mohamed Nasheed made a dramatic return to the top of the national Parliament, with his Maldivian Democratic Party securing a two-thirds majority in the 87-member assembly.**

Mohamed Nasheed, 51, made a dramatic return to the top of national Parliament, with his **Maldivian Democratic Party (MDP)** registering a two-thirds majority in the 87-member assembly.

Nasheed promised to use his party's mandate to usher in a new era of stability and democracy in the Indian ocean archipelago as it emerges from years of strong man rule, political crisis and corruption scandals miring the government and judiciary.

"Our foremost duty is to bring peace to the government", Nasheed told supporters in the capital Male on April 7.

The comprehensive victory was another rebuke for Nasheed's arch-rival and autocratic former President Abdulla Yameen, who was dumped in a shock election defeat in September under a cloud of corruption and embezzlement allegations.

Yameen did not run, but his party—the Progressive Party of Maldives—ended with a poor showing in the People's Majlis, or Parliament.

Nasheed was barred from running in the election but his former deputy, President Ibrahim Mohamed Solih, emerged triumphant over Yameen.

### Iran's Parliament Formally Labels US Troops in West Asia As 'Terrorist'

Iran's lawmakers on April 16, 2019 overwhelmingly approved a bill labelling US forces in West Asia as terrorist, a day after the US terrorism designation for Iran's Revolutionary Guard Corps (IRGC) formally took effect, state TV reported. Defence minister Amir Hatami introduced the bill authorising the government to act firmly in response to 'terrorist actions' by US forces. It demands authorities use 'legal, political and diplomatic' measures to neutralise the American move, without elaborating. The US move aims at 'thwarting Iran's influence', and shows that America's sanctions against Iran have become ineffective, Hatami told lawmakers.

The TV report said 204 lawmakers approved the bill, out of 207 present at the session in the 290-seat chamber. However, it remains unclear how the bill's passage in parliament would affect the Guard's activities in the Persian Gulf, where the US Navy has in the past accused Iranian patrol boats of harassing American warships.

The Guard's designation—the first-ever for an entire division of another government—adds another layer of sanctions to the powerful paramilitary force and makes it a crime under US jurisdiction to provide it with material support. Depending on how broadly 'Material support' is interpreted, the designation may complicate US diplomatic and military cooperation with certain third-country officials, notably in Iraq and Lebanon, who deal with the Guard.

### Parliamentary Election in Finland : Social Democrats Party Seals Narrow Election Win

Parliamentary elections were held in the Nordic nation Finland on April 14, 2019. Social Democrats won 40 seats in the 200-seat Parliament, more than the right-wing Finns Party.

Finland's leftist Social Democrats Party won the general election by a thin margin, capturing two more seats than the nationalist Finns Party, according to final results from the justice ministry.

The results reflect mounting sense of insecurity in the Nordic nation over immigration, welfare, and climate change.

Tipped to win, the opposition Social Democrats scored 17.7 per cent winning 40 seats in the 200-seat Parliament, while their euro-sceptic Finns Party rivals were at 17.5 per cent—38 seats.



The joint ruling Centre Party of Prime Minister Juha Sipilä and centre-right National Coalition stood at 13.8 per cent and 17 per cent, respectively, marking the first time in a century that no party won more than 20 per cent in a general election.

"For the first time since 1999, we are the largest party in Finland... SDP is the Prime Minister's party, the SDP party leader Antti Rinne told supporters and party members.

A first-place spot would put the Social Democrats at the head of the government for the first time in 16 years.

The Finns Party, led by hardline member of the European Parliament Jussi Halla-aho, has seen a surge in support in recent months during an anti-immigration campaign, urging people to "Vote for some borders".

The party could hold significant influence to form the next government, which in Finland is typically a coalition of three or four parties.

## China's Belt & Road Drive Reaches Latin America; Rattles US

China's expansion in Latin America of its one Belt, One Road (OBOR) programme—which it prefers to call the Belt and Road Initiative—to build ports and other trade-related facilities is stirring alarm in the US over Beijing's ambitions in a region that American leaders since the 19th century have seen as off-limits to other powers.

### Inroads into Panama

China is hardly a new comer to the region, but now it is focusing on countries in Central America such as Panama.

It is a country of just 4 million people but its canal (Panama Canal) linking the Atlantic and Pacific Oceans makes it one of the world's busiest trade arteries and strategically important both to Washington and Beijing.



A Panama Canal worker docks the Chinese container ship Cosco at the Panama Canal's Locks, in Panama City.

## Trump Vetoes Measure to End US Involvement in Yemen War

We are fighting against Iran. We are not engaged in hostilities in or affecting Yemen, argues US President.

US President Donald Trump, on April 16, 2019, vetoed a resolution passed by Congress to end US military assistance in Saudi Arabia's war in Yemen.

### Second in Trump's Presidency

The veto—the second in Trump's Presidency—was expected, and Congress lacks the votes to override it. But passing the never-before-used war powers, resolution was viewed as a milestone for lawmakers, who have shown a renewed willingness to assert their war-making

authority after letting it atrophy for decades under Presidents from both parties.

"This resolution is an unnecessary, dangerous attempt to weaken my constitutional authorities, endangering the lives of American citizens and brave service members, both today and in the future," Trump wrote in explaining his step on April 16, 2019 veto.



Tribesman loyal to Houthi rebels hold up their weapons as they attend a gathering in Sanna, Yemen.

## Nepal in Space : Nepal Launches Its First Satellite

Nepal on April 18, 2019 successfully launched its first satellite into space from the US to gather detailed geographical information of the Himalayan nation. Developed by the Nepalese scientists NepaliSat-1 satellite was launched at 2:31 a.m. (Nepal time) from Virginia in the US, according to Nepal Academy of Science & Technology.

Two Nepali scientists, Aabhas Maskey and Hariram Shrestha who are currently studying at Japanese Kyushu Institute of Technology, developed the satellite under the BIRDS project of their institute.

NepaliSat-1 is a cube satellite that weighs 1.3 kg. It is scheduled to be released from the cargo spacecraft into the lower orbit of International Space Station in the second week of June, 2019. Once released into its orbit, the satellite will revolve around the earth four times a day. The orbit lies approximately 400 kilometres above the earth. The satellite is expected to take pictures of Nepal for six to ten minutes during each revolution.

NepaliSat-1 is expected to revolve around the earth for at least six months.

Japanese scientist Aabhas Maskey said, "It is a milestone achievement for Nepal. It has paved the way for, larger projects related to space science." Another Nepali scientist said, "It is a remarkable achievement as the satellite was made with Nepali investment and Nepali manpower."

Nepali PM K.P. Sharma Oli congratulated all the scientists and institutions involved in the development of the satellite.

## Ukrainians Elect Comedian Zelensky as Next President

He beat incumbent Petro Poroshenko in landslide victory.

Ukraine came into the news on April 22, 2019 after comedian Volodymyr Zelensky was elected President on promises of change but with just a vague blueprint of what he might do as a leader.

Mr. Zelensky, whose previous experience in the world of politics was playing the President on TV, defeated incumbent Petro Poroshenko in a stinging rebuke to the establishment fuelled by anger over war and social injustice.

Ukrainians looked to the future with hope and anxiety after Zelensky polled around 73% of the vote on April 21, 2019.



Volodymyr Zelensky



## Youngest President

Mr. Zelensky—who at 41 is to be Ukraine's youngest-ever President—has a vague programme and it remained unclear who would fill top positions.

He shunned traditional campaign rallies, instead performing comedy gigs, and implied he would use the same unorthodox style to run the country of 45 million that depends on international aid.

## North Korean Leader Kim Jong-un Visits Russia : Kim, Putin Vow to Seek Closer Ties

North Korea's top leader Kim Jong-un and Russian President Vladimir Putin vowed to seek closer ties as they met for the first time on April 25, 2019 in Russian city Vladivostok. The talks on the face of it aimed at countering US influence. Putin emerged from the meeting saying that like Washington, Moscow supports efforts to reduce tensions in the Korean peninsula and prevent nuclear conflict.

## Security Guarantee

However, the Russian President insisted that Pyongyang "needs guarantees of its security, the preservation of its sovereignty" and took a veiled swipe at the US for trying to strong-arm North Korea. "We need to return to a state where international law, not the law of the strongest, determines the situation in the world," he said.

## China's Belt and Road Initiative (BRI) Meet in Beijing (April 25-27, 2019)

China launched on April 25, 2019 a staunch defence of its Belt and Road global infrastructure project as it opened a summit with a pledge to ease concerns about debt linked to its signature foreign policy.

President Xi Jinping's pet project is a reboot of the ancient Silk Road to connect Asia to Europe and Africa through massive investments in maritime, road and rail projects. The initiative offers to bring much needed modern infrastructure to developing countries, but the US has dubbed it a 'vanity project' and critics warn it is a 'debt trap' favouring Chinese companies.

Huang Kunming a member of China's powerful Politburo, said at the opening of the three-day **Belt and Road Forum** in Beijing that there have been "some misunderstandings and unfounded rumours" about BRI that they hope to clear up.

But in a nod to the concerns over loans, finance minister said China would release a framework to 'prevent debt risks'. The "debt sustainability analysis framework" encourages Chinese financial institutions and BRI countries to voluntarily improve debt management levels, the report said.

## Xi Allays BRI Projects' Debt Fears

Chinese President Xi Jinping on April 26, 2019 sought to allay the debt diplomatic concerns raised by India and the US over his trillion dollar Belt and Road Initiative

(BRI), promising transparency, sustainability and zero tolerance to corruption in the costly infrastructure projects being funded by Beijing, specially to smaller countries.

## Participants in the Meet

Addressing the 2nd Belt and Road Forum (BRF) attended by 37 heads of state and government including Russian President Vladimir Putin and Prime Minister of Pakistan Imran Khan besides officials from 150 countries and international organisations, Xi said China wants to build the BRI projects based on "Open, green and clean cooperation."

India, like the first BRF meet in 2017, has skipped the meeting as protest over the \$ 60 billion China-Pakistan Economic Corridor being laid through Pakistan occupied Kashmir. The CPEC, which connects the strategic Gwadar Port in Pakistan's Balochistan with China's Xinjiang province, is the flagship project of the BRI. This time, the US also joined India in skipping the BRF.

The Trump administration has been critical of the BRI and is of the view that China's 'predatory financing' is leaving smaller countries under huge debt and is endangering their sovereignty.

This year's gathering also included China's BRI critics of the past, including Malaysian Prime Minister Mahathir Mohamad.

In his speech Xi allayed fears that China was using the BRI as a geopolitical tool to attain superpower status. He said the BRI is "not an exclusive club". "Everything should be done in a transparent way and we should have zero tolerance for corruption," Xi said.

He also said that "facts have proved jointly building the "One Belt and One Road (OBOR) has not only provided new opportunities for the development of all countries in the world, but also opened up new horizons for China's opening-up and development."

Pakistan PM Imran Khan said BRI marks a new and distinct phase in the onward march of nations of the world along the path of globalisation. He noted : "The presence of so many world leaders today is proof that we choose hope over despair and cooperation over confrontation."

## Joint Communique : Xi Touts More Than \$ 64 Billion in Deals

On the concluding day of the BRI meet on April 27, 2019 President Xi Jinping hailed deals worth more than \$ 64 billion signed during China's Belt and Road Initiative (BRI) as he sought to reassure skeptics that the project will deliver sustainable growth for all involved.

A joint communique issued at the conclusion of the summit said that leaders had agreed to project financing that respects global debt goals and promotes green growth, in line with a draft seen by media earlier.

## MoUs

In a separate statement China said it signed a memorandum of understanding with various countries including Italy, Peru Barbados, Luxembourg, Peru and Jamaica.

"All of this shows that Belt and Road cooperation is in synch with the times, widely supported, people centered and beneficial to all," Xi said on April 27, 2019.

Pragati



Updates

# National and International

## ACRONYMS

<b>MMRCA</b>	— Medium Multi-Role Combat Aircraft
<b>SIPRI</b>	— Stockholm International Peace Research Institute
<b>NIRF</b>	— National Institutional Ranking Framework
<b>WASH</b>	— Water, Sanitation and Hygiene
<b>IRGC</b>	— Islamic Revolutionary Guard Corps (of Iran)
<b>UNFPA</b>	— United Nations Fund for Population Activities
<b>ICPD</b>	— International Conference on Population and Development
<b>EFSAS</b>	— European Foundation for South Asian Studies
<b>TERI</b>	— The Energy and Resources Institute
<b>WPI</b>	— Wholesale Price Inflation
<b>TESS</b>	— Transiting Exoplanets Survey Satellite
<b>DST</b>	— Department of Science & Technology
<b>IGCS</b>	— Indo-German Centre for Sustainability

## APPOINTMENTS/NOMINATIONS

### Pak's ex-Intelligence Chief 'Who Aided Osama' Sworn in As Minister

Pakistan's former intelligence bureau chief Izaz Shah, who allegedly aided Osama bin Laden in Pakistan, was sworn in as minister for parliamentary affairs on April 2, 2019 by President Arif Alvi.

The move has put the Imran Khan-led government and the opposition, especially the Pakistan People's Party (PPP), at odds as ex-PM Benazir Bhutto had alleged that Shah was among the people who had hatched a conspiracy to kill her, Dawn reported. PPP leader Syed Khurshed Shah told Dawn, "Ijaz Shah is being made the minister to make Parliament redundant and to further degrade it."

Shah, a confidant of ex-president Musharraf, has also been accused of harbouring al-Qaeda founder Osama bin Laden. In its report in 2012, the Sydney Morning Herald had quoted ex-ISI chief General Ziauddin Butt as saying that Shah had ordered to build the three-storied walled compound in Abbottabad, where Laden was killed by the US Forces in 2011. "I fully believe that Ijaz Shah had kept this man (Osama) with the full knowledge of Musharraf," Butt had alleged. Shah, who served as Pakistan's IB Director General from 2004 to 2008 dismissed the claim.

### Mats Malm : Literature Professor to Head Swedish Academy

The Swedish Academy which awards the Nobel Literature Prize named on April 26, 2019 a literature professor

as its new permanent secretary, after a #Me Too scandal in late 2017 threw the institution into turmoil.

Mats Malm is a professor of literary theory at the University of Gothenburg.

"I am very happy to be given this trust and look forward to the honourable commission as permanent secretary," he said.

Mr. Malm, 54, only joined the Academy four months ago. He takes over from Anders Olsson, who has been serving as head of the Academy since June 2018 after the previous secretary, Sara Danius, was forced to step down amid a scandal sparked by Frenchman Jean-Claude Arnault, an influential figure on Stockholm's cultural scene. Arnault, who is married to a then-member of the Academy who later resigned, was accused and later convicted of rape.



Mats Malm

### Ex-Army Chief Gen. Dalbir Singh Suhag Appointed Envoy to Seychelles

Former Army Chief Dalbir Singh Suhag has been appointed as India's next High Commissioner to Seychelles, a country which is of strategic importance to India in the Indian Ocean region.

General Suhag was the Army Chief from July 31, 2014 to December 31, 2016. He was also part of the Indian Peace Keeping Force (IPKF) in Sri Lanka in 1987.

His appointment as India's High Commissioner to Seychelles comes amid deepening military ties between India and the island nation. India is developing Assumption Island in Seychelles as a naval base to expand its footprint in the strategically-key region where China has been trying to enhance its military presence.



Ex-Army Chief  
Gen. Dalbir  
Singh Suhag

### Safeguarding Media Freedom : Amal Clooney Named UK's Special Envoy

British foreign secretary Jeremy Hunt on April 5, 2019 appointed prominent human rights lawyer Amal Clooney as special envoy on media freedom, who will co-chair a panel of legal experts to counter draconian laws in various countries that hinder journalists from going about their work.

The British foreign office noted that 2018 was the deadliest year for journalists, with 99 killed, 348 detained and 60 taken hostage by non-state groups, adding that the panel will support countries to repeal outdated laws and strengthen mechanisms to protect journalists.

Hunt said, "Violence against journalists has reached alarming levels globally and we cannot turn a blind eye.

The media has a crucial role to play in holding the powerful to account. There is no escaping the fact that draconian laws around the world are being used to restrict the ability of the media to report the truth."

"Amal Clooney's work on human rights means she's ideally placed to ensure this campaign has real impact," he said.

Hunt's announcement comes ahead of the International Conference on Media Freedom to be held in the UK on July 10-11, co-hosted with the Canadian government.

## PERSONS IN THE NEWS

### Kim Kardashian West

US reality TV star says she is studying law, wants to be an attorney like her father.

The star of the show *Keeping Up with the Kardashians* said she is studying law to pass her California bar exams by 2022 and has been interning at a California law firm since last year.

The 38-year-old is following in the footsteps of her father Robert Kardashian, who was OJ Simpson's defence lawyer who helped acquit the American football star accused of killing his wife.

She was inspired to study law after successfully petitioning US President Donald Trump last year to pardon Alice Marie Johnson who had served 22 years of a life sentence to cocaine trafficking.

### Prince Harry

UK royal to make mental health documentaries. The Duke of Sussex, who is set to become a father this month, announced he is teaming up with US celebrity talk show host Oprah Winfrey on a documentary series for Apple about mental health.

He will jointly create and executive produce the upcoming show for Apple's streaming platform with Winfrey, according to Kensington Palace, his official residence.

"I am incredibly proud to be working alongside Oprah on this vital series which we have been developing together for several months," the prince said in a statement.

### Aliko Dangote

Africa's richest man reveals he once withdrew \$ 10 mn to prove to himself he was rich.

The Nigerian billionaire told a forum in Abidjan, Ivory Coast, how he once took \$10 million in cash out of the bank just to look at it and get it into his head that this was real money, not just figures on paper.

"When you're young your first million is important, but after, the numbers don't mean much," Dangote, a manufacturing tycoon with a range of companies spanning cement to flour, told the forum.



Kim Kardashian West



Prince Harry



Aliko Dangote

"One day, I cashed 10 million; put them in the boot of my car, I put it in my room. I looked at them and thought 'now I believe I have money'," Dangote said.

### Lori Lightfoot

Black, openly gay woman elected Chicago mayor.

A political newcomer, the 56-year-old former federal prosecutor defeated Toni Preckwinkle, a career politician who is also black, by a landslide in a runoff to take over a city struggling with crime and weak finances.

The practising lawyer, who has never before held elected office, won by a wide margin of 74% to 26% with most ballots counted. "We were up against powerful interests," she said in a victory speech.

"Today, you did more than make history, you created a movement for change," she told a cheering crowd. Since 1837, Chicago voters have elected only black mayor and one female mayor.

### Celine Dion

Grammy-winning Canadian singer set to end hiatus, announces upcoming tour and album.

The music star will kick off her *Courage World Tour* in Quebec City, Canada, on September 18 and will release her 12th album *Courage* in November.

"It's going to be the Celine that you know," she said of the upcoming album. "The sound will change a little bit, and music changes. But I will always remain who I am."

The tour will cover more than 50 cities, said Dion, who is getting back on the road and creating music for the first time since the death of her husband-manager Rene Angelil in 2016.

### Danny Faure

Seychelles' president makes underwater speech in a call for stronger global action to protect oceans.

He delivered the first-ever live speech from a submersible during a visit to a British-led science expedition exploring the Indian Ocean, making a global plea for stronger protection of the "beating blue heart of our planet."

"We are running out of excuses to not take action, and running out of time," he said from a manned submersible 400 feet below the waves, off the outer islands of Seychelles.

"From this depth, I can see the incredible wildlife that needs our protection, and the consequences of damaging this huge ecosystem," Faure said.

### Christina Koch

US female astronaut Christina Koch is to set record for longest space flight by a woman, the US Space Agency said on April 17, 2019, the same astronaut who would have been in the first all-female space walk scrapped over lack of a right-sized space suit.



Lori Lightfoot



Celine Dion



Danny Faure



Astronaut Christina Koch, who completed the space walk with a man instead of a female colleague in March, 2019, will remain in orbit on board the International Space Station until February, the NASA said.

Part of the NASA's study of the effects of long space flights on the human body, Koch will spend 328 days in space. The 40-year-old astronaut has been in orbit since March, 2019.

On board the orbiting space station, astronauts work on a range of experiments in biology, biotechnology, health, earth, space and other sciences.

Astronaut Pegg Whitson holds the record for the longest single space flight by a woman staying in orbit 288 days in 2016 and 2017, NASA said.

## DEATHS

### Politician KM Mani Dies

Veteran politician and Kerala Congress Chairman K.M. Mani, who never lost an Assembly election since 1967, passed away at a private hospital in Kochi on April 9, 2019.

Mani was suffering from a lung ailment and was unwell since January.

Mani joined the undivided Kerala Congress in 1965 and went on to become its undisputed leader. Over the years, his party underwent several splits.

### Mira Markovic

Widow of former Yugoslav President, known as the Lady Macbeth of the Balkans, dies at 76.

Markovic, who played a role in her strongman husband Slobodan Milosevic's policies during the violent break-up of Yugoslavia in the 1990s, died due to pneumonia in a Moscow hospital.

She left Serbia in 2003 after being charged with abuse of power and was suspected of cigarette smuggling and political assassination. She was granted Russian political asylum in 2008.

While she owed her political influence to being her husband's closest confidante, she also had her own political party the neo-communist Yugoslav United Left.

### Alan Garcia

Former Peruvian President Alan Garcia died on April 17, 2019 after shooting himself in head as police attempted to detain him amid corruption allegations in Latin America's largest graft probe.

President Martin Vizcarra announced on Twitter that Garcia, who ruled Peru twice, died after undergoing emergency surgery.

Garcia repeatedly professed innocence and said he was the victim of false testimony by political enemies who accused him of taking more than \$ 100,000 from the Brazilian construction company.



Mira Markovic



Alan Garcia

### Michael Wolf : Award Winning Photographer of Mega-Cities Dies

Michael Wolf, an award-winning photographer known for his work depicting megacities, died at his home in Hong Kong. He was 64. Wolf died in his sleep on April 23, 2019. Wolf won first prize in the World Press Photo competition twice, for contemporary issues in 2005 and for daily life in 2010. His body of work included Tokyo, Chicago, Paris and Hong Kong.



Michael Wolf

## RESIGNATION

### Pakistan's Finance Minister Asad Umar Quits

Pakistan's finance minister stepped down from his portfolio on April 19, 2019.

"As part of a cabinet reshuffle the prime minister desired that I take the energy minister portfolio," he said, adding "However, I have obtained his consent to not take any cabinet position."

Umar tweeted, saying, "I strongly believe that Imran Khan is the best hope for Pakistan and Insha Allah will make a Naya Pakistan."

## AWARDS AND HONOURS

### Pulitzer Prizes-2019

Pulitzer Prizes, the coveted annual American awards for exemplary works in the fields of journalism, arts, drama, fiction, music etc. were conferred in different categories on April 15, 2019 at Columbia University, New York.

The South Florida Sun Sentinel won the Pulitzer for public service for its coverage of failings by school and law enforcement officials before and after the February 2018 massacre at Marjory Stoneman Douglas High School. In the breaking news category, the Pittsburgh Post-Gazette was honoured for its coverage of the October 2018 shooting at a synagogue in the city.

The Associated Press won a Pulitzer for international reporting for its coverage of the war in Yemen. Reuters was also honoured for international reporting for its coverage of atrocities committed against Rohingya Muslims in Myanmar.

The Pulitzer Prize is an annual award for outstanding work in journalism, literature and music in the USA. It was established in 1917 on the provisions of will of an American-Hungarian journalist Joseph Pulitzer. The Pulitzer Awards are administered by the Columbia University, New York.

### PULITZER PRIZES, 2019 WINNERS

#### Journalism

**Public Service :** South Florida Sun Sentinel, **Breaking News Reporting :** Staff of the Pittsburgh Post-Gazette, **Investigative Reporting :** Matt Hamilton, Harriet Ryan and Paul Pringle of the Los Angeles Times, **Explanatory Reporting :** David Barstow, Susanne Craig and Russ

Buettner of the New York Times, **Local Reporting** : Staff of the Advocate, Baton Rouge, La, **National Reporting** : Staff of the Wall Street Journal, **International Reporting** : Maggie Michael, Maad al-Zikry and Nariman El Mofty of Associated Press and Staff of Reuters, with notable contributions from Wa Lone and Kyaw Soe Oo, **Feature Writing** : Hannah Dreier of ProPublica, **Commentary** : Tony Messenger of the St Louis Post Dispatch, **Criticism** : Carlos Lazada of the Washington Post, **Editorial Writing** : Brent Staples of the New York Times, **Editorial Cartooning** : Darrin Bell, Freelancer, **Breaking News Photography** : Photography Staff of Reuters, **Feature Photography** : Lorenzo Tugnoli of the Washington Post.

## Letters, Drama & Music

**Fiction** : *The Overstory* by Richard Powers, **Drama** : *Fairview* by Jackie Sibblies Drury, **History** : *Frederick Douglass* : *Prophet of Freedom* by David W. Blight, **Biography** : *The New Negro* : *The Life of Alain Locke*, by Jeffrey C. Stewart, **Poetry** : *Be With*, by Forrest Gander, **General Notification** : *Amity and Prosperity* : *One Family and the Fracturing of America*, by Eliza Griswold, **Music** : *Prism* by Ellen Reid

## Many Indian and Indian-Origin Scientists Elected Fellows of UK's Royal Society

Scientist and businessman Yusuf Hamied, microbiologist Gurdyal Bisra, Mathematicians Manjul Bhargava and Akshay Venkatesh and health experts Gagandeep Kang and Anant Parekh are those Indian origin scientists who have been elected Fellows of Royal Society, London as a recognition to their respective great services to science, in April, 2019. The Royal Society, London is the oldest scientific academy in continuous existence. These fellows are elected worldwide for life through a peer review process.

Yusuf Hamied is the chairman of pharmaceutical giant Cipla. Manju Bhargava is a professor of Mathematics at Princeton University, USA.

Gagandeep Kang, executive director of the Translational Health Science and Technology Institute (THSTI), Faridabad is the first Indian woman scientist to have been elected as the fellow of Royal Society in the 359-year history of the academy.

## Master Deenanath Mangeshkar Awards, 2019; Scriptwriter Salim Khan Gets Lifetime Achievement Honour

Master Deenanath Mangeshkar Smruti Pratishthan in Pune, a registered public charitable trust by Mangeshkar family presented its annual Master Deenanath Mangeshkar awards to honour the legends from the fields of Art, Music, Drama and Social work at a ceremony presided over by Directorate-General, Vijay Kumar of CRPF in Mumbai on April 24, 2019. RSS Chief Mohan Bhagwat presented the awards to the winners.

This year, the Master Deenanath Mangeshkar Award for music and art has been conferred upon the well-known classical dancer, Smt. Sucheta Bhide-Chapekar, the Master Deenanath Mangeshkar Lifetime award (Jeevan Gaurav Puraskar) to Salim Khan; the Master Deenanath Mangeshkar Special Award to Madhur Bhandarkar for his contribution to Indian Cinema and the Master

Deenanath Mangeshkar Special Award to Helen for her contribution to Indian Cinema.

The Vagvilasini Award was given to Vasant Abaji Dahake for Literature; the Mohan Wagh Award to Bhadrakali Productions 'Soyare Sakal' for Best Drama of the Year and the Anandmayee Puraskar to Pandit Suresh Talwalkar of Taalyogi Ashram for espousing a social cause.

## ESPN India Multi-Sport Awards, 2018

Second Annual ESPN India Multi-Sport Awards were announced on April 5, 2019 in Mumbai recognizing achievements across various sport disciplines in 2018.

Star javelin thrower Neeraj Chopra won the ESPN Sportsperson of the Year—Male honour while Olympic silver medallist shuttler P. V. Sindhu took the ESPN Sportsperson of the year—Female award.



P. V. Sindhu



Neeraj Chopra

Sindhu got the nod for the top ESPN women's award for her season-ending BWF World Tour Finals title in China and her impressive performance at the 2018 World Championships.

Neeraj was chosen for the top men's award for his gold at 2018 Commonwealth Games and Asian Games, setting the national record of 88-06 m.

2012 London Olympics bronze medallist shuttler Saina Nehwal was honoured with the award for the 'Comeback of the Year' after bagging the bronze at the 2018 Asian Games.

Jaspal Rana, coach of the Indian shooting team, won the 'Coach of the Year' award after India picked up 16 medals in shooting at the 2018 Commonwealth Games.

The Indian women's table tennis team took home the award for 'Team of the Year' after it clinched its first ever gold medal at the 2018 Commonwealth Games.

ESPN Multi-Sport awards recognised achievements across 11 categories, of which winners across 10 categories were selected by an independent 14-member jury.

Eminent people in the jury include Abhinav Bindra, Rahul Bose, Chetan Baboor, Ashish Ballal, Manisha Malhotra, Nisha Millet, Ashwini Nachappa, Aparna Popat, Renedy Singh, Devarajan Venkatesan and Rohit Brijnath.

## 2nd ESPN India Multi Sport Awards, 2018 : Winners

**Sportsperson of the Year (Male)** : Neeraj Chopra (Athletics), **Sportsperson of the Year (Female)** : P.V. Sindhu (Badminton), **Comeback of the Year** : Saina Nehwal (Badminton), **Coach of the Year** : Jaspal Rana (Shooting), **Emerging Sportsperson of the Year** : Saurabh Chaudhary (Shooting), **Team of the Year** : Women's team (Table Tennis), **Match of the Year** : Amit Panghal vs Hasanboy Dusmatov (Boxing), **Differently-abled Athlete**

of the Year : Ekta Bhyani (para-athletics), Moment of the Year : Women's 4x400 m relay, Lifetime Achievement Award : Pradip Kumar Banerjee (Football).

### **Virat Kohli Named Wisden's Leading Cricketer for Third Consecutive Year**

Indian Cricket team captain Virat Kohli was named the 'Leading Cricketer in the World' for 2018 for the third time in a row in this year's edition of the Wisden Cricketers' Almanack on April 10, 2019.

Kohli 30, was also named as one of Wisden's five cricketers of the year along with England's Jos Buttler and Sam Curran, County Championship-winning captain Rory Burns and Tammy Beaumont from the England women's team.

Kohli, who scored only 134 runs during India's previous tour of England in 2014, amassed 593 runs in his side's five-test series last year at an average of over 59 to book his place on the list.

"Despite finishing on the losing side, India captain Virat Kohli shone with the bat, laying to rest his struggles in England in 2014," Wisden editor Lawrence Booth said.

India's Smriti Mandhana, who scored 1,291 runs in limited overs, was named the Leading Cricketer in the women's game while Afghanistan spinner Rashid Khan was named the Leading Twenty20 Cricketer for the second consecutive year.

### **Goldman Environmental Prizes, 2019**

Six environmental activists and ecological crusaders from different countries were honoured with the coveted Goldman Environmental Awards, 2019 on April 29 for their outstanding works in the field of environment protection.

Alfred Brownell of Liberia, Linda Garcia of the USA, Ana Colovic Lesoska of North Macedonia, Alberto Caramil of Chile, Bayarjargal Agvaantseren of Mongolia and Jacqueline Evans of the Cook Islands are the recipients of the Goldman Environmental Awards this year. The prize was instituted in 1989 by philanthropists Richard and Rhoda Goldman to recognize the great work of environmental activists in the world.

### **Telugu Poet K. Siva Reddy Chosen for Saraswati Samman, 2018**

Prominent Telugu poet K. Siva Reddy was on April 10, 2019 chosen for the coveted Saraswati Samman, 2018 for his collection of poetry titled 'Pakkaki Ottigilite' (Turning Aside While Lying Down). It was the 28th edition of Saraswati Samman, one of the highest awards in the field of literature and carries a cash purse of ₹ 15 lakh, a citation and a plaque.

Born in 1943 in a farmer's family in Andhra Pradesh's Guntur, Reddy is counted among the most renowned modern poets in Telugu. He has also taught English literature and produced 23 volumes of poetry.

Pakkaki Ottigilite, published in 2016, is an anthology of 104 poems in blank verse. It captures the responses of the poet over the years to social change, the evolution of his own self and his dynamic relationship with the world.

The award, instituted by the KK Birla Foundation in 1991, is given annually for an outstanding literary work written in any Indian language and published during the last 10 years.

## **SECURITY**

### **Indigenously Built Coast Guard Vessel 'Priyadarshini' Inducted**

'Lifespan of vessels reduced to 5 years from 15-20 years'

Additional Director General of the Indian Coast Guard K.R. Nautiyal formally commissioned Coast Guard vessel 'Priyadarshini' in Kakinada on April 26, 2019.

This is the 99th vessel made by the Kolkata based Garden Reach Shipbuilders and Engineers Limited (GRSE) and the third one deputed to the ICG Station, Kakinada.



Voyage begins : Coast Guard ADG K. R. Nautiyal commissioning the vessel 'Priyadarshini' on April 26, 2019.

### **Increased Strength**

'In the last 10 years, the growth rate of the Indian Coast Guard has increased to 222% and the use of modern infrastructure to 187% compared to the previous decade. The lifespan of vessels has been reduced to five years from the usual 15 to 20 years, enabling our personnel to give their best performance," Mr. Nautiyal said, addressing a meeting that was organised to mark the commissioning. Referring to 'Priyadarshini', he said that the ship was built indigenously with an overall length of 50 meters, displacement of 308 tonnes and a maximum speed of 34 knots.

## **CLIMATE CHANGE/ENVIRONMENT**

### **Climate Change Impact Assessment Centre**

The Indian Institute of Technology, Madras launched a 'DST Centre of Excellence (CoE) in Climate Change Impacts on Coastal Infrastructure and the Adaptation Strategies' recently. It will play a major role in helping communities in India's 7500 km-long coastal line to prepare for the impact of climate change such as rise in sea levels and increased frequency of tropical cyclones.

The CoE is being established by Department of Science and Technology (DST), Government of India, at IIT Madras under Indo-German Centre for Sustainability (IGCS) Centre. Bhaskar Ramamurthi, Director, IIT Madras, inaugurated the CoE in the presence of Dr. Akhilesh Gupta, Head, SPLICE division, DST, and researchers from National Institute of Ocean Technology, National Centre for Coastal Research, Regional Centre for Meteorology and IMD besides an inter-disciplinary group of faculty and researchers from IIT Madras and DST Officials.

### **CoE's Assignment**

The CoE will carry out research studies on predicting climate change impact on coastal communities and strategically important coastal infrastructure such as ports, power plants and major industries.



Studies will also be undertaken to evaluate the intensity and frequency of tropical cyclones and extreme rainfall events under futuristic warming scenarios and the corresponding effect on the coastal infrastructure.

Addressing the inauguration function, Dr. Akhilesh Gupta, Head (Strategic Programmes Large Initiatives and Coordinated Action Enabler-(SPLICE) Division), DST, said, 'IIT Madras is the most appropriate to take up this kind of challenge. We have a lot of expectations from this Centre and am sure it will meet the expectations. We have 16 principal investigators working here.'

### Coastal Vulnerability

The overall vulnerability of coastal infrastructure and communities will also be studied to bring out the risk involved and for designing appropriate adaptation measures.

Further, climate change and sea level rise impact on the availability of water resources and its quality due to enhanced saltwater intrusion and ineffective waste management will be investigated.

### NGT Sets up Panel to Monitor River Cleaning

The National Green Tribunal (NGT) has formed a central monitoring committee to prepare and enforce a national plan to make over 350 river stretches across the country pollution free as it has caused serious threat to safety of water and environment.

#### Panel Members

A bench headed by NGT Chief Justice Adarsh Kumar Goel said the committee would comprise a representative of NITI Aayog, secretaries of ministries of water resources, urban development and environment, director general of National Mission for Clean Ganga and Central Pollution Control Board Chairman.

The panel will also coordinate with the river rejuvenation committee of the states and oversee the execution of action plans, taking into account the timelines, budgetary mechanism and other factors. Chief secretaries of states will also be part of the process.

"The chief secretaries of the states may undertake review of progress of river rejuvenation committee (RRC) by involving concerned secretaries of department of urban development, environment, industries, irrigation and public health", the bench said.

### Environmental Awards

The tribunal also directed the environment ministry to consider a policy for giving environmental awards to outstanding persons and institutions or states and introducing 'disincentives' for non-compliant states and asked it to frame such scheme before June 30.

"First meeting of the central monitoring committee may be held by June 30. The central monitoring committee may consider identifying experts, best practices and models for use of treated water, including plan to supply untreated sewage for a price or otherwise so that the concerned needy party can treat and utilise such water as is reportedly being done at Surat in Gujarat, Nagpur in Maharashtra and Bhiwara in Rajasthan or any other place," it said. Use of treated water for agriculture or other purpose may save potable surface and ground

water, it said. The NGT directed the panel to report by July 31.

The order came after a leading daily highlighted 351 polluted river stretches across India.

## SPACE

### Japan Probe Drops Bomb on Asteroid

A Japanese probe on April 5, 2019 launched an explosive device at an asteroid, aiming to blast a crater in the surface and scoop up material that could shed light on how the solar system evolved.

#### Explosive Mission

The explosive mission is the riskiest yet attempted by the Japanese space agency's Hayabusa2 probe that aims to reveal more about the origins of life on Earth.

Hayabusa2 released a "small carry-on impactor"—a cone-shaped device capped with a copper bottom as scheduled, as the probe hovered just 500 metres above the asteroid Ryugu.

The impactor was programmed to explode 40 minutes later, propelling the copper bottom towards Ryugu where it should gouge a crater into the surface of the asteroid that is 300 million kilometres from Earth.

Hayabusa2 moved smartly away from the area to avoid being damaged by debris from the explosion or colliding with Ryugu while also releasing a camera to capture images of the event.

Images from a different camera at the bottom of the probe showed the impactor was released at the right position and the right angle.

Control mission could not confirm the detonation but assumes "the impactor certainly reached the surface", said Takashi Kubota, engineering researcher at the Japanese space agency.

#### Unprecedented

Kubota said the probe's use of explosives and its 'acrobatic' evasive maneuvers were 'unprecedented' and he hoped the mission would give scientists a rare peek inside an asteroid.

It will take two weeks for the probe itself to return to its 'home-position' near Ryugu after the detonation and impact. The crater could be as large as 10 metres in diameter if the surface is sandy, or three metres across if it is rocky.

### NASA Rover Curiosity Digs up First Sample on Mars

NASA's Curiosity rover has dug up its first sample from a Martian region called Mount Sharp. Curiosity drilled a piece of bedrock nicknamed Aberlady and delivered the sample to its internal lab on April 10, 2019.



A computer graphic handout image shows the Hayabusa2 probe closing in on asteroid Ryugu.

## China Launches Second Generation Data Satellite

China has successfully launched the first of its new-generation data relay satellites into orbit that will provide data relay, measurement and control services for its manned spacecraft. The Tianlian II-01 satellite was launched by a Long March-3B carrier rocket from the Xichang Satellite Launch Centre in Sichuan Province on March 31, 2019.

## NASA Probe Spots Earth-sized Planet

NASA's latest planet-hunting probe has discovered its first Earth-sized exoplanet orbiting a star 53 light-years away.

The Transiting Exoplanets Survey Satellite (TESS) also discovered a warm sub-Neptune-sized world in the same system, according to a study published in the *Astro-physical Journal Letters*.

"It is so exciting that TESS, which was launched just about a year ago, is already a game-changer in the planet-hunting business", said Johanna Teske, Carnegie Institution for Science in the US.

"The spacecraft surveys the sky and we collaborate with the TESS follow-up community to flag potentially interesting targets for additional observations using ground-based telescopes and instruments," Teske said in a statement. One such tool, the Planet Finder Spectrograph on the Magellan II telescope in Chile, was a crucial component of this effort. It helped confirm the planetary nature of the TESS signal, and to measure the mass of the newly discovered sub-Neptune.

## DEFENCE

### Short of Fighters, Indian Air Force (IAF) Eyes 21 MiG-29 Jets

Desperately short of fighters, the Indian Air Force (IAF) is reportedly moving the government to buy an additional 21 Russian-made MiG-29 ground attack and air defence aircraft. IAF needs a minimum of 42 squadrons (each comprising 16-18 fighters) but has only 30. More squadrons will be decommissioned in the coming months. India is expected to have first Rafale fighter jet—the French-made medium multi-role combat aircraft (MMRCA) in September 2019.

The Indian Air Force already has three squadrons of MiG-29. All three are positioned along the western borders. The Indian Navy too uses the naval version of the MiG-29 fighters. They are positioned on the aircraft carrier INS Vikramaditya.



MiG 29 Fighter Jet

Earlier, in February 2019, a team of senior Indian Air Force officials rushed to Russia to examine the fleet of the MiG 29 fighters.

"The airframes are ready and Russia has promised to deliver all 21 fighters within 18 months," the senior IAF official who asked not to be named said.

"The air-frames are ready and available in Russia."

The 21 MiG-29 are upgraded with a more effective radar system, controls, and avionics systems, dorsal and wing tanks, and air-to-air refueling making the aircraft 4.5 generation fighters—the ones that first appeared on the scene between 1990 and 2000. It costs ₹ 285-300 crore per fighter. "The price is extremely competitive," another senior defence ministry official said. "The endurance of the aircraft is now nearly 5 hours with the additional fuel tanks."

The Indian Air Force is also flagging its MiG-29 repair and maintenance facility, based in Ozar, Nashik, to the government as one of the positives.

"We do not need to set up a fresh facility to maintain the fighters. In addition, the Ozar facility has ensured that at least 75% of the fleet is always available for operational deployment," the second official said.

"Importantly, the IAF already has crew and maintenance staff trained. Induction of the fighters will not require a fresh effort," the official added.

## EXPEDITION

### Historic Indian Ocean Science Mission Concludes

The British led Nekton scientific mission on April 18, 2019 completed a seven week expedition in the Indian Ocean aimed at documenting changes beneath the waves that could affect billions of people in the surrounding region over the coming decades.

Little is known about the watery world below depths of 30 metres, the limit to which a normal scuba diver can go.

Operating down to 450 metres with manned submersibles and underwater drones off the island nation of the Seychelles, the scientists were the first to explore areas of great diversity where sunlight weakens and the deep ocean begins.

The oceans' role in regulating climate and the threats they face from global warming are under-estimated by many. Scientific missions are crucial in taking stock of underwater ecosystems' health.

Principal scientist Lucy Woodall called the mission 'massively successful', saying that members believe they have found evidence near several coral islands of a so-called rari-photic zone, or 'twilight zone', located between 130 and 300 metres deep.

## DEMOGRAPHY

### Fewer Youngsters Getting Married in China

China's marriage rate, which has been falling for five straight years, was at its lowest in 2018, an official report said, revealing a glaring disinterest among the young to get married.

The new figures are a worry for and a warning to the Chinese government as the World's most populous country grapples with an ageing and declining population. "The marriage rate dropped from 9 per 1,000 people in

2013 to a five-year low of 7.2 per 1,000 people in 2018," the official Xinhua news agency reported citing the National Bureau of Statistics (NBS) and the Ministry of Civil Affairs (MCA)

"The figures vary in different regions. The more developed regions have lower rates of marriage," the report said. The stats revealed China's financial capital, Shanghai, and Zhejiang province saw the lowest marriage rates, at 0.44% and 0.59%, respectively. Population experts have said increasing costs of living, children's education and housing are among the reasons contributing to the fall in rate.

## PALEONTOLOGY/ARCHAEOLOGY

### Fossils of Enigmatic Human Species Found on Philippine Island

Thirteen fossil bones and teeth excavated in a cave in the Philippines represent an enigmatic previously unknown human species, probably small in stature and possessing an unexpected mix of archaic and modern traits, scientists said on April 10, 2019.

The discovery of remains of at least three individuals from this species, named

**Homo luzonensis**, in Callao Cave on the northern part of the island of Luzon marked the second time in the 21st century that a bygone member of the human family has been found on southeast Asian islands.



Filipino archaeologist Armand Salvador Mijares shows fossil bones and teeth that were recovered from Callao Cave.

The researchers were unable to extract DNA but did determine that one of the individuals lived 67,000 years ago and the other 50,000 years ago.

In 2003, fossils of another island-dwelling species—*Homo floresiensis*, dubbed the 'hobbit' due to its diminutive size—were unearthed in a cave on the Indonesian island of Flores, some 3,000 km from the Luzon site. There is no indication the two species interacted or were closely related.

*Homo luzonensis* was a contemporary not only of the Hobbit but of our own species, *Homo sapiens*, which emerged in Africa roughly 300,000 years ago.

The scientists said they could not rule out the possibility that the arrival of our species in the region contributed to the demise of *Homo luzonensis*.

The Hobbit also disappeared about 50,000 years ago at the same time *Homo sapiens* was spreading through the region.

## CRIME

### China Identifies New Set of 'Soft Violence'

China has put together a new category of criminal behaviour called 'soft violence' that includes stalking,

throwing excreta, brandishing tattoos and deliberately shutting utilities to threaten and harass citizens.

As an ongoing campaign against organised crime gathers pace, the government announced the new category after it was found that criminal groups or gangs were taking to 'soft violence' instead of well-defined norms of criminal behaviour, like physical violence. "Revealing personal information, damaging property, home invasions, setting off fire crackers, playing funeral music or placing wreaths to threaten others, are considered soft violence," the government said.

### Global Executions at Lowest Level in Decade

Executions fell worldwide by nearly a third last year to their lowest levels in at least a decade, but several countries recorded a rise. **Amnesty International** said on April 9, 2019.

### Thailand Resumes Executions

But it rose in Belarus, Japan, Singapore, South Sudan and the US, while Thailand resumed executions for the first time in a decade and Sri Lanka threatened to follow suit. "Despite regressive steps from some, the number of executions carried out by several of the worst perpetrators has fallen significantly," said Kumi Naidoo, Amnesty International's secretary general.

He added the 'dramatic' drop globally proved that "even the most unlikely countries are starting to change their ways and realise the death penalty is not the answer".

"This is a hopeful indication that it's only a matter of time before this cruel punishment is consigned to history, where it belongs," Naidoo said.

## RENEWABLE ENERGY

### Switch to Clean Energy Possible by 2050 : Study

Amid the gloom-and-doom predictions on the impact of climate change, a global study has, for the first time, projected that a global transition to 100% renewable energy is possible by 2050 across all sectors, including power, heat generation, transport and desalination, provided there is political will.

The study underlines that it is possible to achieve the target under the **2015 Paris Agreement** to keep rise in global average temperature within 2 degrees Centigrade over pre-industrial levels.

This transition will lead to a decline in annual global greenhouse gas emissions from the energy sector from 30 gigatonnes of carbon dioxide equivalent (GtCO<sub>2</sub>e) in 2015 to zero by 2050.

"The study's results show that all countries can and should accelerate the current Paris Climate Agreement targets," said Christian Breyer, professor for Solar Economy at Finland's LUT.

"A transition to 100% clean, renewable-energies is very realistic even today, with the technologies currently available," he added.

"The report shows that it's technically and financially possible to transition to 100% renewable energy... How-



ever, there needs to be enough safeguards to manage variability and the scale of deployment of these technologies, which will be critical to manage costs," said Karan Mangotra, associate director and climate specialist at the Energy and Resources Institute (TERI).

## ECOLOGY

### Peak Break : China to Build 'Ecotoilet' on Mount Everest

Climbers with pressing needs on Mount Everest will soon find an 'eco-friendly' toilet at a Chinese campsite 7,028 metres above sea level in an ongoing campaign to deal with the peak's waste problem. During the climbing season this spring, a Chinese expedition firm will add what state media dubbed an 'eco-friendly' loo at higher campsite on the northern slope in Tibet. "The toilet makes it easy to collect human waste produced by the climbers as there is a barrel with rubbish bags underneath the toilet," Xinhua quoted Pema Tinley of Tibet Mountaineering Association as saying. The waste will be brought down from the mountain.

## SURVEY/RESEARCH/STUDY

### Unhealthy Diet Bigger Killer Than Tobacco : No. 2 Risk Factor in India in 2017, Says Study

Unhealthy diet is responsible for more premature deaths than tobacco, high blood pressure or any other health risk, a new study published in *Lancet* has indicated. Dietary risks were the second biggest factor behind deaths and disabilities in 2017 in India, following on the heels of malnutrition.

Dietary risk in India has also increased by 35% in a decade since 2007 when it ranked fourth after malnutrition, air pollution and the risk of water, sanitation and hygiene (WASH).

### Indians Are Most Optimistic About Retirement Life : Aegon Survey

Indians are among the most optimistic in terms of retirement preparedness, according to Dutch insurer Aegon.

However, given that ideas of retirement are still traditional (retiring with family) a new social contract might be required as a fifth of the population will be aged above 60 by 2050 with people living longer and their families dispersed.

In its retirement report, the Dutch insurer has said that the present social contract that envisages individuals saving for their retirement through combination of employee savings and employer



## PLACES IN THE NEWS

### Athens (Greece)

Athens on April 19, 2019 installed its first Alexander the Great statue, a project mired in bureaucratic delays for nearly three decades. The 3, 50-metre equestrian statue of a young Alexander, cast in bronze, was erected in central Athens opposite a statue of Lord Byron, the great English Poet.

Alexander the Great, the fourth century BC warrior King, was born in modern days' northern Greek region of Macedonia. He is a hero figure and symbol of chivalry for Greeks.

## BOOKS AND AUTHORS

### 1. No Nation for Women

—By Priyanka Dubey, Simon & Shuster

### 2. Will Tibet Ever Find Her Soul Again ?; India Tibet Relations (1947–1962) Part 2

—By Claude Arpi, Vij Books

### 3. Jallianwala Bagh, 1919

—By Kishwar Desai, Westland

### 4. A Night in the Hills

—By Manav Kaul, translated by Pooja Priyamvada, West-land

### 5. I Have Become the Tide

—By Githa Hariharan, Simon & Schuster

### 6. The Great March of Democracy, Seven Decades of India's Elections

—Edited by S. Y. Qureshi, Penguin

## IMPORTANT DAYS/WEEKS/YEARS

June 2019

### National Days

June 29 National Statistics Day

### International Days

June 1 World Milk Day (FAO)  
 June 5 World Environment Day  
 June 8 World Oceans Day  
 June 12 Child Labour Prohibition Day  
 June 14 World Blood Donor Day  
 June 17 World Day to Combat Desertification and Drought  
 June 20 World Refugee Day  
 June 21 International Day of Yoga  
 June 23 UN Public Service Day  
 June 26 International Day Against Drug Abuse and Illicit Trafficking, in Support of Victims of Torture



# Employment And Career News

## Union Public Service Commission

**Invites online applications from eligible candidates for 'Central Armed Police Forces (Assistant Commandants) Examination, 2019'.**

**Last Date for Submission of online Applications—May 20, 2019.**

**Age Limit—**A candidate must have attained the age of 20 years and must not have attained the age of 25 years as on August 01, 2019. It means the candidate must have been born not earlier than August 02, 1994 and not later than August 01, 1999. Relaxation in the upper age limit shall be conceded as per the set government norms.

**Essential Educational Qualifications—**A candidate must hold a Bachelor's Degree or equivalent from

a government approved university or educational institution.

**Selection Procedure—**The selection procedure will comprise three parts—

1. Written Examination
2. Physical Standards / Physical Efficiency Tests and Medical Standards Tests
3. Interview / Personality Tests

The Written Examination will consist of two papers. Paper I will carry 250 marks while Paper II will carry 200 marks.

Final selection will be made on the basis of candidate's marks obtained in the Written Examination and Interview. The Interview / Personality Test will carry 150 marks.

**How to Apply—**Candidates are required to apply online using the link:

<https://www.upsconline.nic.in>

## Staff Selection Commission

**Invites online applications from eligible candidates for 'Multi Tasking (Non-Technical) Staff Examination, 2019'.**

**Last Date for Submission of online Applications—May 29, 2019.**

**Age Limit—**The age of the candidate should not be less than 18 years and not more than 25 years as on August 1, 2019. But in some cases the upper age limit is 27 years. Relaxation in the upper age limit will be given as per the set government norms.

**Essential Educational Qualifications—**The candidate must have cleared Matriculation Examination or equivalent from a recognized Board or educational institution.

## FORTHCOMING COMPETITIVE EXAMINATIONS, 2019

Railway Recruitment Board Junior Engineer Computer Based Test (May)	Chhattisgarh B.Sc. and M.Sc. Nursing Entrance Exam, 2019 (16 June)
Uttar Pradesh Power Corporation Ltd. Technician (Line) Recruitment Exam, 2019 (May)	Bihar Polytechnic Entrance Exam, 2019 (16 June)
Jharkhand B.Ed. Combined Entrance Competitive Exam, 2019 (May)	Bihar Paramedical (Madhyamik & Intermediate) Exam, 2019 (17 June)
Rajasthan Pre-Teacher Education Test, 2019 (PTET) (12 May)	(Online Closing Date: 18 May, 2019)
Maharashtra B.Ed. Common Entrance Test, 2019 (22 May)	UGC-NET/JRF Exam, 2019 (20-28 June)
Uttar Pradesh Joint Entrance Exam. (Polytechnic) Exam, 2019 (26 May)	Chhattisgarh Post Basic Nursing (PBN) Entrance Exam, 2019 (23 June)
Rajasthan D.El.Ed. (General/Sanskrit) Entrance Exam, 2019 (26 May)	RAS/RTS Main Exam, 2018 (25-26 June)
Jharkhand Polytechnic Entrance Competitive Exam, 2019 (26 May)	Life Insurance Corporation Assistant Administrative Officer (AAO) Main Exam, 2019 (28 June)
RRB Paramedical Categories Computer Based Test, 2019 (June)	SSC Combined Higher Secondary Level (10+2) Exam, 2019 (Tier-I) (1-7 July)
State Bank of India Junior Associates (Customer Support and Sales) Recruitment Exam, 2019 (June)	Telangana State-State Eligibility Test (TS-SET) 2019 (5, 6, 8 July)
Railway Recruitment Board Non-Technical Popular Categories (Graduate and Under Graduate Posts) Computer Based Test, 2019 (June-Sept.)	Central Teacher Eligibility Test (CTET), 2019 (7 July)
Civil Services Preliminary Exam, 2019 (2 June)	State Bank of India P.O. (Main) Exam, 2019 (20 July)
Chhattisgarh (Pre.) B.Ed. and (Pre.) D.El.Ed. Entrance Exam, 2019 (7 June)	SSC Multi-Tasking (Non-Technical) Staff Exam, 2019 (Tier-I) (2 Aug. to 6 Sept.)
State Bank of India P.O. (Pre.) Exam. (8, 9, 15 & 16 June)	(Online Closing Date: 29 May, 2019)
Delhi Polytechnic Common Entrance Test-2019 for (10th Based Diploma Courses) (9 June)	UPSC Central Armed Police Forces (Assistant Commandants) Exam, 2019 (18 Aug.)
CSIR-UGC NET/JRF Exam, 2019 (16 June)	(Online Closing Date: 20 May, 2019)
	S.S.C. Junior Engineer (Civil, Electrical and Mechanical) Computer Based Examination (Paper-I), 2018 (23-27 Sept.)
	RRC Group 'D' (Level-I) Computer Based Test, 2019 (Sept.-Oct.)
	SSC Multi-Tasking (Non-Technical) Staff Exam, 2019 (Tier-II-Descriptive Paper) (17 Nov.)

**Scheme of Examination**—There will be a Computer Based Examination, comprising two papers—Paper I and Paper II. Paper I will consist of objective type Multiple choice questions only.

**Paper-I (Computer Based Examination)**

Part	Subject (Not in sequence)	Number of Questions/ Maximum Marks
I	General English	25/25
II	General Intelligence & Reasoning	25/25
III	Numerical Aptitude	25/25
IV	General Awareness	25/25

Paper II will be descriptive in nature, carrying 50 marks. Paper II will only be of qualifying nature. Final selection will be made on the basis of candidate's marks obtained in Paper I.

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

<https://ssc.nic.in>

**Border Security Force (BSF)**

Invites online applications from eligible candidates for recruitment to the posts of Head Constable (Radio Operator) and Head Constable (Radio Mechanic).

**Last Date for Submission of online Applications**—June 12, 2019.

**Age Limit**—The age of the candidate should not be less than 18 years and not more than 25 years as on June 12, 2019. Relaxation in the upper age limit as per the government rules.

**Essential Educational Qualifications**—

(i) **Head Constable (Radio Operator)**—Matriculation or equivalent from a recognized Board and two years Industrial Training Institute Certificate (ITI) in Radio and Television or Electronics or computer operator & Programming Assistant or, Data Preparation & Computer Software or, General Electronics or, Data Entry Operator from a recognized Institute.

Or

Pass in Intermediate or 12th standard or equivalent with Physics, Chemistry and Mathematics from a recognized Board or University or Institution as a regular student with aggregate 60% marks in PCM subject.

(ii) **Head Constable (Radio Mechanic)**—Matriculation or equivalent from a recognized Board and two years' Industrial Training Institute Certificate (ITI) in Radio and Television or General Electronics or Computer Operator & Programming Assistant or Data Preparation & Computer Software or Electrician or Fitter or Info Technology & Electronics System maintenance or Computer Hardware or Network Technician or Mechatronics or Data Entry Operator from a recognized Institute.

Or

Pass in Intermediate or 12th standard or equivalent with Physics, Chemistry and Mathematics from a recognized Board or University or Institution as a regular student with aggregate 60% marks in PCM subject.

**Scheme of Examination**—There will be two Written Papers in the examination. First Paper will carry

100 objective type questions of two marks for each question. But it will serve the screening purpose only. There will be a paper in descriptive nature also. Candidates will have to clear 'Physical Standard Test (PST), Physical Efficiency Test (PET) and Medical Examination also prior to final selection.

**How to Apply**—Candidates can submit their applications in online mode only, using the BSF's website :

<https://recruitment.bsf.gov.in>

**Bihar Combined Entrance Competitive Examination Council**

Invites applications for 'Diploma-Certificate Entrance Competitive Examination-2019.

**Last Date for online Registration of Applications**—May 18, 2019.

Educational qualifications, age limits and scheme of examination vary as per the requirement of the Diploma in numerous courses.

For more details log onto :

<http://bceceboard.bihar.gov.in>

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— Editor



team after the Sports Authority of India (SAI) and the Sports Ministry cleared his name for the post. Being a successful hockey player of his time, Reid has also coaching experience of the Australian and the Netherlands national hockey teams. It boosted his chances to claim the post of Chief Coach of Indian men's hockey team.



## TENNIS

### Garbine Muguruza Retains Monterrey Open Title

Second seed defending champion Garbine Muguruza retained the WTA Monterrey Open Singles title on April 7, 2019 in Monterrey, Mexico when her opponent in the final Victoria Azarenka retired due to the injury. Muguruza was in a leading position 6-1, 3-1 when Azarenka decided to quit the final, resulting in Muguruza's title triumph.

### Fabio Fognini Wins Monte Carlo Masters Crown

Fabio Fognini of Italy defeated Dusan Lajovic of Serbia 6-3, 6-4 in the final on April 21, 2019 to clinch the Monte Carlo Masters Men's Singles title and his maiden Masters title. It is Fognini's ninth ATP Singles title.

Fognini defeated Rafael Nadal of Spain in the semifinal to secure his place in the final of this red clay surface tournament.

### Dominic Thiem Wins Barcelona Open, 2019

Third seed Dominic Thiem of Austria clinched the Barcelona Open Men's Singles title, beating Daniil Medvedev 6-4, 6-0 in the final on April 28, 2019 in Barcelona. Thiem is the first Austrian to win the Barcelona Open crown since 1996 when Thomas Muster claimed it. Thiem prevailed over 11-time Barcelona Open Champion Rafael Nadal of Spain in the semi-final.

It is Thiem's second title this year after the Indian Wells Crown.

### Petra Kvitová Wins WTA Stuttgart Open Title

Petra Kvitová of the Czech Republic clinched the WTA Stuttgart Open Singles title, beating Estonia's Anett Kontaveit 6-3, 7-6(2) in the final

on April 28, 2019 in Stuttgart. It is Kvitová's second WTA title this year after her Sydney International success.



## ATHLETICS

### 43rd Paris Marathon, 2019

Ethiopian athletes dominated the 43rd edition of Paris Marathon as **Abbrha Milaw** of Ethiopia and his compatriot **Gelete Burka** emerged winners of the Men's and women's events of Paris Marathon this year on April 14, 2019 in Paris.

Milaw won the men's race with a time of 2 hours, 07 minutes and 05 seconds. Asefa Mengistu, again from Ethiopia finished runner-up after Milsaw. Two-time defending champion Paul Lonyangata of Kenya finished third this year in Paris.

In women's race, Ethiopian women led by champion Gelete Burka grabbed top three positions. Burka won the Paris Marathon woman's race with a timing of 02 hours, 22 minutes and 47 seconds. Compatriots Azmera Gebru and Azmera Abreha secured second and third places respectively in the race.

### 123rd Boston Marathon

Kenya's Lawrence Cherono emerged the winner of the Boston Marathon men's event on April 16, 2019 with 2 hours, 7 minutes and 57 seconds finish in the race. He finished the race by two seconds faster than runner-up Lelisa Desisa of Ethiopia. Desisa had won the event in 2013 and 2015. Kenneth Kipkemai of Kenya finished third. Cherono received a check worth \$ 1,50,000 for being the champion of the Boston Marathon this year.

Worknesh Degefa of Ethiopia won the Boston Marathon women's event with a timing of 2 hours, 23 minutes and 31 seconds. Kenya's Edna Kiplagat, who has been the 2017 champion in Boston, finished runner-up this year. It was the 123rd edition of Boston Marathon.

### 23rd Asian Athletics Championship, 2019 : India Finishes 4th with 17 Medals

The 23rd Asian Athletics Championship, 2019 was successfully

organised at the Khalifa International Stadium in Doha, the capital city of Qatar from April 21 to 24, 2019. Hundreds of athletes from Asian countries took part in numerous athletics disciplines in the event.

Bahrain emerged on top of the medal tally in the 23rd Asian Athletics Championship. It claimed total 22 medals including 11 gold and 7 silvers. China secured second position on the medal tally with total 30 medals. China won 10 gold, 13 silver and 7 bronze medals. Japan finished third.

India finished fourth this time as it won total 17 medals including three gold medals. **Gomathi Marimuthu** (women's 800 m), **P.U. Chitra** (women's 1500 m) and **Tajinder Pal Singh Toor** (men's shot put) clinched gold medals for India in the 23rd Asian Athletics Championships.

22nd Asian Athletics Championship, 2017 was organised in Bhubaneswar, India. India won 29 medals in this edition. 24th Asian Athletics Championship will be organised in China in 2021.

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## 23rd Asian Athletics Championships: India's Medalists

**Gold :** Gomathi Marimuthu (women's 800 m), P.U. Chitra (women's 1500 m), Tajinder Pal Singh Toor (men's shot put).

**Silver :** Ajay Kumar Saroj (men's 1500 m), Avinash Sable (men's 3000 m steeple chase), Shivalp Singh (men's javelin throw), Annu Rani (women's javelin), women's 4 x 400 m relay (Prachi, Poovamma, Saritaben Gayakwad and V.K. Vismaya); 4 x 400 m mixed relay (Muhammed Anas, M.R. Poovamma, V.K. Vismaya and Arokia Rajiv); Swapna Barman (women's heptathlon).

**Bronze :** Dutee Chand (women's 200 m), M.R. Poovamma (women's 400 m), Parul Chaudhary (women's 5000 m), Gavit Murli Kumar (men's 10,000 m), Sanjivani Jadhav (women's 10,000 m), M.P. Jabir (men's 400 m hurdles), Saritaben Gayakwad (women's 400 m hurdles).

## London Marathon 2019

Eliud Kipchoge of Kenya retained the London Marathon Men's event title for 2019 by finishing the race in 02 hours, 02 minutes and 37 seconds, 18 seconds faster than runner-up Mosinet Geremew of Ethiopia on April 28, 2019 in London. It was Kipchoge's fourth London Marathon title as he had won it in 2015, 2016 and 2018 before this one in 2019. Mule Wasihun of Ethiopia finished third in the race.

London Marathon's women event title also went to Kenya when Brigid Kosgei emerged champion with the timing of 02 hours, 18 minutes and 20 seconds. Her fellow Kenyan Vivian Cheruiyot finished runner-up in the race.



## Malaysia Open Badminton Championship-2019

Chinese shuttlers dominated the Malaysian Open Badminton Championship, 2019 in April, this year as they won all the titles at stake in the tournament except the women's singles title which went to Tai Tzu Ying of Taiwan.

Chinese shuttler Lin Dan clinched the Malaysian Open Men's Singles title on April 7, 2019 in Kuala Lumpur, beating compatriot Chen Long 9-21, 21-7, 21-11 in the final. It is Dan's first major title in two years. Two-time Olympic Champion Lin Dan got a prize money worth \$49,000 for this title triumph.

Tai Tzu Ying of Taiwan clinched her third consecutive Malaysian Open Women's Singles title after a 21-16, 21-19 emphatic victory over Japan's Akane Yamaguchi in the final.

Chinese combination of Li Junhui and Liu Yuchen trounced Japanese pair of Takeshi Kamura and Keigo Sonoda 21-12, 21-17 in the final to clinch the Malaysia Open Men's Doubles Crown.

The Malaysia Open Women's Doubles title also went to China when Chen Qingchen and Jia Yifan defeated Du Yue and Li Yinhui 21-14, 21-15 in an all Chinese final.

The Malaysian Open Mixed Doubles final also witnessed an all Chinese encounter when Zheng Siwei and Huang Yaogong clinched the Mixed Doubles title with a 21-17, 21-13 facile victory over the fellow Chinese pair of Wang Yilu and Huang Dongping in the final.

## BWF Singapore Open Badminton Championship, 2019

Japanese shuttlers dominated the Singapore Open Badminton Championship, 2019 by sweeping three major titles out of five in the tournament, including the Men's Singles Crown for Kento Momota.

Kento Momota of Japan clinched the Singapore Open Men's Singles title, beating Indonesia's Anthony Sinisuka Ginting 10-21, 21-19, 21-13 in a closely-fought final on April 14, 2019.

In the Singapore Open Women's Singles final, Tai Tzu Ying of Taiwan emerged champion as she prevailed over Japan's Nozomi Okuhara 21-19, 21-15 in the final. It was Tai's second Singapore Open title.

Japan's Mayu Matsumoto and Wakana Nagahara won the Women's Doubles Crown of the championship, beating South Korean pair of Kim Hye-jeong and Kong Hee-yong 21-17, 22-20 in the summit clash.

Japan's pair of Takeshi Kamura and Keigo Sonoda clinched the third title for Japan of Singapore Open this year when they pipped Indonesia's Mohammad Ahsan and Hendra Setiawan to win the Men's Doubles title of the tournament. Japanese pair defeated the Indonesian duo 21-13, 19-21, 21-17 in the final.

Thailand's Dechapol Puavaranukroh and Sapsiree Taerattanachal defeated Malaysian combination of Tan Kian Meng and Lai Pei Jing 21-14, 21-6 in the final to claim the Singapore Open Mixed Doubles title.

## Harsheel Dani Wins Dutch Open Badminton Title

India's Harsheel Dani recovered from a game down to get the better of Denmark's Mads Christophersen in the final to clinch the Dutch International Badminton title in Wateringen, the Netherlands on April 14, 2019. Dani, a former junior National champion, clinched his maiden crown of the season with a 15-21, 21-12, 21-13 victory over World No. 149 Mads.

## Badminton Asia Championships, 2019

Japan's Kento Momota prevailed over Shi Yuqi of China 12-21, 21-18, 21-8 in the final on April 28, 2019 in Wuhan, China to retain the Badminton Asia Championships Men's Singles title.

The Badminton Asia Championships Women's Singles title also went to Japan when Akane Yamaguchi defeated China's He Bingjiao 21-19, 21-9 in the final to clinch the title. Akane is the first Japanese female shuttler to win the Badminton Asia Singles title.

Japan's successful title run also went to the Men's Doubles event of the championship after its singles title victories. Japanese combination of Hiroyuki Endo and Yuta Watanabe clinched the Badminton Asia Championship, 2019 Men's Doubles title with a 21-18, 21-3 facile victory over Indonesian pair of Marcus Fernaldi Gideon and Kevin Sanjaya Sukamuljo in the final.

Jia Yifan and Chen Qingchen of China defeated Japan's Wakana Nagahara and Mayu Matsumoto 19-21, 21-14, 21-19 in the final to clinch the women's Doubles title.

Wang Yilyu and Huang Dongping clinched the Mixed Doubles title of the championship, beating He Jiting and Du Yue 21-11, 13-21, 23-21 in an all Chinese final.



### Lewis Hamilton Wins Chinese Grand Prix, 2019

Formula one champion Mercedes' F1 driver Lewis Hamilton of Britain won the Chinese Grand Prix on April 14, 2019 in Shanghai. He finished the race in 01 hour, 32 minutes and 08.734 seconds to beat his teammate and runner-up Valtteri Bottas by 6.552 seconds. It was the third one-two finish of the Mercedes' duo in the three races in a row this season.

It was Hamilton's 75th F1 victory of the career and second in a row this season. Hamilton won the Chinese GP sixth time in his career. He also reached top of the drivers' point table after this victory. Bottas was the pole position holder in this race but he could not maintain his momentum till the end and lost the race to his teammate.

● This year Chinese Grand Prix was Formula one's 1000th World Championship race.

**Valtteri Bottas Wins Azerbaijan Grand Prix, 2019**

Valtteri Bottas of Finland won the Azerbaijan Grand Prix on April 28, 2019 in Baku, beating his Mercedes' teammate Lewis Hamilton in a close contest. Bottas finished the race in 01 hour, 31 minutes and 52.942 seconds, about 1.5 seconds faster than runner-up Hamilton. It was the fourth consecutive one-two finish of Mercedes' drivers this year. Bottas was the pole position holder in this race.

Ferrari's Sebastian Vettel finished a distant third in the race.



## Tiger Woods Wins Augusta Masters Golf Crown-2019

**Legendary American Golfer**  
Tiger Woods ended his 11-year major golf title drought with a thrilling one-shot victory to claim the Augusta Masters, 2019 on April 14, 2019 in Augusta, the USA. Woods, in his 22<sup>nd</sup> Masters appearance, closed with a final round of 70 and finished 13 under par at 275, one stroke better than compatriot trio Dustin Johnson, Brooks Koepka and Xander Schauffele. Woods at 43 became the oldest champion of Augusta Masters after Jack Nicklaus who won it at the age of 46 in 1986.

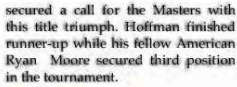


Tiger Woods poses his Augusta Masters Trophy in Augusta.

It was Wood's 15th major golf title of his career and first one since 2008 when he clinched the US Open golf. It is Wood's fifth Augusta title as he had clinched it in 1997, 2001, 2002 and 2005 before this one in 2019. He received a prize money worth \$ 2407 million for this historic feat. Woods received the prestigious 'Green Jacket' of the champion of the Augusta Masters, also known as the US Masters from Patrick Reed, the last year Augusta champion.

## Corey Connors Wins Texas Open Golf Title, 2019

Corey Connors of Canada clinched the Texas Open Golf Title with a two shot victory over his nearest rival Charley Hoffman of America on April 7, 2019 in Texas, the USA. Corey scored six under-par 66 in the final round to finish at 266 under 268 in the tournament. He



## Pankaj Advani Wins Asian 10-red Snooker Tour Title

Home favourite Pankaj Advani defeated Iran's Ehsan Heydari 6-4 in the final to clinch the ACBS Asian 10-red Snooker Tour Third leg title on April 25, 2019 at KSBA, Bengaluru. Advani earned \$ 12,000 as prize money while Heydari received \$ 6,000 for being the runner-up in the tournament.

Pankaj prevailed over Aung Phyoo of Myanmar in the semifinal while Heydari defeated Thanawat Tirapongpaiboon of Thailand in the other semifinal to set a clash with Pankaj in the final.

[illegible]



Jia Yifan and Chen Qingchen of China defeated Janan's Wakana Nagahara and Mayu Matsumoto 19-21, 21-14, 21-19 in the final to clinch the women's Doubles title.

Wang Yiliu and Huang Dongping clinched the Mixed Doubles title of the championship, beating He Jiting and Du Yue 21-11, 13-21, 23-21 in an all Chinese final.



### Lewis Hamilton Wins Chinese Grand Prix, 2019

Formula one champion Mercedes' F1 driver Lewis Hamilton of Britain won the Chinese Grand Prix on April 14, 2019 in Shanghai. He finished the race in 01 hour, 32 minutes and 08.734 seconds to beat his teammate and runner-up Valtteri Bottas by 6.552 seconds. It was the third one-two finish of the Mercedes' duo in the three races in a row this season.

It was Hamilton's 75th F1 victory of the career and second in a row this season. Hamilton won the Chinese GP sixth time in his career. He also reached top of the drivers' point table after this victory. Bottas was the pole position holder in this race but he could not maintain his momentum till the end and lost the race to his teammate.

● This year Chinese Grand Prix was Formula one's 1000th World Championship race.

### Valtteri Bottas Wins Azerbaijan Grand Prix, 2019

Valtteri Bottas of Finland won the Azerbaijan Grand Prix on April 28, 2019 in Baku, beating his Mercedes' teammate Lewis Hamilton in a close contest. Bottas finished the race in 01 hour, 31 minutes and 52.942 seconds, about 1.5 seconds faster than runner-up Hamilton. It was the fourth consecutive one-two finish of Mercedes' drivers this year. Bottas was the pole position holder in this race.

Ferrari's Sebastian Vettel finished a distant third in the race.



### Tiger Woods Wins Augusta Masters Golf Crown-2019

Legendary American Golfer Tiger Woods ended his 11-year major golf title drought with a thrilling one-shot victory to claim the Augusta Masters, 2019 on April 14, 2019 in Augusta, the USA. Woods, in his 22<sup>nd</sup> Masters appearance, closed with a final round of 70 and finished 13 under par at 275, one stroke better than compatriot trio Dustin Johnson, Brooks Koepka and Xander Schauffele. Woods at 43 became the oldest champion of Augusta Masters after Jack Nicklaus who won it at the age of 46 in 1986.



Tiger Woods poses his Augusta Masters Trophy in Augusta.

It was Wood's 15th major golf title of his career and first one since 2008 when he clinched the US Open golf. It is Wood's fifth Augusta title as he had clinched it in 1997, 2001, 2002 and 2005 before this one in 2019. He received a prize money worth \$ 2.07 million for this historic feat. Woods received the prestigious 'Green Jacket' of the champion of the Augusta Masters, also known as the US Masters from Patrick Reed, the last year Augusta champion.

### Corey Connors Wins Texas Open Golf Title, 2019

Corey Connors of Canada clinched the Texas Open Golf Title with a two shot victory over his nearest rival Charley Hoffman of America on April 7, 2019 in Texas, the USA. Corey scored six under-par 66 in the final round to finish at 20-under 268 in the tournament. He

secured a call for the Masters with this title triumph. Hoffman finished runner-up while his fellow American Ryan Moore secured third position in the tournament.



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# Science & Technology

## New Universe Map Unveils 3,00,000 More Galaxies

Hundreds of thousands of previously unknown galaxies are discovered recently. This discovery is published in a new map of night sky. More than 200 astronomers from 18 countries were involved in the study which used LOFAR telescope to look at a segment of sky over the northern hemisphere and found 3,00,000 previously unseen light sources thought to be distant galaxies.

The international team behind the unprecedented space survey said their discovery literally shed new light on some of the Universe's deepest secrets, including the physics of black holes and how clusters of galaxies evolve.



**Deep secrets :** An optical image of the M106 galaxy stacked on an image of the galaxy's emissions (in orange).

"This is a new window on the universe," said Cyril Tasse, an astronomer at the Paris Observatory who was involved in the project.

The map created by the LOFAR observations, part of which was published in the journal *Astronomy & Astrophysics*, contains data equivalent to the capacity of ten million DVDs yet charts just two per cent of the sky.

Radio astronomy allows scientists to detect radiation produced when massive celestial objects interact.

The team used the Low Frequency Array (LOFAR) telescope in the Netherlands to pick up traces or 'jets' of ancient radiation produced when galaxies merged. These jets, previously undetected, can extend over millions of light years.

"With radio observations we can detect radiation from the tenuous medium that exists between galaxies", said Amanda Wilber, of the University of Hamburg.

The discovery of the new light sources may also help scientists better understand the behaviour of one of space's most enigmatic phenomena.

Black holes—which have a gravitational pull so strong that no matter can escape them emit radiation when they engulf other high-mass objects such as stars and clouds.

## Scientists Identify Obesity Causing Genes

Researchers of USA have identified genetic variants associated with obesity that is central to developing targeted intervention to reduce the risk of chronic illnesses such as hypertension, heart disease and Type-2 diabetes. The team found genetic sites that affect body's size and shape, including height and obesity.

## Anti-ageing Compound Found in Plant

In Japan, the slightly bitter leaves of the *Ashitaba* plant have long been considered healthy, and a new study has found the traditional belief may have good scientific grounds.

A natural substance in the plant appears to induce a key process that helps remove the 'cellular garbage' that can build up as cells age and cause a range of diseases and disorders.

Researchers from the University of Graz's Institute of Molecular Biosciences, Austria, said the substance known as 4,4'-dimethoxy-chalcone or DMC, which occurs in *Ashitaba* plants, induces a process called autophagy. "This is a cleansing process", said Frank Madeo, a professor at the university.

It removes "superfluous material, especially cellular garbage like aggregated proteins." That 'cleaning' process is key to sustained good health as the body ages.

## A 'Superfood' that Lowers Blood Pressure

Italian researchers have identified *Spirulina*, a superfood made from algae, to help reduce blood pressure. The superfood, described as the "most complete food source in the world", contains a specific protein SP6, which was found to relax arteries in animals, media reports said. The study was detailed in the journal *Hypertension*.

## Fast Travel Through Hyperloop is Taking Shape

California decided to sharply scale back its plans for a high speed rail artery meant to transform travel up and down the state. But in the desert outside Las Vegas, the transportation ambitions still seem limitless.

Here, engineers working for Virgin Hyperloop are testing a radically different type of mass transit : one that aims to move people and cargo in small wheelless pods in a vacuum tube at speeds that could exceed 600 mph.



**Pipe ride :** A section of hyperloop tube at the Virgin Hyperloop test centre in Moapa, Nevada.

It works by propelling pods using magnetic levitation through a low-pressure, near-vacuum tube. The low pressure minimises friction and air resistance, greatly reducing the power needed. And because the pods travel in a tube, they're not subject to shutdowns due to harsh weather.

Maharashtra declared the company's proposed hyperloop system between Pune and Mumbai as an official infrastructure project.

Passenger operations could begin by the middle of the next decade.

### System Developed to Stitch up Internal Injuries with Sound Waves

Scientists have successfully used sound waves to levitate and manipulate multiple objects simultaneously for the first time, using the system to 'sew' a thread into a piece of fabric.

The system can be used to acoustically stitch up internal injuries or deliver drugs to target organs.

Sound exerts a small acoustic force and by turning up the volume of ultrasonic waves, too high pitched for humans to hear, scientists create a sound field strong enough to move small objects.

Scientists from University of Bristol in the UK and Universitat Publica De Navarra in Spain attached two millimetric polystyrene spheres to a piece of thread and used the acoustic tweezers to 'sew' the thread into a piece of fabric. The system can also simultaneously control the 3D movement of up to 25 of these spheres in air.

### Volcanic Plumes on Jupiter's Moon

NASA's solar powered Juno spacecraft has beamed back new images of volcanic plumes on Jupiter's moon 'Io', captured during the mission's 17th flyby of the gas giant. Four of Juno's cameras captured images of the Jovian moon Io, the most volcanic body in the solar system.



Juno spacecraft near Jupiter's moon 'Io'.

### 'Crying Snake' Discovered

A new species of 'crying snake' has been discovered in Lepa-Rada district of Arunachal Pradesh. The discovery of the non-venomous Crying Keelback has been published in *Zootaxa*, the New Zealand-based scientific mega-journal for animal taxonomy.

"The name for this Keelback was suggested because of a dark spot under its eyes looking like black tear that interrupts a white stripe running along the upper jaw to the back of its head and beyond," said Jayaditya Purkayastha, a Guwahati-based zoologist who located the new keel-back in the Basar area of Arunachal Pradesh.



Hebius lacrima and, inset, close-up of eye.

Globally snakes are represented by 3,709 species. The northeast is the home to some 110 species.

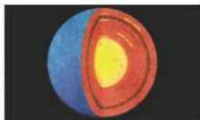
According to the paper by Mr. Purkayastha and Mr. David, the Crying Keelback can be differentiated

from all other species of the genus *Hebius* by the combination of a distinctive broad, white, interrupted stripe along its body, three rows of irregular dark blotches (not vertically aligned) on each side, six cream, elongated spots on its anterior part and a smooth dorsal scale row.

### Scientists Discover Massive Mountains Under Earth's Crust

Scientists have discovered massive mountains in the Earth's mantle, an advance that may change our understanding of how the planet was formed. Most school children learn that the Earth has three layers, a crust, mantle and core which is subdivided into an inner and outer core.

While that is not wrong, it does leave out several other layers that scientists have identified within the Earth. In a study published in the journal *science*, scientists used data from an enormous earthquake in Bolivia to find mountains and other topography on a layer located 660 km straight down, which separates the upper and lower mantle.



Buried mountains : A graphical representation of the various layers within the Earth.

Lacking a formal name for this layer, the researchers simply call it "the 660-km boundary".

To peer deep into the Earth, scientists from the Princeton University in the US and the Institute of Geodesy and Geophysics in China, used the most powerful waves on the planet, which are generated by massive earthquakes.

Data from earthquakes that are of magnitude 7.0 or higher send out shockwaves in all directions that can travel through the core to the other side of the planet and back again.

For this study, the key data came from waves picked up after a magnitude 8.2 earthquake—the second largest deep earthquake ever recorded that shook Bolivia in 1994.

The researchers also examined a layer 410 km down, at the top of the mid-mantle 'transition zone', and they did not find similar roughness. The presence of roughness on the 660-km boundary has significant implications for understanding how our planet formed and evolved.

### Evidence of Water Found on 17 Asteroids

Japanese scientists have detected evidence of water on 17 asteroids for the first time using data from the infrared satellite AKARI.

Researchers from the Japan Aerospace Exploration Agency and University of Tokyo found that water is retained in asteroids as hydrated minerals, which were produced by chemical reactions of water and anhydrous rocks that occurred inside the asteroids.



An Asteroid



# Memorable Points



## National

- Who took charge as the President of CII for 2019-20 ? → **Vikram Kirloskar**

  - Vikram Kirloskar, the Chairman and Managing Director of Kirloskar Systems Ltd, took over as the President of the Confederation of Indian Industry (CII) on April 5, 2019 for 2019-20. He succeeded Rakesh Bharti Mittal on this post. Mr. Kirloskar has been associated with CII for three decades and has been Chairman of Global Innovation and Technology Alliance (GITA) Board since its inception in 2012-13. Uday Kotak, the MD and CEO of Kotak Mahindra Bank became President-designate of CII.
- Who has been appointed the Chairman of NASSCOM for 2019-20 ? → **Keshav Murugesh**

  - WNS Global Services Group CEO Keshav Murugesh was on April 5, 2019 appointed as the Chairman of NASSCOM, the IT industry body of India, for 2019-20. He succeeded Rishad Premji of Wipro on this post. Prior to becoming the NASSCOM Chairman, Keshav was the Vice-Chairman of it. NASSCOM also appointed Infosys COO UB Pravin Rao as its Vice-Chairman for 2019-20.
- Who became the first Indian to be elected as the member of FIFA Executive Council ? → **Praful Patel**

  - All India Football Federation (AIFF) President Praful Patel was on April 6, 2019 elected as the member of FIFA Executive Council in the election during the 29th AFC Congress in Kuala Lumpur, Malaysia. He became the first Indian to get elected in the FIFA Executive Council. Mr. Patel, who is also the senior Vice President at the Asian Football Confederation (AFC) received whopping 38 votes out of 46 to claim the FIFA Council member post, the global governing body of football. Total five persons from AFC were elected to the FIFA Council with a four-year term (2019-23) each.
- Which educational institute emerged on top in the overall category in the NIRF-2019 ? → **Indian Institute of Technology, Madras**

  - The Indian Institute of Technology, Madras (IIT-Madras) was placed on top in the overall category for the first time in the National Institutional Rankings Framework (NIRF), 2019, released by President Ram Nath Kovind on April 8, 2019. IIT-Madras also retained its top position in the engineering category in NIRF-2019 for the fourth year in a row. Indian Institute of Science, Bengaluru lost top position in the overall category in the NIRF this year with one spot drop. IISc, Bengaluru remained on the second place in 2019. The NIRF, published annually since 2016, is based on multiple parameters, including teaching, learning and resources; research and professional practice; graduation outcomes; outreach and inclusivity etc.
- India successfully flight-tested the Nirbhay missile, which is a → **Long-range sub-sonic cruise missile**

  - India on April 15, 2019 successfully test-fired its first indigenously designed and developed long-range sub-sonic cruise missile 'Nirbhay' from the integrated test range at Chandipur off the Odisha Coast. The Nirbhay (the fearless) is capable of carrying nuclear warheads to a strike range of 1,000 km at a 0.7 Mach speed. The missile which is touted to be India's answer to the US Tomahawk missile, achieved all the mission objectives. It was the sixth developmental flight trial of the missile. The Nirbhay missile is highly maneuverable with "Loitering capabilities" as it can first detect and then strike the intended target.
- Indian Coast Guard Commissioned ICGS Priyadarshini which is the first of → **The Class 05 Fast Patrol Vessels**

  - Additional Director General of the Indian Coast Guard K.R. Nautiyal formally commissioned ICGS Priyadarshini on April 26, 2019 at the Kakinada Deep Water Port. ICGS Priyadarshini is the 99th vessel made by the Kolkata-based Garden Reach Shipbuilders and Engineers Limited (GRSE). ICGS Priyadarshini is the first of the Class 05 Fast Patrol Vessel (FPVs) with a maximum speed of 34 knots and an endurance of more than 1500 nautical miles.
- IRDAI set up a committee, to review microinsurance framework chaired by → **Suresh Mathur**

  - The Insurance Regulatory and Development Authority of India (IRDAI) formed a 13-member panel in April, 2019 to review the regulatory framework on microinsurance and recommend measures to increase the demand for such products. IRDAI Executive Director Suresh Mathur will be the Chairman of the committee. It will also suggest changes in the distribution structure if required.
- Which team clinched Santosh Trophy 2018-19 ? → **Servicos**

  - Servicos defeated Punjab 1-0 in the final on April 21, 2019 at the Guru Nanak Stadium, Ludhiana to clinch the Santosh Trophy 2018-19. It was the sixth Santosh Trophy title of Servicos. Bikash Thapa scored a goal in the final to help Servicos emerge champion. Servicos secured its place in the Santosh Trophy final with a victory over Karnataka in the semifinal. Servicos won its last Santosh Trophy Football crown in 2015 against the same opponent Punjab in the final.

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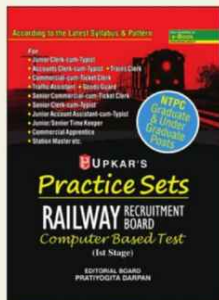
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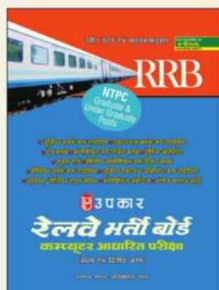
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## International

- Who became the new President of the World Bank ? → **David Malpass**
  - ☛ David Malpass was on April 5, 2019 unanimously selected as the President of the World Bank after the Bank's 25-member executive board approved his name for the top post of the Bank. Malpass' candidature was backed by US President Donald Trump. He will have a five-year term as the 13th President of the World Bank. Malpass succeeded Jim Yong Kim on this post. Prior to becoming the World Bank Chief, Malpass was the 'under Secretary of Treasury for International Affairs' in the Trump administration. He was also a senior economic adviser to the US President Trump during his 2016 election campaign.
- Who has been elected the new President of Ukraine → **Volodymyr Zelensky**
  - ☛ Comedian Volodymyr Zelensky was on April 22, 2019 elected the new President of Ukraine with a landslide victory over incumbent Petro Poroshenko. Zelensky secured more than 73% votes in the Presidential poll. Mr. Zelensky, a political novice, earned nationwide fame as a comedian for his role in a satirical television series 'Servant of the People' in which he becomes the President of the country. But now he took the charge as the President in reality.
- Who has been honoured with the 71st World Press Freedom Hero Award of IPI ? → **Cyril Almeida of Pakistan**
  - ☛ Pakistani journalist Cyril Almeida, assistant editor of 'Dawn' paper was in April 2019 honoured with the World Press Freedom Hero award of the International Press Institute (IPI), a global body of editors, media executives and journalists in over 100 countries. He became the IPI's 71st World Press Freedom Hero for his 'Critical' and 'tenacious' coverage of the civil-military relations in Pakistan. IPI's award honours journalists who have made vital contributions to the promotion of press freedom, particularly in the face of great personal risk.
- Which country retained its top position on the World Press Freedom Index, 2019 ? → **Norway**
  - ☛ Norway retained its top position on the World Press Freedom Index, 2019, released on April 18, 2019 by the Reporters without Borders, a global non-profit body that works on the freedom of press. Norway retained its top position on the index with a score of 7-82 as the country where press and journalists have most liberty in their domain out of 180 countries of the world included in the list. Finland and Sweden secured second and third spots on the index after Norway respectively. India dropped two places down on the index as it was placed on 140th spot out of 180 countries in 2019. Last year it was on 138th position.
- Sri Lanka and Nepal launched their first satellites into space. The names of satellites are → **Raavana-1 of Sri Lanka and Nepali Sat-1 of Nepal**
  - ☛ India's neighbour countries Sri Lanka and Nepal on April 18, 2019 joined the space world when both the countries launched their first satellites into space successfully from Virginia, the USA. Sri Lanka launched its 1.05 kg Raavana-1 satellite, designed and built at the Kyushu Institute of Technology in Japan by two Sri Lankan scientists. Raavana-1 with a lifespan of one and a half years will capture images of Sri Lanka and its neighbouring countries. Nepali Sat-1 satellite has been sent to gather detailed geographical information of Nepal.
- Which city set a new world record for the number of national flags raised in a city for 24 hours ? → **Beirut**
  - ☛ Lebanon's capital Beirut set a 'Guinness World Record' for the number of national flags raised in a city for 24 hours when the Beirut Alive Association on April 28, 2019 raised a total of 26,852 Lebanese flags in Beirut, breaking New York's Waterloo record of 25,599 flags.
- Who emerged champion of the Augusta Masters golf title, 2019 ? → **Tiger Woods**
  - ☛ Tiger Woods of America clinched his fifth Augusta Masters golf title with a one shot victory on April 14, 2019 in Augusta, USA. It was Woods' 15th major golf title and first one since the US Open Golf in 2008. He had won the Augusta in 1997, 2001, 2002 and 2005 before this one in 2019. He got richer by \$ 2.07 million after this title triumph. He finished 13 under par at 275 with a final round of 70. Woods got the traditional 'Green Jacket' of the Augusta Masters Champion from compatriot and last year champion Patrick Reed.
- Who has become first female umpire to stand in a men's ODI in cricket ? → **Claire Polosak**
  - ☛ Australia's Claire Polosak scripted a new chapter in international cricket by becoming the first female umpire to stand in a Men's One Day International. Polosak officiated as an umpire in the final of the World Cricket League Division 2 between hosts Namibia and Oman on April 27, 2019 in Windhoek. She has also been an umpire in 15 Women's ODIs and in the semi-final of the women's T20 World Cup in 2018. But the duty as a female umpire in a Men's International match was a historic moment of her career.





# Economic Scenario



## WTO Predicts World Trade Volume Growth Dipping in 2019

- **WTO Predicts World Trade Volume Growth Dipping in 2019**
- **David Malpass : World Bank's New President**
- **India's GDP to Grow 7.5 per cent in 2019-20 : World Bank's Estimates**
- **IIT-Madras Tops HRD's Ranking (2019) of Higher Education Institutes, IISc Second**
- **IMF Cuts India Growth Forecast for 2019-20 to 7.3 per cent**
- **India Brings Down Trade Deficit with China by \$ 10 Billion in 2018-19**
- **India's Population Grew at 1.2% Average Annual Rate Between 2010 and 2019 : UN**
- **Banks Board Bureau Recommends Governance Reforms in Public Sector Banks**
- **Banks Close 2018-19 with 13.24% Credit Growth, Deposits up 10.03%**
- **At 2.86%, CPI Inflation at 5-month High in March-2019 on High Food Prices**
- **At 0.1%, India's Industrial Growth Falls to 20-month Low in February 2019**
- **RBI Divests Entire Stake in NHB, NABARD**

Growth in global trade volumes is likely to slow down to 2.6 per cent in 2019 compared to 3 per cent in 2018, due to rising trade tensions between major economic powers and increased economic uncertainty, according to WTO estimates. Trade growth could then rebound to 3 per cent in 2020, but only if there is an easing of trade tensions, said a WTO report released on April 2, 2019. World GDP growth is expected to decline from 2.9 per cent in 2018 to 2.6 per cent in both 2019 and 2020. Key findings of WTO trade profile 2018 are the following :

- Trade growth in 2018 was weighed down by several factors, including : (i) new tariffs and retaliatory measures affecting widely traded goods, (ii) weaker global economic growth, (iii) volatility in financial markets and (iv) tighter monetary conditions in developed countries.
- Trade growth in 2020 is expected to outpace GDP growth due to faster growth in developing economies.
- The value of merchandise trade was up 10 per cent to \$ 19.48 trillion in 2018, partly due to higher energy prices.
- The value of commercial services trade rose 8 per cent to \$ 5.80 trillion in 2018, driven by strong import growth in Asia.

- India recorded double - digit growth in commercial services trade on both the export side (11 per cent) and the import side (14 per cent).



- Value of India's merchandise export in 2018 is estimated at US \$ 326 billion registering a growth rate of 9% over 2017. India's share and rank in global merchandise export is 1.7% and 19th respectively in 2018.
- Value of India's merchandise import in 2018 is estimated at US \$ 511 billion registering a growth rate of 14% over 2017. India's share and rank in global merchandise import is 2.6% and 10th respectively in 2018.
- Value of India's commercial services export in 2018 is estimated at US \$ 206 billion registering a growth rate of 11% over 2017. India's share and rank in global commercial services export is 3.5% and 8th respectively in 2018.
- Value of India's commercial services imports in 2018 is estimated at US \$ 175 billion registering a growth rate of 14% over 2017. India's share and rank in global commercial services imports is 3.2% and 10th respectively in 2018.

## David Malpass : World Bank's New President

David Malpass, US President Donald Trump's nominee to lead the World Bank, won unanimous approval from the World Bank's executive board on April 5, 2019, continuing the 73-year tradition of an American running the world's largest development lender.

Malpass, the US Treasury's undersecretary for international affairs, assumed his new role on April 9, 2019 as the World Bank and International Monetary Fund Spring Meetings get under-way.

In a phone interview with Reuters, Malpass said he would uphold the bank's commitment to reducing poverty in the poorest countries and to fight climate change, and pursue goals stated in a \$ 13 billion capital increase last year. In an email to World Bank employees, Malpass emphasized the need to fight extreme poverty and "foster broad based growth for each and every borrower, and a stronger, more stable global economy for all."

Since taking his job at the Treasury in 2017, Malpass had been critical of the World Bank's continued lending to China, arguing that the world's second-largest economy was too wealthy for such aid while it was loading up some countries with unsustainable debt from its Belt and Road infrastructure program.



David Malpass : New President  
World Bank Group.

## India's GDP to Grow 7.5 per cent in 2019-20 : World Bank's Estimates

According to World Bank's estimates, India's GDP growth is expected to accelerate moderately to 7.5 per cent in the 2019-20, driven by continued investment strengthening, particularly private-improved export performance and resilient consumption. The real GDP growth is estimated at 7.2 per cent in 2018-19, the World Bank said in its latest report on South Asia on April 7, 2019, ahead of the spring meeting of the World Bank and the International Monetary Fund (IMF).

- Data for the first three quarters (April-December 2018) suggests that growth has been broad-based. Industrial growth accelerated to 7.9 per cent, making up for a deceleration in services.
- Meanwhile, agriculture growth was robust at 4 per cent.
- On the demand side, domestic consumption remained the primary growth driver, but gross fixed capital formation and exports both made growing contributions.
- Over the last quarter (Q4 of 2018-19), growth is expected to remain balanced across sectors.

- Inflation dynamics have been subdued over most of 2018-19. With robust growth, and food prices poised to recover, inflation is expected to converge towards four per cent. Observing that headline inflation stood at 2.6 per cent in February 2019, and the average for 2018-19 (April-February) at 3.5 per cent, well below the Reserve Bank of India's (RBI's) target-midpoint of 4 per cent, as a result, the RBI reduced the policy rate by 25 basis points (to 6.25 per cent) in February 2019 and further to 6.00 per cent on April 4, 2019.
- Both the current account and the fiscal deficit are expected to narrow.

## IIT-Madras Tops HRD's Ranking (2019) of Higher Education Institutes, IISc Second

The Indian Institute of Technology (IIT), Madras, topped the HRD Ministry's national ranking of higher education institutes while the Indian Institute of Science (IISc), Bangalore, and Miranda House, Delhi, were adjudged best university and college respectively. The fourth edition of the Indian rankings based on the National Institutional Ranking Framework (NIRF) 2019 were announced on April 8, 2019 by President Ram Nath Kovind.

- IISc Bangalore and IIT-Delhi ranked second and third in the overall rankings of higher educational institutions.
- Of top 10 institutes, seven are IITs. The Jawaharlal Nehru University (JNU) and the Banaras Hindu University (BHU) ranked seventh and 10th respectively.

## AHEAD IN THE CLASS

### TOP 5 ENGINEERING INSTITUTIONS IN INDIA 2019

- |              |                 |
|--------------|-----------------|
| 1 IIT-Madras | 4 IIT-Kharagpur |
| 2 IIT-Delhi  | 5 IIT-Kanpur    |
| 3 IIT-Bombay |                 |

### TOP 5 UNIVERSITIES

- 1 Indian Institute of Science, Bangalore
- 2 Jawaharlal Nehru University, Delhi
- 3 Banaras Hindu University
- 4 University of Hyderabad
- 5 Calcutta University

### TOP 5 COLLEGES

- 1 Miranda House, Delhi
- 2 Hindu College, Delhi
- 3 Presidency College, Chennai
- 4 St Stephen's College, Delhi
- 5 Lady Shri Ram College for Women, Delhi

- DU's Miranda House has topped the colleges rankings followed by Hindu College and Presidency College in Chennai. While the prestigious St. Stephens college has been ranked at four, the Sri Ram College of Commerce placed at the seventh position.
- Eight of the top 10 engineering institutions are IITs. IIT-Madras topped the ranking followed by Delhi and Mumbai. Anna University, Chennai, and National Institute of Technology, Tiruchirappalli, have been ranked at nine and 10 in the category.
- Among the management colleges, top six ranks have been retained by Indian Institutes of Management (IIMs), led by Bengaluru. IIT-Delhi, Mumbai and Roorkee are also among the top 10 in the category.
- Jamia Hamdard has been announced as the top varsity for Pharmacy while All India Institute of Medical Sciences (AIIMS) and National Law School of India University, Bengaluru, have been adjudged as the best medical college and law school respectively.
- In the university category, IISc Bangalore has been ranked one followed by JNU and BHU.

### IMF Cuts India Growth Forecast for 2019-20 to 7.3 per cent

The International Monetary Fund (IMF) on April 9, 2019 cut the growth forecast for India by 20 basis points for the fiscal 2019-20.

- IMF has also lowered the growth projection by 20 basis points for 2019. However, there is no change forecast for 2020.
- According to the latest edition of World Economic Outlook (WEO), released during 2019 Spring Meeting, India is expected to grow at 7.3 per cent in 2019-20. This is 20 basis points lower than January, 2019 outlook and 10 basis points lower than October's forecast. Though the growth is estimated to go up at 7.5 per cent during 2020-21, still it will be 20 basis points lower than January and October 2018 forecast. India's (GDP) growth is supported by the continued recovery of investment and robust consumption amid a more expansionary stance of monetary policy and some expected impetus from fiscal policy.

### Growth Projections for India

(in %)

Agencies	2019-20	2020-21
IMF	7.3	7.5
World Bank	7.5	7.5
ADB	7.2	7.3
Fitch	6.8	7.1
RBI	7.2	—

### India Brings Down Trade Deficit with China by \$ 10 Billion in 2018-19

India has managed to bring down its trade deficit with China by \$ 10 billion to \$ 53 billion in 2018-19 year

on year, thanks to efforts by New Delhi to get greater market access to the latter's markets and take benefit out of the current Washing-ton-Beijing trade war. India's exports to China rose to \$ 17 billion during the year from \$13 billion during 2017-18, while imports declined to \$ 70 billion from \$ 76 billion. India is the seventh largest export destination of China, while China is the fourth largest export destination of India. On the other hand, China is the top import source for India, while the latter is the 25th largest import source for China.

### India's Population Grew at 1.2% Average Annual Rate Between 2010 and 2019 : UN

As per the data of United Nations Population Fund's State of World Population 2019 report, India's population in 2019 stood at 1.36 billion, growing from 942.2 million in 1994 and 541.5 million in 1969. The Indian population grew at average annual rate of 1.2 per cent between 2010 and 2019. In comparison, China's population stood at 1.42 billion in 2019, growing from 1.23 billion in 1994 and 803.6 million in 1969. China's population grew at an average annual rate of 0.5 per cent between 2010 and 2019.

In India, total fertility rate per woman was 5.6 in 1969, dropping to 3.7 in 1994 and 2.3 in 2019. India also recorded an improvement in life expectancy at birth. The life expectancy at birth in 1969 was 47 years, growing to 60 years in 1994 and 69 years in 2019.

27 per cent of India's population was in the age bracket of 0-14 years and 10-24 years each, while 67 per cent of the country's population was in the 15-64 age bracket. Six per cent of the country's population was of the age 65 and above.

Indicative of the improvement in the quality of India's health care system, the Maternal Mortality Ratio (MMR) in India dropped from 488 deaths per 100,000 live births in 1994 to 174 deaths per 100,000 live births in 2015.

### Banks Board Bureau Recommends Governance Reforms in Public Sector Banks

The Banks Board Bureau (BBB) has reiterated some of the pending demands related to governance in public sector banks (PSBs) to the central government, including complete autonomy to their boards to decide on organisational structure.

The BBB, led by Bhanu Pratap Sharma, has released a list of activities undertaken between October 2018 and March 2019. Its key recommendations are the following :

- Improve the operative environment and selection process for filing up posts of directors on PSB boards to "attract the best board-level talent".
- Give 'complete autonomy' to bank boards to decide the organisational structure.

A committee under veteran banker P.J. Nayak, which had submitted a report in 2014 to review the governance



of banks, had suggested a similar move, but only in the final phases of the review. The Nayak committee had recommended a three-phased reform in PSBs. The first stage would be formation of a BBB, which will be taken over by a holding company of PSBs in the second phase and then it will be followed up by empowering and strengthening the boards in the third phase. "Revamp credit governance architecture in nationalised banks to reinforce efforts to minimise credit costs and enhance efficiency of credit allocation," the BBB has also recommended.

- Introduce a performance-based compensation through Employee Stock Option Scheme, which is different from Employee Share Purchase Scheme, and Performance-Linked Incentives in a bid to "incentivise maximisation of risk adjusted income" and discourage "operational inefficiencies by aligning compensation with right performance metrics".
- The boards of banks should be allowed to "recommend person-ages to the government who could be considered for appointments to address specific competency gaps on the boards".

### **Banks Close 2018-19 with 13.24% Credit Growth, Deposits up 10.03%**

Banks closed fiscal 2018-19 with robust disbursements that rose in double-digits for the second year in row, after the sub-5 per cent in 2016-17, which was the lowest in five decades. According to the Reserve Bank data released on April 11, 2019, bank credit rose 13.24 per cent to ₹ 97.67 lakh crore for the fortnight to March 29, 2019, while deposits grew by 10.03 per cent to ₹ 125.72 lakh crore during the same period. This is the second consecutive double-digits credit growth after the same had declined to 4.54 per cent in 2016-17 at ₹ 78.41 lakh crore, which was the lowest since 1963.

In the year-ago fortnight, deposits were at ₹ 114.26 lakh crore and advances at ₹ 86.25 lakh crore. In 2016-17, aggregate deposits in the banking system grew a mere 6.7 per cent in 2017-18, while credit grew still lower at 4.54 per cent, the lowest since fiscal 1963.

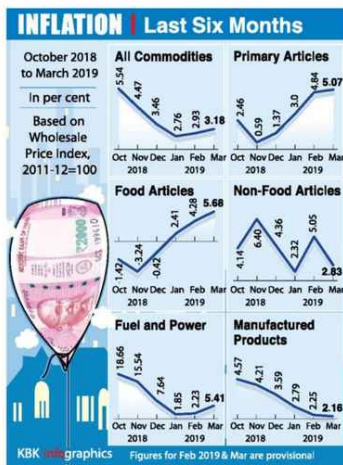
Bank deposit growth fell to a five-decade low in year to March 2017 as demonetisation bonanza withered. Credit to the infrastructure, chemical and chemical products, and all engineering sectors accelerated. However, credit growth to basic metal & metal products, textiles, and food processing decelerated/contracted.

### **At 2.86%, CPI Inflation at 5-month High in March-2019 on High Food Prices**

The retail inflation rate (Consumer Price Based Inflation Index) touched a five-month high of 2.86 per cent in March 2019, helped by the prices of food and health services. The inflation rate, however, remained within the Reserve Bank of India's (RBI's) overall target

range of 2-6 per cent, prompting economists to expect another 25-50 basis points' cut in the policy rate (Repo Rate) by the monetary policy committee in 2019-20, though not in the next policy. The food inflation rate rose to 0.30 per cent in March 2019 after witnessing a contraction in the past five months. In February 2019, the food deflation rate stood at 0.73 per cent. This pushed up the overall inflation rate, from 2.57 per cent in February 2019. Within food items, vegetables, fruits, pulses and sugar remained in deflation in March, 2019. The core inflation rate (inflation rate sans food and fuel), meanwhile, fell to 4.97 per cent in March 2019 from 5.36 per cent in February 2019.

The average food inflation rate fell to the lowest in 2018-19 since India undertook a sea change of economic reforms in 1991. "The food inflation rate of 0.14% in 2018-19 was the lowest since 1991."



### **At 0.1%, India's Industrial Growth Falls to 20-month Low in February 2019**

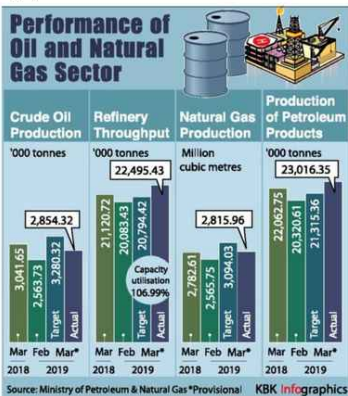
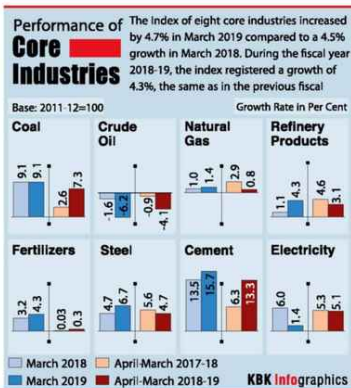
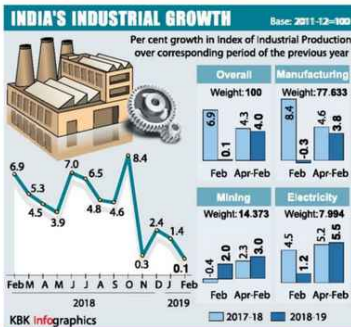
A contraction in manufacturing output, especially in the sensitive capital and consumer goods segment, pulled down industrial growth to a 20-month low of just 0.1 per cent in February 2019. The bottom crawling growth rate follows a 1.43 per cent growth in the previous month of January 2019. The index of industrial production (IIP) has witnessed low growth since November 2018, and is expected to remain muted owing to weak exports, rural distress, credit constraints and uncertainty over the election outcome, according to economists.

In the April-February (2018-19) industrial output grew at 4 per cent, as against 4.3 per cent in the same period of the previous financial year. The manufacturing segment, which constitutes the bulk of the index of industrial production (IIP) at 77.6 per cent, contracted by 0.3 per cent in February 2019 against an equally small rise of 0.93 per cent in January 2019. Before this the December 2018 manufacturing rises by 2.95 per cent. The numbers show continued volatility in the IIP, despite change in the index last year.

Most of all, the capital goods segment, which connotes investments, saw output growth turning to negative with an 8.8 per cent contraction, as compared to a 3.42 per cent contraction in the previous month. The capital goods sector, which had shown an average growth of 8.9 per cent during April-October (2018-19) and raised hopes of

an incipient investment recovery in the economy is once again appearing to be losing steam.

In January 2019, the growth rate for consumer durables also fell to 1.2 per cent, from the 2.3 per cent growth in January. "A 1.2 per cent consumer goods production is also reflective of inventories that have built up in Q3 (2018-19), when capacity utilisation also improved. But, with demand tapering off, production has slowed down. On the other hand, consumer non-durables commanded a growth rate of 4.3 per cent in February, up from 3.3 per cent in January. All other user-based segments either showed a negative growth or low-single digit growth.



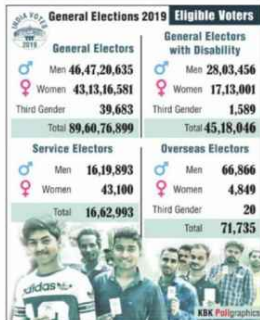
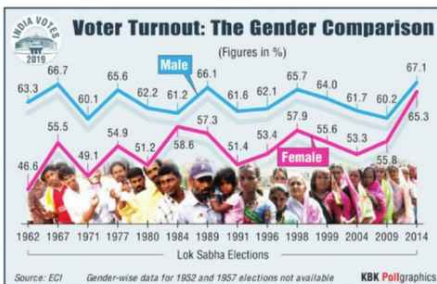
## RBI Divests Entire Stake in NHB, NABARD

The RBI has divested its remaining stake in the National Bank for Agriculture and Rural Development (NABARD) and National Housing Bank (NHB) in February and March 2019. The Central government now fully owns these two financial institutions. While the RBI stake-sale of 1 per cent in NABARD in February 2019 yielded ₹ 20 crore, 100 per cent disinvestment in NHB brought in ₹ 1,450 crore.

Divestment of RBI's shareholding in NABARD was done in two phases. It originally held 72.5 per cent of equity in NABARD, which amounted to ₹ 1,450 crore. It sold off 71.5 per cent, amounting to ₹ 1,430 crore in October 2010, while the residual shareholding was divested on February 26, 2019.

The RBI held 100 per cent shareholding in NHB, which was divested on March 19, 2019.

# Indian Democracy Through Numbers







# Preliminary Examination 2019 : Let Your Prelims Result Speak About Your Potential

—Atul Kapoor

With Civil Services Examination 2018 results 759 candidates have accomplished their goal by unlocking their true potential.

All these successful candidates have a meaningful connection—they are ones who walk their talk.

The big success is built on small steps you take every day. As it is said compounding works silently; but, it becomes a force with time.

This is the basic plan that guides you to success. Every small activity you do as part of Civil services Examination preparation creates big impact and even reflect in the end result also.

In the last issue, I reached out to some successful candidates in Top 10 and shared a story about CSE 2018 results. In the last three weeks, I am in conversation with many toppers to know their experiences and bringing

their success strategies and some insights that are enough to encourage you for big success.

In this issue we are bringing detailed interviews of Junaid Ahmed (AIR 3), Shubham Gupta (AIR 6) and Gunjan Dwivedi (AIR 9) for your benefit.

## A Little about those who Let Slip the Opportunity at Last Stage

It is an open competition and not everyone gets success. No doubt, these are moments of setback; but, it is not end of your efforts.

You have to learn from the mistakes; introspect and hit upon the root cause of the negative result and will have to work on by plugging the loopholes.

Once you are able to identify your strengths and weaknesses and are able to identify the areas that

need attention, you need to mend your preparation-plan accordingly and have to work harder to ensure that this time you will be successful.

Have courage and maintain focus as well as consistency in preparation and do what you are required to do and write a great comeback story that motivates many others who find themselves entangled in similar situations.

One of the greatest indicators of your power and toughness is revealed in how you respond to these moments of fragility and with success in next attempt you are ready to show your mettle. You must have the perseverance to stick to preparation-plan until you are successful.

Coming back to your immediate requirements—Preliminary Examination that is scheduled for 2nd June, 2019.

## Civil Services Examination, 2018 : Recommendation Details and Cut-off Marks (Categorywise)

S.No.	Category	Vacancy	Recommendation of PwBD Candidates	Vacancy after recommendation of PwBD candidates	Recommendation of candidates (Non-PwBD)	Minimum qualifying standards* [CS(P)] (Out of 200)	Minimum Qualifying Standards* [Written Exam] (Out of 1750)	Marks secured by the last recommended candidate [Final Stage] (Out of 2025)
1.	General	414	28	386	333	98-00	774	982
2.	OBC	209	05	204	204	96-66	732	938
3.	SC	128	02	126	126	84-00	719	912
4.	ST	61	01	60	60	83-34	719	912
	Total	812	36	776	723			
<b>Candidates belonging to Persons with Benchmark Disability (PwBD)</b>								
(a)	PwBD-1	11 (10 Gen., 01 OBC)	11	Nil	—	73-34	711	839
(b)	PwBD-2	12 (09 Gen., 01 OBC, 01 ST)	12	Nil	—	53-34	696	908
(c)	PwBD-3	11 (08 Gen., 02 OBC, 01 SC)	11	Nil	—	40-00	520	754
(d)	PwBD-5	02 (01 Gen., 01 SC)	02	Nil	—	45-34	460	718
	Total	36 (28 Gen., 05 OBC, 02 SC, 01 ST)	36	Nil	—			

\* Cut-off marks on the basis of GS Paper-I only. However, GS Paper-II was of qualifying nature with 33% marks as per Rule 15 of Civil Services Examination, 2018.

# Subject to 10% marks in each of the seven competitive papers i.e., Essay, GS-I, GS-II, GS-III, GS-IV, Optional-I and Optional-II.

## Minimum Qualifying Marks CSE 2018 and Cut-Off Marks Analysis CSE 2015-18

While formulating preparation strategies, candidates look for vital information about the minimum qualifying marks required by candidates in previous examinations.

Cut-off marks released by UPSC after completion of Civil Services Examination 2018 give a rough idea about the current trends at various stages of the examination.

Before commencing preparation for Civil Services Examination, majority of candidates keep an eye on Cut-off for current as well as previous years that helps them understand the level they need to cross to stay afloat.

Minimum Qualifying Marks (Cut-off marks) for Civil Services Examination 2018 have been released by Union Public Service Commission.

It indicates the cut-off for various stages of the examination i.e., Preliminary Examination, Main Examination (Written) and the Final cut-off for various categories.

The aspirants for forthcoming Civil Services Examination would be immensely benefited with this information as it clearly gives an idea about the minimum qualifying standards/Marks secured by the last recommended candidate in various categories at various stages of the examination.

The minimum qualifying marks at various stages for various communities have been as table.

### Cut-Off Marks Analysis CSE 2015-18

Minimum qualifying marks for Preliminary Examination have come down in CSE 2018 and are lowest in last four years CSE 2015-2018.

In CSE 2015 Preliminary Examination General Studies Paper 2 was made qualifying.

The Cut-off gives you a rough idea about the minimum qualifying marks year wise; but, this is not any indicator of any trend as the cut-off depends on many factors such as number of vacancies available, toughness of question paper and number of candidates appeared in Preliminary Examination.

In CSE 2018, the number of vacancies has gone down comparing

previous years and the Prelims paper was tough and that really impacted cut-off that has gone to 98.

You can also read many such analytical stories and about IAS toppers on [www.iaspassion.com](http://www.iaspassion.com) where i contribute regularly.

### Minimum Qualifying Marks for Preliminary Examination

Preliminary Examination Cut-off	
CSE 2018	98
CSE 2017	105-34
CSE 2016	116
CSE 2015	107-34

### How Many Questions are Enough ?

Be clear that those who attempt 100% questions are not safe.

The more risk you take; the more chances are you are spoiling your odds of success.

It is not only you; there will be many candidates who find it hard to answer all questions.

You should keep a target of attempting at least 65 + correct questions while planning your endeavour so that you can feel safe in any confrontational situation that you may face while attempting Preliminary Examination 2019.

### In a nutshell, understand the nature of questions being asked in Preliminary Examination

In an attempt to understand the questions, one needs to recognize it clearly as most of the questions being asked in Civil Services (Preliminary) Examination are tricky and twisted.

You need to understand the question which requires careful reading of question paper.

With increasingly dynamic and more demanding syllabus, one needs to understand the examiners' intent and how UPSC frames the questions for Preliminary Examination General Studies Paper 1.

It is all about higher level of understanding and knowledge of concepts.

Earlier, many candidates believed the theory that UPSC has exhausted almost all direct questions which can be asked in the examination.

The twist in the questions asked was seen as an attempt to diminish the chance of question being repeated.

Now, with aptitude test in place, the things are getting crystal clear that UPSC continuously aimed to examine your capabilities and alertness of your mind to comprehend.

You need innovative approach for learning and those who identify the benefits of 'Integrated Approach' (commencing preparation with Main Examination orientation), find it easy to handle Prelims General studies Paper 1.

UPSC wants candidates to put their thinking caps on. After all, their purpose is to recommend the suitable candidates for such higher posts.

Yes, these questions are formulated in such a way that now proper attention and a little more time is required to understand these.

Look at past few years' question papers and you will agree that most of the questions are not direct and involve a lot of intelligence; at the same time it will require you to apply the concepts and some thinking skills such as application and analysis.

While you are concentrating on preparation, you must recognize the link between your accumulated knowledge and the examination techniques for a brilliant performance.

You need to prepare cautiously otherwise you will be left scratching your head while attempting the Preliminary Examination question papers.

While practising and applying knowledge and skills helps you perform; by knowing the UPSC exam pattern, you have another factor 'Negative Marking' that makes your task little more risky if you don't prepare well.

### Get Noticed !

Your aim is big success and achieving success at first stage will increase probabilities of your final success in Civil services Examination.

Let your Preliminary Examination result speak about your potential. The success at first stage will set the tone for a big achievement; let everyone know your true personality through your actions.

So, put in your best and make use of the limited time you have in hand before Prelims that is scheduled for 2nd June, 2019 and get noticed.

All the best !





# World Panorama

## India and Security Council : Distant Hope

—Arunoday Bajpai

In the post-cold war era, India laid her claim for the permanent membership of the UN Security Council for the first time during 1992 UN Summit. The reform and expansion of permanent membership of Security Council has been in the agenda of UN since the Special Summit of UN convened in 1992. But no tangible progress has been made in this regard. The reform process is slow and tardy. However, so far, India has been elected seven times to the UN Security Council as a non-permanent member. India has served as a non-permanent member in 1950-51, 1955-56, 1972-73, 1977-78, 1984-85, 1991-92 and finally in 2011-12. Thus, she is one of the countries, which have been elected for the most number of years as a non-permanent member.

### India's Claim

The permanent membership of the Security Council not only bestows the Veto power, but also enhances the political status of the country. If a country gets the permanent membership of the Security Council, it gains more bar-gaining power and leverage in global affairs. India has claimed the permanent membership of the Security Council on the following grounds:

(1) When UN was established in 1945, the big five powers were given the permanent seat in the Security Council. Since then not only the world has expanded but its composition has also changed. It was only in 1965 that the non-permanent seats were increased from ten to fifteen. However, in last 70 years, there has been no change in the category of permanent membership. However, there is a tremendous change not only in the composition of the global power

structure but also in the nature of global challenges. In order to make the UNSC effective in facing the post-cold war global challenges, the reforms of the Security Council have become urgent.

(2) Now, India has emerged as a leading global player in economic terms. With \$ 2.7 trillion GDP, India is now the 6th largest economy in the

world. In terms of purchasing power parity (PPP), it now holds the third position in the global economy after the US and China. It now appears strange and unrealistic that the UK and France continue to be the permanent members, while the same status is denied to India. India's political status in the world should match her economic status.

(3) In terms of population, India is the second largest country in the world after China. India is also the largest functioning democracy in the world. Since her independence, India has displayed commitment to human rights, rule of law, and respect for the

### When India was Offered the Security Council Seat ?

*Why was China made a permanent member of UN SC and not India ?* In fact, the status of the permanent membership of the Security Council was decided for the first time when the UN came into being in 1945 and its Charter was finalized. By that time India was not even an independent country, whereas China was not only an independent country but also a large country in terms of population and geographical area. Another possible immediate reason for granting China the permanent seat in the UNSC by the Allies (Victorious countries in the Second World War) might have been to balance the enemy country Japan, which was defeated in the World War II and was held responsible for many war crimes. Also, no other Asian country, at that time, was in a position (many countries were not even independent) to be offered the permanent seat in the Security Council. These are probably the main reasons why China could make to the permanent membership of the UNSC, whereas India could not. However, China's seat in the UNSC became controversial in 1949 following the establishment of the Communist Party rule in China as most of the nations did not grant recognition to Communist China. The Nationalist China (Taiwan) was still recognized as natural claimant of China's seat, though the mainland China was under the Communist rule. India considered Communist China as the natural successor to China, a claim denied by the US and other western countries.

It was in this background that India was offered the controversial seat by the US and the USSR. It is now revealed and confirmed from many sources that India was offered a permanent seat on the Security Council in 1950 by the US and again in 1955 by the Soviet Union. The offer of the US came though the then US Foreign Secretary John Foster Dulles, who discussed this matter with Vijay Laxmi Pandit, the Indian Ambassador in the US. Vijay Laxmi Pandit wrote a letter to Jawahar Lal Nehru informing about the proposal. In order to avoid controversy, Nehru denied in Lok Sabha that any such offer was made.

But that offer was declined by the Indian Prime Minister, Jawahar Lal Nehru. He said that the seat should be given to China. Nehru's argument is summarized as "Integrating the People's Republic of China into International community by conceding its right to Chinese seat at the Security Council" was in fact the Central pillar of Nehru's foreign policy. The status of People's Republic of China in the UN, Nehru argued, should take priority before any consideration be given to the necessary revision of the UN Charter required for the admittance of new permanent members.

Another reason, Nehru declining the offer might be the ongoing cold war after the World War II, in which both the US and the Soviet blocs were engaged in bitter rivalry. Joining UNSC seat at the behest of either super power would have entangled India in the cold war politics, undermining India's independence. In view of India's Non-aligned policy, keeping away from the cold war rivalry was essential. Hence, Nehru declined the offer of both the US and the USSR.

sovereignty and equality of nations, the very principles the UN stands for. India has declared to adhere to the UN principles in her Constitution under the Directive Principles of State Policy. India has always stood for peaceful resolution of disputes among nations. It is not a coincidence that Gandhi's birthday has been declared as 'International Non-Violence Day' by the UN General Assembly in 2007. International Yoga day is also celebrated by the UN each year.

(4) India is the founder member of the United Nations as Indian representative signed its Charter in 1945. India has made huge contribution to the fulfillment of the aims and objectives of the UN. She has opposed colonialism and racialism and supported the peaceful settlement of international disputes and the cause of global peace and disarmament. India has always been in the forefront to promote development partnership with other developing and poor countries. India is rightly considered the leader of Global South.

India has performed successful mediation role in many global conflicts like Korea war (1950-53) and Suez Crisis (1956). India has been elected seven times as non-permanent member of Security Council, and has discharged her responsibility in an effective manner. India's contribution to the peacekeeping activities is impressive. India is the third largest contributor of peacekeeping forces of the UN. India has also discharged her global responsibility through other UN organs and agencies like UNESCO, Human Rights Council, International Court of Justice and so on.

(5) In last 30 years or so, India has emerged as the leading player in the management of global affairs. She is now the member of G-20 group of the 20 leading economies of the world. India has been playing a leading role in climate change and world trade negotiations. India is one of the five outreach members invited for consultation in G-8 Summits on a regular basis. India is also one of the founder members of BRICS (Brazil, Russia, India, China and South Africa), which is projected to outpace the western economies by the year 2050.

## The Progress and Obstacles

The UN General Assembly appointed a Task force in 1992 to suggest proposals for reform, which submitted its report in 1996. It suggested for evolving a consensus among members for reform. However such consensus has not emerged so far. Again, in 2005, the Secretary-General of UN, Boutros Boutros Ghali presented another proposal named as 'In Larger Freedom', which proposes to increase the membership of the Council to 24 from 15 at present. The proposal was discussed in 2005 Summit of UN but no consensus was forged. Meanwhile, African countries have also demanded one permanent seat for a African country. Many countries support the idea of increasing only the non-permanent membership or increasing permanent membership without veto power.

The four countries—Brazil, Germany, Japan, and India, are currently seeking permanent membership of Security Council. They are known as **G-4 Group**. According to their proposal the UN Security Council should be expanded beyond the current fifteen members to include twenty-five members. The G-4 members support the claims for permanent membership of each other. They are also willing to allow South Africa also as a permanent member from African Continent.

The membership of Security Council has become a political issue. The countries which are opposed to the permanent membership of G-4 countries have organized under the banner of **Coffee Club**. Its members are : Italy, Spain, Argentina, Canada, Mexico, South Korea and Pakistan.

Thus, Pakistan is opposed to India's membership; Spain and Italy oppose Germany; Argentina and Mexico have opposed Brazil, and South Korea is opposed to the membership of Japan. The Coffee Club is now known as '**Uniting for Consensus**'. China is the only permanent member of the Security Council, which does not support India's claim for the permanent membership of the Security Council. Other permanent members of Security Council—the US, Russia, UK and France have extended their support for India's claim for permanent membership.

At present, the proposal for the reforms of the Security Council is pending before the UN General Assembly for the last three years to elicit members' opinion. The text-based negotiations are to be completed in the UN General Assembly, in which each member state will have to give her views in writing. The final proposal will be passed by the two-thirds majority of the General Assembly and will be placed before the Security Council for final approval, where China is likely to exercise her veto. In fact, giving permanent membership to any new country involves the amendment in the UN Charter. The proposal for the Amending of Charter is to be first passed by a two-thirds majority of the General Assembly and later approved by the 9 members of the UNSC including the positive votes of all the permanent members. Due to tardy process and objection by China, India's hopes may not get materialized in near future. Thus, the permanent membership for India in the Security Council appears to be a pipedream.

## India and Pakistan after Pulwama and Balakot

India and Pakistan reached to the brink of war following the killing of more than 40 *Jawans* of CRPF in a terrorist attack on 14 February, 2019 at Pulwama in Jammu and Kashmir by Pakistan based terrorist group Jaish-e-Mohammad (JeM) and India's second surgical strike on 26 February, 2019 at the JeM Training Camp located in Balakot in Khyber Pakhtunkhwa province of Pakistan.

In retaliation, Pakistan launched air strikes on 27 February, 2019 against India's military target in Jammu and Kashmir. Pakistan's air strike was foiled by the Indian air force, but in the process one Indian MIG-21 aircraft was crashed and its pilot was captured by Pakistan military. Under international pressure and facing an imminent threat of further air strikes by India, Pakistan released the Indian

pilot after two days. However, the tensions between the two countries have built up, as there are reports of regular heavy firing along the border by both sides. It is reported that Pakistan has increased the deployment of forces along Indian borders by shifting her forces from the Pak-Afghan border. These developments may undermine peace and stability in the entire region.

### **Pakistan's Involvement in Kashmir and Terrorism**

Pakistan considers Kashmir dispute to be the main point of tension with India, though India argues that it is not Kashmir but the cross-border terrorism in Kashmir, which is the main cause of tensions between the two countries. India has also declined in 2016 to participate in any negotiations with Pakistan until state sponsored terrorism is addressed in Pakistan.

Pakistan had agreed in Shimla agreement in 1972 to resolve all bilateral dispute with India bilaterally, but she has violated this agreement by raising Kashmir issue in various international fora. Pakistan does not claim that Kashmir is a part of her territory, but, instead, it demands the holding of UN sponsored Plebiscite (1948) in Kashmir to decide its fate. Thus, Pakistan is interested in seeking independence of Kashmir from India. However, Pakistan's strategy is to annex Kashmir once it is declared independent. India refutes Pakistani demand of plebiscite on the ground that the merger of the Jammu and Kashmir was first signed by the rulers of Kashmir and later it was ratified subsequently by the Constituent Assembly of the state in 1954. And thus, Jammu and Kashmir is an integral part of India and Pakistan has illegally occupied its certain parts known as Pak-Occupied Kashmir (POK).

Pakistan has fought three wars with India on the issue of Kashmir in 1947, 1967 and 1999. The war of 1971 was with the uprising in East Pakistan (Now Bangladesh). With her decisive defeat in all wars, Pakistan was convinced that it cannot win a conventional war against India. Meanwhile, the end of Afghan war in 1989, following the withdrawal of Soviet forces from Afghanistan gave

Pakistan an opportunity to wage a different and more insidious war against India through the strategy of state sponsored terrorism. A large number of Jihadis called Mujahideens came back to Pakistan from Afghanistan and needed another Jihad, Pakistan's army and ISI helped them to organize and train to launch Jihad for the liberation of Kashmir. Thus, in early 1990s, terrorism took roots in Kashmir and its effects are known to all. Pakistan sponsored terrorist groups like Lashkar-e Taiba, Jaish-e-Mohammad, Hizbul Mujahideen and many others based in Pakistan have caused many attacks against India in last three decades. Some of the major attacks are: 1999 Hijacking of Indian Airline flight IC184 to Kandahar, Afghanistan, which led to the release of dreaded terrorists including Masood Azhar; December 2000 attack in the legislative Assembly of Jammu and Kashmir; December 2001 attack on the Indian Parliament, 2008 attack on Taj Hotel Mumbai, 2016 attacks in Pathankot Air base and Uri Army base and now Pulwama attack in 2019.

A suicide bomber rammed the explosive laden car on the CRPF convoy at Pulwama on 14 February, 2019, which killed more than 40 CRPF Jawans. The terror attack raised huge popular rage in India. After the killing of 40 Indian Jawans in Pulwama attack, Indian people were expecting some meaningful action from the government of India. The electronic media facilitated the sharing of popular feelings of excitement at real time basis. The high level popular excitement in India led to national anguish. The entire nation including all political parties and sections of people stood united behind the government. Pulwama attack is viewed as the attack on the identity and prestige of India and perhaps this was the last opportunity to explore our options to deal with this serious threat to India's security, integrity and peace.

### **Indian Response**

Indian response to Pakistan supported terrorism and separatism mainly in Kashmir has not been encouraging in the initial years. Sadly enough India's policies towards terrorism in Kashmir have been adhoc and reactionary, without making any

long term impact on the core issues. But gradually Indian response gained sinews over the years more specifically since 2016.

Broadly speaking Indian response to Pakistan sponsored terrorism falls into two categories:

**(A) Internal Response :** India has been trying to find political and amicable solution of the Kashmir through negotiation with Separatist leaders, announcing special packages for the development of the state and also strengthening internal security, vigil at the border and intelligence net-work in the region. But all this proved ineffective as both terrorism and separatism continues to grow in Kashmir. However, following Pulwama terror attack, India launched a massive drive against the terrorists and separatists active in Kashmir valley. To begin with, the government security provided to separatist Hurriyat leaders was withdrawn, Jamaat-e-Islami, the parent organization of separatist was banned and its property and assets seized, another militant group JKLF was also banned and a nation-wide hunt for terrorists and their sympathizers was launched. The search and hunt operation is still going on.

**(B) External Response :** India has been following a hard line policy against Pakistan since Pathankot and Uri attacks in 2016. India drew a red line that there should not be any further negotiations with Pakistan till she takes some credible action against terrorism. India declined to participate in the SAARC summit proposed in November, 2016 in Islamabad. India's external response can be further divided into military response and political response.

As far as **military response** is concerned India has tightened security at the border to prevent further infiltration. The cross-border firings from two sides have become a regular feature.

**Surgical Strikes :** India has also conducted surgical strikes against Pakistan to destroy the training camps of terror outfits. Surgical strike derives its name from medical surgery in which precise and limited operation is conducted to treat the diseased organ. In similar fashion, when armed forces enter the territory



controlled by another country and conduct a limited and precise military operation, it is known as surgical strike.

First, the first major surgical strike was conducted by Indian Special Forces against Pakistan in the wee hours of 29 September, 2016 across the Line of Control (LOC) at five points. Indian Special Forces, in a overnight operation destroyed terrorist launching pads located near the border and killed about 37 terrorists in the Pak Occupied Kashmir (POK). However, Pakistani government and Army have disowned these surgical strikes and said that it was a routine violation of LOC by Indian armed forces in which 2 Pakistani Armed soldiers were killed.

Also, there have been some minor surgical strikes by Indian army across Indo Pak border in the past also. In 2008, Indian Army crossed LOC and raided Pak army posts after an Indian soldier of Gorkha Rifles was killed. Similarly, in 2011, Indian Army crossed LOC and killed Pakistani soldier to take the revenge of the killing of six Indian soldiers in Kupwara. Again, in 2013, Indian Army destroyed a Pak army post across the LOC after an Indian Lance Naik was found beheaded by Pakistani forces.

Second, in response to Pulwama terrorist attack by Jaish-e-Mohammad terrorists, India launched her second surgical strike on 26 February, 2019 in Balakot, which is located in Khyber Pakhtunkhwa province of Pakistan, which is a border province between Pakistan and Afghanistan. As per the available official details, given by the Ministry of External Affairs, Indian air force destroyed the largest JeM training camp in Balakot. The strike destroyed the entire camp and killed a large number of terrorists and their trainers and their commanders.

India has justified this surgical strike on the ground that JeM terrorists, being trained at Balakot were planning another suicide attack against India. That is why India termed this operation as 'non-military preemptive strike'. India called it non-military operation, as it was launched in self-defence against terrorist camp, not against civilian population or any other establishment of Pakistan.

## Do You Know ?

### Indian Diplomatic Efforts have Caused more Damage to Pakistan than Surgical Strikes

Indian diplomatic efforts have following negative impact on Pakistan :

1. Pakistan was politically and diplomatically isolated as none of the countries came in support of Pakistan when India launched Balakot Operation. Instead, India's right to self-defence against cross-border terrorism was approved by many countries.
2. After Pulwama, there was a meeting of Financial Action Task Force in Paris, where Pakistan compliance report with respect to disrupting financial networks of terror group was reviewed. Due to Indian diplomatic pressure, Pakistan was not given any relief and remained in the Grey List. India also pleaded for placing Pakistan in the Black list, which will be considered in the coming meeting of FATF in October, 2019.
3. It was a success of Indian diplomacy, that France, UK and the US jointly moved proposal in the UNSC's Al Qaeda and Taliban Sanctions Committee to declare JeM Chief Masood Azhar as a global terrorist. Though due to Chinese Veto he could not be declared as global terrorist, yet both Pakistan and China were again exposed for their wrong stand on terrorism. Later, France imposed national sanctions against Masood Azhar, which may be followed by other members of the European Union.
4. In the first week of March, 2019, India inflicted another diplomatic damage on Pakistan by being invited as a special guest in the meeting of Foreign Ministers of OIC, in spite of Pakistan's vehement opposition. The OIC is an organization of 57 Muslim Countries, but the final Abu Dhabi Declaration, issued at the end of meeting, for the first time, did not mention Kashmir issue.
5. Immediately after the Pulwama attack, Saudi Prince Mohammad bin Sultan visited Pakistan, but in spite of Pakistan's great expectations, he did not mention the issues of Kashmir in his joint press conference with Pakistani PM Imran Khan. This was a great disappointment for Pakistan as Pakistan considers Saudi Arabia as her close political and strategic ally.
6. The White Paper on fight against terrorism and extremism issued by China on 18 March, 2019 underlined that the Mumbai Attack of 2008 was one of the notorious terrorist incidents at the time when Pakistani Prime Minister was present in Beijing. This may be indirect consequence of ongoing diplomatic pressure on China by India and other countries for using veto in favour of Azhar in the UNSC.
7. In February, 2019, India withdrew the Most Favoured Nation (MFN) Status granted to Pakistan in 1996. This has the symbolic value to isolate her in global community.

Thus, India's diplomatic efforts following Pulwama attack have largely succeeded in isolating Pakistan, which faces many actions in future from global community on the issue of terrorism. Pakistan under the global diplomatic pressure has taken some actions against terror groups in Pakistan, though these may be an eye wash in the long run.

Moreover, India has not declared a war with Pakistan. However, Pakistani military spokes-person, though admitted strike by Indian air force, but denied any human casualty or damage to property. Yet paradoxically, he claimed Pakistan resolve to give appropriate response to India as per their choice of time and place.

The international reactions with respect to Balakot strike have largely been in India's favour, except China. China, maintaining her tilt towards Pakistan said that India should have avoided unilateral action against terrorists and should have addressed this issue with international cooperation. China has not directly sided with Pakistan openly yet she has

called both parties to maintain restraint. On the other hand, the US and France have come in open support to India by reiterating that India has the right to self defence. France said that she is willing to support India to fight terrorism. Australia advised Pakistan to take action against the terrorist groups, which operate in India. Other countries like UK and UN called for maintaining peace in the region. However, no country has openly sided with Pakistan.

**Pakistan Retaliates :** In response to Balakot operation, Pakistan air force launched an airstrike using advanced F-16 fighter jets on some

*Continued on Page 77*

# Mission Shakti : A-SAT

—Dr Vivek Sharma



Prime Minister Narendra Modi on March 27, 2019 addressed the nation to declare the success of Mission Shakti, India's first test of an anti-satellite weapon. With this, India becomes the fourth Nation, after US, China and Russia, with the capability to destroy a low-orbit satellite and thus establish itself as a space power. The team of scientists was able to accomplish this feat within a span of 3 minutes. A-SAT intercepted an unnamed Indian satellite in the Low Earth Orbit (LEO) at an altitude of 300 km and destroyed it. Mission Shakti has ensured that it secures a place in the space power league by shooting down the satellite which was orbiting at an altitude of 300 km. Catapulting India into an elite league of countries with anti-satellite (A-SAT) weapons, Mission Shakti is a joint programme of the Defence Research and Development Organisation (DRDO) and the Indian Space Research Organisation (ISRO). The acquisition of this A-SAT technology is also expected to have spinoffs that India can exploit for domestic and international commercial use.

## Anti-Satellite Weapons (A-SAT)

Anti-Satellite Weapons (A-SAT) are created to destroy or incapacitate satellites. The new technologies incorporated in A-SAT include an advanced navigation system called Ring Laser Gyroscope and an infrared Imaging Radar(IIR) seeker that helps the missile home-in on the target satellite. Most of these technologies were developed at the Missile Complex and Research Centre Imarat (RCI) in Hyderabad. The entire mission carried out on March 27, 2019 was led by G. Satheesh Reddy, Chief of DRDO and Secretary, defence R&D & Scientific Advisor to the Minister of Defence. A-SAT is actually an advanced version of the interceptor missile, which the DRDO had successfully developed in 2011. There are many countries which have this capability, but only four

countries including India have demonstrated their A-SAT capabilities. The US first tested A-SAT technology in 1958, the USSR followed in 1964 and China in 2007. In 2015, Russia tested its PL-19 Nudol missile and followed it up with other tests. Israel is also said to possess this capability, though it has not carried out a test so far.

The DRDO, in February 2010, had announced that India was developing necessary technology to produce a weapon to destroy enemy satellites in space. A-SAT missile is 12-13 metres long and has three stages with two solid boosters and a terminal stage fitted with the 'hit to kill' feature. The A-SAT weapon was launched around 11:16 am on March 27, 2019 and targeted an Indian satellite which had been decommissioned. Mission Shakti was carried out from DRDO's testing range in Odisha's Balasore.

## Significance of Mission Shakti

Satellites are used by countries for navigation, communications and also for guiding their missile weaponry. The ability to bring down an enemy's missile, therefore, gives a country the capability to cripple critical infrastructure of the other country, rendering their weapons useless. Such a weapon allows for attacks on enemy satellites blinding them or disrupting communications as well as providing a technology base for intercepting ballistic missiles. India, whose space programme has developed launchers, satellites and probes to the moon and Mars, created the interceptor used in this test domestically. Destroying an enemy's satellite, which can provide crucial intelligence and communication in war, is considered an advanced capability. With the successful test of A-SAT India theoretically holds other countries' satellites at risk.

Though the United States and the then Soviet Union both tested

anti-satellite missiles way back in the 1970s at the height of the cold war, never has any country brought down the satellite of any other country, either during a conflict or by mistake.

During the tests, countries target their own satellites; those which are no longer in use but continue to be in the space. The tracking and interception capabilities that went into Mission Shakti have been available with the DRDO for over a decade. It began developing these after China's successful A-SAT test in 2007. On March 18, 2008, then DRDO chief, Dr. V.K. Saraswat (now a NITI Aayog member), had briefed the media in New Delhi that intercepting an incoming missile fired from 2,000 kilometres away required the same technology needed for shooting down a satellite. Claiming that the DRDO already possessed that capability in 2008, Saraswat had said: "We have built, as of now, ABM (anti-ballistic missile) systems with interceptors to engage 2,000 kilometre-class of targets."

"We have mastered anti-satellite capability and we have today shown that we can hit satellites at long ranges with a few centimetres accuracy," DRDO chairman G. Satheesh Reddy told ANI. Brahma Chellaney, a security expert at New Delhi's Centre of Policy Research, said the United States, Russia, and China were pursuing anti-satellite (A-SAT) weapons. "Space is being turned into a battlefield, making counter-space capabilities critical. In this light, India's successful 'kill' with an A-SAT weapon is significant," he told Reuters.

Arvind K. John, an analyst at the New Delhi-based Observer Research Foundation, said the A-SAT weapon is likely to be the most potent military tool for the armed forces over the next few decades, notwithstanding a revolutionary technological breakthrough. PM Modi has asserted that Mission Shakti will not have any effect on India's status in the MTCR (Missile Technology Control Regime) or other such treaties. The defence

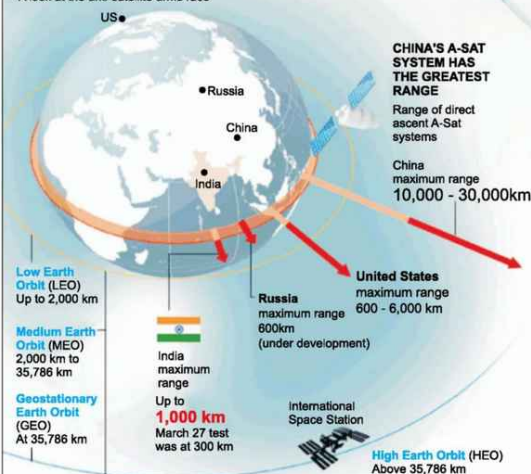
ministry said: "The test has demonstrated the nation's capability to defend its assets in outer space." However, experts pointed out that Mission Shakti did not test a defensive system that could shield Indian satellites from attack. Instead, it tested a retaliatory capability to shoot down enemy satellites.

"In wartime, the enemy may want to degrade our surveillance or communications capabilities, for example by taking down an Indian Navy satellite. Developing the capability to destroy enemy satellites would hopefully deter him," said Rakesh Sood, a former Indian diplomat who specialises in nuclear and

space policies. Rajeshwari Rajagopalan, a space specialist with Observer Research Foundation, said that even though there was no international momentum for banning A-SAT tests, New Delhi might have decided to conduct its tests now before any ban came into effect. Having been left on the wrong side

## INDIA JOINS 3 SUPERPOWERS

India has made history with its anti-satellite missile test, entering an exclusive club of nations with weapons capable of destroying satellites. But the US and Russia are long-standing players in the field and China has made leaps in recent years. A look at the anti-satellite arms race



### WHAT'S AN ANTI-SATELLITE WEAPON?

Anti-satellite (A-SAT) weapons that attempt to directly strike or detonate near a satellite or other targets are called kinetic weapons. There are two types of kinetic weapons

- Direct ascent A-SAT (DAASAT)** weapon: Strikes a satellite using a trajectory that intersects the target without requiring an interceptor system already in orbit. It's the type of missile tested by India on March 27, 2019.
- Co-orbital A-SAT** weapon: Requires first to be placed into orbit and then, when commanded to do so, it moves to reach within striking distance of its target

### CHINA

Budget for space programmes	China tested its first DAASAT systems in 2005 and 2006
\$11 billion	

- In a 2007 test, China destroyed an ageing weather satellite at an altitude of about 875 km, sending ripples through US defense circles. The test created more than a thousand pieces of space debris, the most ever in a single event, drawing international condemnation
- China has since conducted several non-debris producing tests with missiles capable of reaching MEO and GEO
- In 2013, China fired a missile into GEO at an altitude of around 30,000 km, putting the United States on alert
- China is said to be working on at least three DAASAT systems and co-orbital A-SAT weapons

### RUSSIA

Budget for space programmes \$4 billion

- Before it fell, the Soviet Union built a strong foundation of anti-satellite systems under the *Istrebitel' Sputnikov* (Russian for 'satellite destroyer') programme. Russia's current systems are all rooted in Soviet-era technology
- First A-SAT weapon became operational in 1973
- In 1980s, Soviet Union began work on the most powerful A-SAT yet, the *Naryad*, which is currently operational. It's a co-orbital A-SAT that can reach as high as 40,000 km and launch attacks from there

- US developed most of its A-SAT tech during the Cold War to counter the Soviet Union's space capabilities
- After Soviet Union's fall, counterspace projects took a backseat amid counterterrorism, counterinsurgency efforts
- But China and Russia's growing A-SAT projects have brought US back to the field and it currently has several ground, air- and sea-based missile systems that can be used as A-SAT weapons

\$48 billion Budget for space programmes

Source: Centre for Strategic and International Studies, The Wilson Quarterly, Safe World Foundation, media reports



of the Non-Proliferation Treaty, it played safe this time.

#### Key Features of Mission Shakti :

- On March 27, 2019 India conducted Mission Shakti, an anti-satellite missile test, from the Dr. A.P.J. Abdul Kalam Island launch complex, DRDO's testing range in Odisha's Balasore.
- This was a technological mission carried out by DRDO.
- The satellite used in the mission was one of India's existing satellites operating in lower orbit.
- The test was fully successful and achieved all parameters as per plans.
- The test required an extremely high degree of precision and technical capability.
- The significance of the test is that India has tested and successfully demonstrated its capability to interdict and intercept a satellite in outer space based on complete indigenous technology.
- With this test, India joins an exclusive group of space faring nations consisting of USA, Russia and China.
- The DRDO's Ballistic Missile Defence interceptor was used, which is part of the ongoing ballistic missile defence programme.
- There are other ways to demonstrate ASAT capabilities such as 'fly-by tests' and Jamming. India used the particular technology of Kinetic Kill.
- This is a technology where we have developed capability. Space technologies are constantly evolving. We have used the technology that is appropriate to achieve the objectives set out in this mission.
- The test was done in the lower atmosphere to ensure that there is no space debris. Whatever debris that is generated will decay and fall back onto the earth within weeks.
- India has a long standing and rapidly growing space programme. It has expanded rapidly in the last five years. The Mangalyaan Mission to Mars was successfully launched. Thereafter,

the government has sanctioned the Gaganyaan Mission which will take Indians to outer space.

- India has undertaken 102 spacecraft missions consisting of communication satellites, earth observation satellites, experimental satellites, navigation satellites, apart from satellites meant for scientific research and exploration, academic studies and other small satellites. India's space programme is a critical backbone of India's security, economic and social infrastructure.
- The test was done to verify that India has the capability to safeguard our space assets. It is the Government of India's responsibility to defend the country's interests in outer space.
- The tests were done after we had acquired the required degree of confidence to ensure its success, and reflects the intention of the government to enhance India's national security. India has seen an accelerated space development programme since 2014.
- India has no intention of entering into an arms race in outer space. We have always maintained that space must be used only for peaceful purposes. We are against the weaponisation of Outer Space and support international efforts to reinforce the safety and security of space based assets.
- India believes that Outer space is the common heritage of humankind and it is the responsibility of all space-faring nations to preserve and promote the benefits flowing from advances made in space technology and its applications for all.
- India is a party to all the major international treaties relating to Outer Space. India already implements a number of Transparency and Confidence Building Measures (TCBMs) – including registering space objects with the UN register, pre-launch notifications, measures in harmony with the UN Space Mitigation Guidelines, participation in Inter Agency Space Debris Coordination (IADC) activities with regard

to space debris management, undertaking SOPA (Space Object Proximity Awareness and COLA (Collision Avoidance) Analysis and numerous international cooperation activities, including hosting the UN affiliated Centre for Space and Science Technology Education in Asia and Pacific. India has been participating in all sessions of the UN Committee on the Peaceful Uses of Outer Space.

- India supported UNGA resolution 69/32 on No First Placement of Weapons on Outer Space. We see the No First Placement of weapons in outer space as only an interim step and not a substitute for concluding substantive legal measures to ensure the prevention of an arms race in outer space, which should continue to be a priority for the international community.
- India supports the substantive consideration of the issue of Prevention of an Arms Race in Outer Space (PAROS) in the Conference on Disarmament where it has been on the agenda since 1982.
- The principal international Treaty on space is the 1967 Outer Space Treaty. India is a signatory to this treaty, and ratified it in 1982. The Outer Space Treaty prohibits only weapons of mass destruction in outer space, not ordinary weapons.
- India expects to play a role in the future in the drafting of international law on prevention of an arms race in outer space including inter alia on the prevention of the placement of weapons in outer space in its capacity as a major space faring nation with proven space technology.
- India is not in violation of any international law or Treaty to which it is a Party or any national obligation.
- The test is not directed against any country. India's space capabilities do not threaten any country nor are they directed against anyone.

*Continued on Page 77*

# Trends in India's Foreign Trade in 2018-19



— Dr. Deepa Rawat

- India's overall exports (Merchandise and Services combined) in 2018-19\* are estimated to be USD 535-45 billion, exhibiting a positive growth of 7.97 per cent over the same period last year.
- Overall imports in 2018-19\* are estimated to be USD 631-29 billion, exhibiting a positive growth of 8.48 per cent over the same period last year.

## Merchandise Trade Exports (Including re-exports)

- Cumulative value of exports for the period 2018-19 was USD 331.02 billion (₹ 23,14,429.08 crore) as against USD 303.53 billion (₹ 19,56,514.53 crore) during the period 2017-18, registering a positive growth of 9.06 per cent in Dollar terms (18.29 per cent in Rupee terms).
- Non-petroleum and Non Gems and Jewellery exports in 2018-19 were USD 243.02 billion, as compared to USD 224.52 billion for the corresponding period in 2017-18, an increase of 8.24 per cent.

## Merchandise Trade Imports

- Cumulative value of imports for the period 2018-19 was USD 507.44 billion (₹ 35,48,004.48 crore) as against USD 465.58

### Merchandise April-March 2018-19

Exports
USD 331.02 billion 9.06%
Imports
USD 507.44 billion 8.88%
Trade Deficit
USD 176.42 billion

### Services April-March 2018-19\* (Estimated)

Exports
USD 204.43 billion 6.26%
Imports
USD 123.86 billion 6.43%
Net of Services
USD 80.57 billion

### Overall Trade = Merchandise + Services April-March 2018-19\* (Estimated)

Exports
USD 535.45 billion 7.97%
Imports
USD 631.29 billion 8.48%
Trade deficit
USD 95.85 billion

billion (₹ 30,01,033.43 crore) during the period 2017-18, registering a positive growth of 8.99 per cent in Dollar terms (18.23 per cent in Rupee terms).

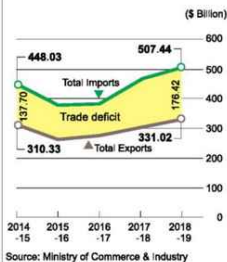
- Crude Oil and Non-Oil Imports :** Oil imports in 2018-19 were USD 140.47 billion (₹ 9,83,147.76 crore) which was 29.27 per cent higher in Dollar terms (40.39 per cent higher in Rupee terms) compared to USD 108.66 billion (₹ 7,00,320.81 crore), over the same period last year. In this connection it is mentioned that the global Brent price (\$/bbl) has

decreased by 0.06% in March 2019 vis-à-vis March 2018 as per data available from World Bank (Pink Sheet). Non-oil imports in March 2019 were estimated at USD 31.69 billion (₹ 2,20,204.59 crore) which was at-par in Dollar terms (6.85 per cent higher in Rupee terms), compared to USD 31.69 billion (₹ 2,06,081.80 crore) in March 2018.

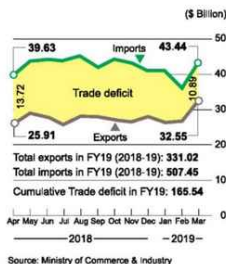
- Non-oil imports in 2018- 19 were USD 366.97 billion (₹ 25,64,856.72 crore) which was 2.82 per cent higher in Dollar terms (11.48 per cent higher in Rupee terms), compared to USD 356.92 billion (₹ 23,00,712.62 crore) in 2017-18. Non-Oil and Non-Gold imports were USD 28.42 billion in March 2019, recording a negative growth of 2.67 per cent, as compared to Non-Oil and Non-Gold imports in March 2018.

- Non-Gold and Non-Gold imports were USD 334.15 billion in 2018-19, recording a positive growth of 3.37 per cent, as compared to Non-Oil and Non-Gold imports in 2017-18. Coal, Coke & Briquettes, etc. (~14.85%) Organic & Inorganic Chemicals (~6.35%) Machinery, electrical & non-electrical (~5.74%) Electronic goods (~ 5.69%) Pearls, precious and Semi-precious stones (~1.03%).

## EXPORTS CLIMB SLOW BUT IMPORTS SHOOT UP



## MERCHANDISE TRADE FIGURES IN 2018-19



Merchandise Trade	
Export and Imports (US \$ Billion) : Provisional	
2018-19	
Exports (Including Re-Exports)	
2017-18	303.53
2018-19	331.02
% change	9.06
Imports	
2017-18	465.58
2018-19	507.44
% change	8.99
Trade Balance	
2017-18	-162.05
2018-19	-176.42
Export and Imports (₹ crore) : Provisional	
Exports (Including Re-exports)	
2017-18	19,56,514.53
2018-19	23,14,429.08
% change	18.29
Imports	
2017-18	30,01,033.43
2018-19	35,48,004.48
% change	18.23
Trade Balance	
2017-18	-10,44,518.91
2018-19	-12,33,575.40

Services Trade	
Export and Imports (Services) (US \$ Billion) : Provisional	
April-February	
Exports (Receipts)	187.85
Imports (Payments)	114.10
Trade Balance	73.75
Export and Imports (Services) (₹ crore) : Provisional	
Exports (Receipts)	13,14,237.86
Imports (Payments)	7,98,280.24
Trade Balance	5,15,957.62

(\*Note : Services data pertains to April-February 2018-19 as February 2019 is the latest data available as per RBI's Press Release dated 15th April, 2019. It is arrived at by adding quarterly data of RBI for Q1, Q2 & Q3 of 2018-19 with Month-wise QE data of RBI's press release for January and February 2018-19. This data is provisional and subject to revision by RBI. In addition, it may be noted that data for March 2019 is estimated and added to the April-February 2018-19 data of RBI to calculate the Overall Trade Deficit for April-March 2018-19. It will be revised based on RBI's next press release for March 2019.)

**Trade in Services** (for February, 2019, as per the RBI Press Release dated 15th April, 2019).

**Exports (Receipts)** Exports in February 2019 were USD 16.58 billion (₹ 1,18,114.23 crore) registering a negative growth of 6.54 per cent in dollar terms, vis-à-vis January 2019. (as per RBI's Press Release for the respective months).

**Imports (Payments)** Imports in February 2019 were USD 9.81 billion (₹ 69,861.46 crore) registering a negative growth of 11.05 per cent in dollar terms, vis-à-vis January 2019. (as per RBI's Press Release for the respective months).

**Trade Balance Merchandise :** The trade deficit for 2018-19 was estimated at USD 176.42 billion as against the deficit of USD 162.05 Billion in 2017-18.

**Services :** As per RBI's Press Release dated 15th April 2019, the trade balance in Services (i.e., Net Services export) for April-February, 2019 is estimated at USD 73.75 billion.

**Overall Trade Balance :** Taking merchandise and services together, overall trade deficit for 2018-19\* is estimated at USD 95.85 billion as compared to USD 86.05 billion in 2017-18.

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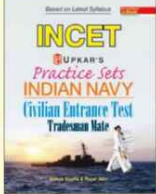
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## "Perseverance, hard work and learning from my mistakes are the secrets of my success."

**Junaid Ahmad**

**Topper—Civil Services Examination, 2018 (3rd Rank)**

"Pratiyogita Darpan" arranged an exclusive interview with Shri Junaid Ahmad who has been selected in Civil Services Examination, 2018, conducted by UPSC. He deserves high appreciation and our heartiest congratulations on his grand 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 Junaid**—Thank you for the good wishes.

**PD**—Were you confident of your success in this examination and how did you react to this news?

**Shri Junaid**—No one can be sure of his success in this examination because of the nature of this exam. I expected to be in the list but getting AIR 3 came as a surprise to me.

It was a surreal feeling and the first thing I did was to call to my parents for sharing this feeling with him.

**PD**—What preference in services have you opted for and any particular reason for that priority?

**Shri Junaid**—As I am already in Indian Revenue Service (IRS), I opted for IPS and IAS in this attempt.

The reason for it is the direct connect with people which IAS and IPS have.

**PD**—What was your optional subject?

**Shri Junaid**—Optional Subject : Geography

**PD**—In how many attempts have you achieved this success?

**Shri Junaid**—This was my 5th attempt. In 4th attempt I got IRS (352nd rank).

**PD**—You must have read IAS toppers' interviews in newspapers/magazines; what inspired you the most? Any particular success story which influenced your journey to this result?

**Shri Junaid**—More than any story it was the feeling of returning back to the society and serving them,

which inspired me the most. Nothing in the world can give you more satisfaction than doing something for others. Civil Service provides the best platform for it.



Successful men are the real men, in them the Nature has succeeded.

—Junaid Ahmad

**PD**—What was your approach towards Paper I (General Studies) and Paper II (Aptitude Test) during Prelims preparation? How long time and how much effort did you divide for each?

**Shri Junaid**—For Paper I-The first priority should be NCERT's reference books for each subject. 1-2 months prior to exam, more focus should be on solving test series and analysing previous years' papers Coaching Institute helped me in preparing GS subjects.

**PD**—How did you manage to tackle the 'Negative Marking' in Prelims?

**Shri Junaid**—You have to practice before the exam through test series. You have to take calculated risk in the exam and minimise you silly mistakes. The fear of negative marking is there but if you practice

well you will not face any problems during the exam.

**PD**—The first step is the most difficult; how to prepare? Which optional subjects to pick? 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 Junaid**—In the starting it is very important to keep yourself on tracks. Luckily, I had some seniors with me who helped me in the process.

For optional I shortlist a few like History Geography and Political Science and read few books. I found Geography interests me more so I took it.

I believe that your interest should be the main reason behind your optional selection.

**PD**—You achieved the desired success in this attempt; how do you visualize your previous attempts?

**Shri Junaid**—I always say that failures are stepping stones which one should use to achieve big things. Failure in my previous attempts helped me in rectifying my mistakes and clearing this exam.

**PD**—While making final choice for optional subject, what's important and what's not?

**Shri Junaid**—The only reason for finalising your optional should be your interest.

Previous trends, notes availability, syllabus all are secondary things.

**PD**—What shift did you adopt in your strategy for MAINS (Written)?

**Shri Junaid**—For mains I focused on two things.

(a) **Notes**—concise, crisp, notes in bullet points for each topic should be prepared so that you can write comprehensive answers in mains.

(b) **Answer writing practice**—Everyday I use to sit with my friends and write answers that helped me a lot.

### Bio-Data

**Name**—Junaid Ahmad

**Father's Name**—Mr. Javed Husain

**Mother's Name**—Mrs. Aisha Raza

**Date of Birth**—28 January, 1991

**Educational Qualifications**—

10th—2007, A.M.U., Minto (60%)

12th—2009, A.M.U., Minto (60%)

B.Tech—2009-2013, Sharda University, (70%)

**Previous Selections:**

CSE 2017, Rank 352 IRS (C & I)

**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 Junaid**—Essay preparation does not require any special efforts. It is your accumulated knowledge that needs to be reproduced in an organised manner.

Topic I chosen (1) Alternate technologies for climate change suitable for India.

(2) Customary morality cannot be a guide to modern life. I chose these topics as these areas are my strength.

**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 Junaid**—Practice that is the key.

For preparation I always made small targets. Daily, weekly, monthly and tried to complete them. This helped in keeping your studies on track.

For writing The test series and answer writing practice which I did before the exam. helped me.

**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 Junaid**—For Interview I gave few mocks in Vajirao and Reddy and also I practiced answering in front of the mirror under the guidance of Dr. Chaudhary Sir. My interview was on 28th of March. My Board was of Satyawati Mam. She is a retired IAS Officer. My interview went well and it lasted for 30 minutes.

Questions were mostly from my application form e.g. B.Tech (ECE) background National electronics policy 2019 2G, 3G, 4G, 5G etc.

Geography—India's strategic location. Maritime zones etc.

**PD**—Were you preparing for other career opportunities as well while preparing for your ultimate goal i.e. Career in Civil Services?

**Shri Junaid**—I thought of giving a try for other exams also, after I failed many a time.

But my passion for Civil Service brought my focus back and I decided that I will think of it only.

**PD**—While the changing economic environment offers immense lucrative career opportunities in various sectors, still what kept you motivated towards Civil Services?

**Shri Junaid**—I always looked for a meaningful career where I could return back to the society, where I can have job satisfaction and civil services provided the best platform for it.

**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 Junaid**—One should start preparing for it after graduation. If you think of it before you lose out on the learnings of school and college. If one does this part of his study well, it will not take long time for him to clear this exam.

Talking about the minimum period it requires 1-1.5 years.

**PD**—What is your opinion regarding the general view that Science subjects have better chance to score than Humanities?

**Shri Junaid**—I don't agree with this views. It is your preparation that gives you marks. UPSC is looking for good candidates from diverse backgrounds and that is the reason this exam. is open for everyone.

**PD**—What is the importance of medium of examination for exams like CSE?

**Shri Junaid**—I always say it is your knowledge that matters. Medium is only a way to express your knowledge. You can choose any medium English, Hindi, Urdu to express.

**PD**—Can you recall the exact moment when you realized the importance of Civil Services?

**Shri Junaid**—It was there from the very childhood. When you look at things around you there is a feeling of being a driver of change. You try to contribute something to the society and that brings you closer to this exam.

**PD**—Finally, at what point of time did you make up your mind to make career in 'Civil Services'?

**Shri Junaid**—After graduation I decided to prepare for this exam.

**PD**—Did you keep in mind some time-frame for the examination preparation and number of attempts?

**Shri Junaid**—In the starting I decided that I would not give more than 2 attempts. But when I was into this I started enjoying the whole process and it took me 4 attempts to clear this exam.

### Personal Qualities

**Favourite Person**—Every person who is positive and whom I can learn from.

**Strong Point**—Perseverance.

**Weak Point**—Emotions some times put me in trouble.

**Hobbies**—Reading books, Cricket.

**PD**—Was CSE your planned decision or your parents' wish?

**Shri Junaid**—Both. Every parent in India has this wish of making their children IAS. My story is also the same. But it was more of my interest which pushed me into the preparation of Civil Services.

**PD**—Does the educational, financial and demographic status of the family of an aspirant have any impact on the preparation?

**Shri Junaid**—It is your self-study that matters. Today internet has reached the remotest part of the country and ocean of information is available there.

I believe the things which have impacted me are Patience, Hard work Perseverance.

**PD**—In your opinion what role do the Competition Magazines play when you are preparing for an examination like Civil Services?

**Shri Junaid**—They help in covering the current affairs domain which is an important part of the preparation.

**PD**—How do you find Pratiyogita Darpin? Do you find it close to your expectations?

**Shri Junaid**—It is a good magazine for beginners-toppers; strategies are very useful provided in the magazine.

For aspirants—Current events are covered extensively. Also for school, college students it's a good magazine to read.

**PD**—As a reader of PD, do you read IAS preparation related articles published in it and do you find these constructive?

**Shri Junaid**—Articles in PD helps in opinion formation on a particular issue. It helps in making answers more comprehensive.

**PD**—Please give your comments on the PD Extra Issues Series on 'General Studies' and a few Optional Subjects?

**Shri Junaid**—The series is good for aspirants who want to get a know how without opting for coaching institutes. This will help them in their preparation.

**PD**—What is the secret of your success?

**Shri Junaid**—Hard work, patience and perseverance are the things which are required for this exam. It is an open secret to everyone.

**PD**—To whom would you like to give the credit for your success?

**Shri Junaid**—To the Almighty who kept His blessings on me. Parents, teachers and friends who were a constant source of support, helped in preparing according to the needs of this exam.

**PD**—Any suggestion/advice you would like to give to the future aspirants.

**Shri Junaid**—You should be passionate for Civil Services. If you put others interests above you, it will become easier. And also failures are part of life, Don't fear them, they

make you a better person. All the best to everyone.

**PD**—Thank you very much and wishing you all the best for your future endeavours.

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Indian defence establishments in Kashmir valley. However, Pakistan air strike was foiled by Indian air force, which destroyed one F-16 fighter jet inside Pakistan territory. But in the process, India lost her one MIG-21 fighter jet and its pilot was captured by Pakistani forces as it also fell down inside Pakistani area. With considerable international pressure from the US, Saudi Arab, and UAE as well as Indian retaliatory threat, Pakistan released the Indian pilot after two days. Yet, tensions continue in the border with heavy firing across the Line of Control (LOC) from both sides. As India enters into election mode, it appears, the major tensions have been defused for the time.

**China Uses Veto for Azhar:** Meanwhile there was a fresh move by France, UK, and US to enlist JeM Chief Masood Azhar as global terrorist. But, for the fourth time in last one decade, China has put 'technical hold' on 13 March, 2019 in Al Qaeda and Taliban Sanction Committee to prevent Masood Azhar from being declared as global terrorist by the UN. Earlier, China used her veto in 2009, 2016 and 2017 on Indian proposals to save Azhar from being declared as global terrorist. Though, it may appear a minor incident, yet in the light of Pulwama attack and Balakot action, leading to raised concerns of global community, the Chinese move has long-term consequences for India as well as the entire global Community. China says that it needs more time to investigate the matter. Chinese efforts are aimed at salvaging global isolation of Pakistan, but in the process, China is also being exposed on the issue of terrorism.

Pragati

### Continued from Page 72

- At the same time, the government is committed to ensuring the country's national security interests and is alert to threats

from emerging technologies. The capability achieved through the Anti-Satellite missile test provides credible deterrence against threats to our growing space-based assets from long range missiles, and proliferation in the types and numbers of missiles.

### Challenges of Mission Shakti

Space remains a grey area without binding international treaties to govern the conduct of nations. However, there is a broad consensus that A-SAT tests that involve physically destroying a satellite should be avoided, as it creates space debris, which endangers other satellites and space vehicles. Anti-satellite tests are extremely controversial and considered to be contributing towards weaponisation of the space, which is prohibited by the Outer Space Treaty of 1967. After China's test in 2007, the first after US tested in 1985, many countries criticised the move and underline the "serious consequences of engaging in the militarisation of space". China sought to allay the fears by saying it would not "participate in any kind of arms race in outer space". China had earlier publicly advocated a ban on space weapons. There has been international debate on how to clamp down on tests of anti-satellite missiles. In 2013, a UN Group of Governmental Experts (GGE) on Outer Space TCBMs signed off on a report that recommended many transparency and confidence-building measures (TCBMs). The major concern was over debris and they proposed that tests leaving behind "long-lived debris should be avoided". If debris cannot be avoided, other potentially affected states need to be kept in loop.

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# "The trinity of dedication, commitment and perseverance is the formula of my success."

**Shubham Gupta**

**Topper—Civil Services Examination, 2018 (6th Rank)**

"Pratiyogita Darpan" arranged an exclusive interview with Shri Shubham Gupta who has been selected in Civil Services Examination, 2018, conducted by UPSC. He deserves high appreciation and our heartiest congratulations on his glorious success. This important, thought-provoking and highly inspiring interview is being presented here in its original form.

**PD**—Achieving top slot in the coveted Civil Services Examination is no small feat; accept our heartiest congratulations on your splendid success.

**Shri Shubham**—Thank you very much. It really has been a whirlwind journey for me over the years. I have become able to achieve what I had embarked upon.

**PD**—In how many attempts have you achieved this success?

**Shri Shubham**—This was my 4th attempt. Earlier, in my 2nd attempt, I had secured AIR 366 in CSE 2016.

**PD**—You achieved the desired success in this attempt; how do you visualize your previous attempts?

**Shri Shubham**—I was not able to clear the preliminary examination in the 1st and the 3rd attempt. In the 2nd attempt, I secured AIR 366 in CSE 2016. This was my 4th attempt. Even when I secured AIR 366 in the second attempt, my mains examination score was decent but my interview (personality test) marks were very low i.e., 124. This year my interview score is 184.

**PD**—What was your optional subject?

**Shri Shubham**—Optional Subject : Law.

**PD**—While making final choice for optional subject, what's important and what's not?

**Shri Shubham**—In my opinion, there should be two factors which one should keep in mind while making the final choice for the optional paper.

One, the interest of the candidate. It is imperative that the candidate should have some interest in that particular subject.

Two, the general pattern of scoring in UPSC pertaining to that paper. Ultimately, it's important that the candidate does his research on the scoring pattern and finds a subject where both interest and score are achievable. This will maximize the success potential of a candidate in the optional paper.



A successful man takes advantage of his mistakes and tries again in a different way.

—Shubham Gupta

**PD**—What preference in services have you opted for and any particular reason for that priority?

**Shri Shubham**—IAS, IFS, IPS. I have always dreamt of becoming an IAS Officer and it also allows me to carry out the welfare activities that I wish to in the most direct manner. Hence, it is my first preference.

**PD**—'Success is sweet' were you confident of your success with top ranks and how did you react to this news?

**Shri Shubham**—I don't think anybody can be assured of the top rank in this exam, due to the nature of this examination. Same was the case with me. I knew that I had written well and I might be in the

final list. But I surely didn't expect to secure AIR 6. This came as a total surprise.

When the results came, I called up my parents. Suddenly, I was flooded with calls and messages. It took me sometime together the thought and let the feeling sink in. Ultimately, I was very happy that I was able to make my parents proud and I was one step closer to what I want to achieve in my life.

**PD**—Today, IAS Toppers are icons and lots of media coverage makes them popular. Before your success, what was your opinion about these toppers?

**Shri Shubham**—IAS Toppers are considered as role models by the aspirants and future civil servants. Hence, the toppers have an additional responsibility of guiding the people who look up to them in the right direction with absolute integrity. I do feel that somehow the mistakes made by the toppers don't get that much coverage as much as they should. They should be highlighted enough so that the aspirants may be prevented from repeating the same.

One particular story that inspired me a lot was that of Ms. Ira Singhal, CSE 2014 AIR 1, not only because of the struggles she faced in her personal life but also the difficulties she encountered in her professional life. Despite all odds being against her, she kept her motivation strong and after multiple attempts she was able to attain the top rank in the exam. Her success motivated me a lot just when I was about to begin my journey and also kept me on my toes over the years.

**PD**—Can you recall the exact moment when you realized the importance of Civil Services?

**Shri Shubham**—Since I belong to a purely business family, there were multiple instances when my father had to communicate and interact with civil servants with regard to his business activities. Ultimately, it was the result day for my 5th standard exams when my father sat me down and explained to me all this while expressing his desire for me to become an IAS Officer. This was that particular moment when in my life I first encountered nuances related to the civil services.

### Bio-Data

**Name**—Shubham Gupta

**Father's Name**—Shri Anil Gupta

**Mother's Name**—Mrs. Anupama Gupta

**Educational Qualifications**—

10th—2010, Shri Swaminarayan Gurukul, Vapi, CBSE Board (10-0 CGPA)

12th—2012, Shri Swaminarayan Gurukul, Vapi, CBSE Board (94.6%)

B.A. (Hons.-Eco.)—2012-13, Delhi College of Arts and Commerce, University of Delhi (89.32%)

**Previous Selections:**

UPSC, CSE 2016/AIR 366/

Service : Indian Audit and Accounts Service.

**PD**—Finally, at what point of time did you make up your mind to make career in 'Civil Services'?

**Shri Shubham**—When my father expressed his desire for me to become a civil servant in 5th standard, it stuck in my mind somewhere. Ultimately it was after my 12th standard exams that I finally decided to give it a try by attempting the civil service examination.

**PD**—Was CSE your planned decision or your parents' wish?

**Shri Shubham**—Both. As it was only when I myself figured out that this was indeed the way for me that I began to think about making my career in the civil services.

**PD**—Did you keep in mind some time-frame for the examination preparation and number of attempts?

**Shri Shubham**—Yes I did. Of course, I also wanted to clear the exam in my very first attempt. But somewhere in the back of my mind, I had told myself that I can give maximum four attempts.

**PD**—'Time Management' is a key factor. How did you manage things?

**Shri Shubham**—Time management is a big issue for the aspirants.

In this scenario, my notes came to my rescue. I had prepared notes for most of my subjects which meant that I could avoid reading the complete books this time. This was immense help especially in my optional paper and helped me complete my syllabus in a much limited time in this attempt.

**PD**—The first step is the most difficult; from where did you get the right advice?

**Shri Shubham**—It is quite natural for anyone to ask all these questions at the stage of beginning the preparation for UPSC CSE.

I talked to one of my seniors who was also preparing at that time (He happens to be an IAS himself now). I also talked to some of my brother's friends who were also preparing for the exam. Further, I also went around and talked to some of the institutes and tried together as much information as possible.

**PD**—What was your approach towards Paper I (General Studies) and Paper II (Aptitude Test) during Preliminary Examination preparation? How long time and how much effort did you divide for each?

**Shri Shubham**—For GS Paper I (General Studies) : Most of my preparatory time was spent on studying aspects related to Paper I. My approach was to try and complement the study of static part of a subject with the current events and developments related to that subject through a comprehensive reading of the newspaper.

I had also taken a decision for myself that apart from NCERT books and the newspaper for current events, if needed, I would refer to at the most one reference book for a particular subject rather than multiple books.

In addition, I always made sure to attempt a certain number of practice tests (especially for Paper I) so that I am able to manage my time better.

**For GS Paper II (Aptitude Test) :** By the time I started my preparation for UPSC CSE, Paper II had become only a qualifying paper for the

preliminary exam requiring only 33% marks for getting through. Having studied mathematics in some form until the graduation level, I devoted very less time for the preparation of Paper II.

### Personal Qualities

**Favourite Person**—My father is my all-time favourite person. This is because he is the one who taught me how to stand up in times of adversity.

**Strong Point**—I am a good listener.

**Weak Point**—I tend to be impatient at times.

**Hobbies**—Collecting and reading books, watching and playing sports.

**PD**—How did you manage to tackle the 'Negative Marking' in Prelims?

**Shri Shubham**—Everyone has a different way of handling the negative marking in prelims examination. In my case, I was able to reasonably guess the answers for certain questions that I wasn't completely aware of, based on the technique of elimination. I generally used to attempt 90+ questions.

**PD**—What shift did you adopt in your strategy for Main Examination (Written)?

**Shri Shubham**—Although the preparation strategy for UPSC CSE is an integrated one for all three stages of the examination, there are some shifts which one has to make, especially at a time when exam date is approaching.

At this stage, the editorials and opinion articles from the newspapers would come in handy so as together good content about the nuances of a particular subject. It, thus, becomes a good exercise to keep oneself updated with the newspaper articles and making notes out of the same.

Further, for the Mains, my focus was especially on answer writing. My strategy was to write at least two tests per paper before the final examination.

**PD**—Was there any special effort for effective preparation for Essay Paper?

**Shri Shubham**—My strategy in the essay paper would be to divide my 180 minutes in intervals of 100 and 80 minutes for the two essays respectively.

The topics that I chose for my essays this time are:

**Topic I.** Poverty anywhere is a threat to prosperity everywhere.

**Topic II.** A people that values its privileges above its principles loses both.

**PD**—How did you prepare yourself for Interview (Personality Test)?

**Shri Shubham**—This year my personality test was on the 14th of March, 2019 in the afternoon session. The board was chaired by Dr. B.S. Bassi and the duration was about 25 minutes. The interview was overall pretty smooth with only limited cross questioning. The chairman as well as members were very nice to me and encouraged my thoughts and answers to the questions. Overall, about 30-35 questions were asked to me during the interview.

**PD**—Were you preparing for other career opportunities as well while preparing for your ultimate goal i.e., Career in Civil Services?

**Shri Shubham**—I believe that it is very important for a person to identify his/her 'antardhwan' or the inner drumbeat that showcases the purpose of his/her life. It also has to be understood that there are always multiple ways of attaining that inner drumbeat, UPSC being one of them. It will be wrong to consider UPSC CSE as the end, for it is only a means to an end.

Hence, I always wanted to keep a backup career option in my hand throughout my preparation journey such as having a good college degree in hand. Further, even before I qualified for the first time, I had two job offers from two very good MNCs in my hand. This is just to highlight the fact that I never considered UPSC as an end in itself in my life, but only as a means of doing what I wanted to do.

**PD**—While the changing economic environment offers immense lucrative career opportunities in various sectors, still what kept you motivated towards Civil Services?

**Shri Shubham**—Two and most importantly, I have always felt that being in the civil services helps me to attain that inner drumbeat of mine where I get to work for the betterment of the people around me and I

get a chance to make a direct positive impact in the lives of the people while working for the prosperity of the nation.

Both these factors combined always kept me motivated towards civil services, even while I was exposed to some really lucrative career opportunities in the private sector in the form of campus placements.

**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 Shubham**—A candidate may dedicatedly start preparing for civil services from the third year onwards, one year prior to his becoming eligible to write the exam for the first time.

From my experience, I have observed that one year is generally a good and sufficient time period for covering the extensive syllabus for this examination before finally attempting it.

**PD**—What is your opinion regarding the general view that Science subjects have better chance to score than Humanities?

**Shri Shubham**—Over the years I have noticed that certain science oriented subjects tend to fare better in terms of scoring in the exam. For instance, Mathematics and Anthropology have been high scoring subjects over the past few years. However, this also increases the responsibility of these candidates to write to-the-point answers as opposed to other humanities related subjects where there is relatively greater scope for opinion based answers.

There are multiple cases every year where people belonging to subjects such as Political Science, Law, etc. end up getting the top ranks while also scoring reasonably high marks in their optional paper.

**PD**—Does the educational, financial and demographic status of the family of an aspirant have any impact on the preparation?

**Shri Shubham**—To some extent, yes. It is only an enabling factor for candidates having parents from the civil service background and where

they are able to afford the best of the institutes for their children.

It can't be overemphasized that it is only hard work and commitment to this paper that can ensure success in this paper no matter however favorable the educational, financial and demographic status of the candidate and his/her family is.

**PD**—In your opinion what role do the Competition Magazines play when you are preparing for an examination like Civil Services?

**Shri Shubham**—I have observed that if a candidate has time in his/her hands, certain good quality magazines can be of help them from perspectives on certain key issues and events which can be useful for them during the exam.

**PD**—What is the secret of your success?

**Shri Shubham**—Dedication, Commitment and Perseverance. The trinity of these three words is the formula for my success. The process of constant learning is highly significant and increases your chances of clearing this exam manifold.

**PD**—To whom would you like to give the credit for your success?

**Shri Shubham**—I would like to thank my parents, my brother and my sister and friends for always being there during good as well as bad times. I would also like to express my gratitude towards the teachers that have taught me and kept me motivated over the years.

**PD**—Any suggestion/advice you would like to give to the future aspirants.

**Shri Shubham**—For the aspirants, I would suggest them to treat UPSC as just one of the stages of life and don't allow it to dominate all spheres of your life. UPSC is only a means to an end, and not the end in itself.

As far as preparation is considered, I would like to advise the aspirants to stay organic in their preparation. Try to avoid referring to multiple sources for one single subject and focus more on qualitative learning. Have faith in yourself and you will definitely ace the examination.

**PD**—Thank you very much and wishing you all the best for your future endeavours.



# "Excellent strategy, staying focused, dedication and hard work are the secrets of my success."

**Gunjan Dwivedi**

**Topper—Civil Services Examination, 2018 (9th Rank)**

"Pratiyogita Darpan" arranged an exclusive interview with Ms. Gunjan Dwivedi who has been selected in Civil Services Examination, 2018, conducted by UPSC. She deserves high appreciation and our heartiest congratulations on her marvellous achievement. This important, thought-provoking and highly inspiring interview is being presented here in its original form.

**PD**—Achieving top slot in the coveted Civil Services Examination is no small feat; accept our heartiest congratulations on your splendid success.

**Ms. Gunjan**—Thank you so much.

**PD**—Medium for writing in the examination.

**Ms. Gunjan**—English

**PD**—Medium for Personality Test.

**Ms. Gunjan**—English.

**PD**—In how many attempts have you achieved this success?

**Ms. Gunjan**—3.

**PD**—You achieved the desired success in this attempt; how do you visualize your previous attempts?

**Ms. Gunjan**—In my previous attempts, I could not clear the preliminary exam. What I lacked was a coherent strategy and detailed plan of action.

**PD**—What was your optional subject?

**Ms. Gunjan**—Optional Subject : Political Science and International Relations.

**PD**—While making final choice for optional subject, what's important and what's not?

**Ms. Gunjan**—The foremost thing is to have a liking for the subject. This is because optional is like a graduation in itself.

**PD**—Give the basis of selecting the optional subject?

**Ms. Gunjan**—The basis is having genuine interest in the subject. This would naturally induce a desire for indepth analysis which is exactly what is needed to score good marks.

**PD**—What preference in services have you opted for and any particular reason for that priority?

**Ms. Gunjan**—IAS is my first choice. It has a very wide scale and scope of impact on the lives of people.



Struggle is the opportunity to do something and become somebody.

—Gunjan Dwivedi

**PD**—"Success is sweet" were you confident of your success with top ranks and how did you react to this news?

**Ms. Gunjan**—Till the day of the declaration of the result, I was studying for UPSC CSE 2019 preliminary exam to be held on 2nd June. Knowing the uncertainty of the exam I was in no way confident of my success. I could not believe my ears when my friend broke the news that I had secured 9th rank.

**PD**—Today, IAS Toppers are icons and lots of media coverage makes them popular. Before your success, what was your opinion about these toppers?

**Ms. Gunjan**—The advice and success story of toppers provided me a sense of guidance and motivation

while on the monotonous and difficult phase of preparation.

The success story of 2017 CSE topper Megha Arora, rank 108 inspired me a lot.

**PD**—Can you recall the exact moment when you realized the importance of Civil Services?

**Ms. Gunjan**—It was never any specific moment but a gradual understanding over time.

**PD**—Finally, at what point of time did you make up your mind to make career in "Civil Services"?

**Ms. Gunjan**—After class 12th.

**PD**—Was CSE your planned decision or your parents' wish?

**Ms. Gunjan**—It was both.

**PD**—Did you keep in mind some time-frame for the examination preparation and number of attempts?

**Ms. Gunjan**—No, I was all in no matter how much time it took. However this does not mean that one adopts a lackadaisical approach.

**PD**—"Time-Management" is a key factor. How did you manage things?

**Ms. Gunjan**—I made a detailed plan which included monthly, weekly and daily targets. I ensured that the targets were realistic and achievable.

**PD**—The first step is the most difficult; from where did you get the right advice?

**Ms. Gunjan**—Preparing for this exam is an arduous task. The right guidance and understanding of the exam is extremely important.

I took the advice of my father-AKD Dwivedi, Sister-Umang Dwivedi and mentor-Saumitra Singh. Along with this I read a lot of toppers'

strategies and watched their videos. This helped me to frame my own strategy. However the foremost and most important step is going through the syllabus and previous years' papers on a regular basis.

**PD**—What was your approach towards Paper I (General Studies) and Paper II (Aptitude Test) during Preliminary Examination preparation? How long time and how much effort did you divide for each?

**Ms. Gunjan**—For GS Paper I (General Studies) A lot of revisions and practice through mock tests. I holistically studied both static and current affairs portions of the syllabus. 99% of my time was devoted to paper I.

**GS Paper II (Aptitude Test)**—I practised few previous years' papers.

**PD**—How did you manage to tackle the 'Negative Marking' in Prelims?

**Ms. Gunjan**—It was only through taking a lot of mock tests (around 35-40) that I developed the skill of solving MCQs with negative marking.

### Bio-Data

**Name**—Gunjan Dwivedi  
**Father's Name**—Shri Ashok Kumar dar Dwivedi  
**Mother's Name**—Mrs. Suman Dwivedi  
**Date of Birth**—16 October, 1994  
**Educational Qualifications**—  
 B.A. Honours in Political Science  
 from Daulat Ram College, Delhi University.

**PD**—What shift did you adopt in your strategy for Main Examination (Written)?

**Ms. Gunjan**—The most important shift is developing an analytical insight. This requires answering questions like "What, When, How, Why etc.". Further adopting a multi-dimensional approach i.e., political, social, economic, environmental, cultural etc. really assists in answer writing.

**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?

**Ms. Gunjan**—I made a list of quotes and anecdotes.

I chose the following two topics because of the diverse and in-depth knowledge and understanding I had on these.

(1) Poverty anywhere is a threat to prosperity everywhere.

(2) A people that values its privileges above its principles loses both.

**PD**—How did you prepare yourself for Interview (Personality Test)?

**Ms. Gunjan**—The foremost thing is to be calm and composed even during the preparation at this stage. It is not a test of knowledge but your personality and ability to be a civil servant.

Date of interview- 19-02-2019

Duration- 35 minutes

Although I was a little nervous in the beginning, my interview went good. Questions were asked on DAF, International Relations, problems of Indian economy, ponzi scheme, women empowerment, essence of Gita, patriarchy etc.

**PD**—Were you preparing for other career opportunities as well while preparing for your ultimate goal i.e., Career in Civil Services?

**Ms. Gunjan**—No.

**PD**—While the changing economic environment offers immense lucrative career opportunities in various sectors, still what kept you motivated towards Civil Services?

**Ms. Gunjan**—It was my childhood dream. This kept me motivated.

**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?

**Ms. Gunjan**—The exam ideally requires a year of dedicated preparation. One can assist this by reading newspapers and NCERT books from college.

**PD**—What is your opinion regarding the general view that Science subjects have better chance to score than Humanities?

**Ms. Gunjan**—Every year there are toppers from both the fields.

**PD**—What is the importance of medium of examination for exams like CSE?

**Ms. Gunjan**—Medium of exam helps in clear expression of thoughts and knowledge. One must choose that medium in which she/he is most comfortable.

**PD**—Does the educational, financial and demographic status of the family of an aspirant have any impact on the preparation?

**Ms. Gunjan**—Succeeding in this exam requires only will, hard work and patience.

**PD**—In your opinion what role do the Competition Magazines play when you are preparing for an examination like Civil Services?

**Ms. Gunjan**—They added to my preparation by providing ready reference data for general studies.

### Personal Qualities

**Strong Point**—Patience

**Weak Point**—Difficulty in learning facts and data.

**Hobbies**—Drawing mandalas and journaling (Bullet Journal Method).

**PD**—What is the secret of your success?

**Ms. Gunjan**—Patience, dedication and hard work.

**PD**—To whom would you like to give the credit for your success?

**Ms. Gunjan**—My Parents- AKD Dwivedi, Suman Dwivedi, sister- Umang Dwivedi and mentor- Saumitra Singh.

**PD**—Any suggestion/advice you would like to give to the future aspirants.

**Ms. Gunjan**—Do not lose hope. Be honest with yourself in this phase of preparation. Read, revise and practice.

**PD**—Thank you very much and wishing you all the best for your future endeavours.

# Changing Nature of Indian Federalism

—A. Bajpai

India is a big country characterized by cultural, regional, linguistic and geographical diversities. Such a diverse and vast country cannot be administered and ruled from a single centre. Historically, though India was not a federal state, its various regions enjoyed adequate autonomy from central rule. Keeping in view these factors in mind, the Constitution makers of India opted for the federal form of government. Though, the Government of India Act, 1935 envisaged a federal set-up for India, federal provisions of the Act were not enforced. Thus, India became a federal polity when the Constitution of India came into force on 26th, January, 1950.

Federalism as a form of government was, for the first time, put into practice in the United States way back in 1789. Subsequently, it was followed in other countries of the world as a political choice. J.W. Garner defines Federal Government as "contradistinguished from a Unitary government, a system in which the totality of government power is divided and distributed by the national constitution or the organic law of parliament creating it, between a central government and the government of individual states or other territorial divisions of which the federation is composed of". Noted scholar K.C. Wheare defines federalism as "the method of dividing powers so that the general and regional governments are each within a sphere coordinate and independent."

## Features of Federalism

1. Federalism assumes two sets of governments, one at the centre and the other at the provincial level.
2. The most important feature of federalism is the division of powers between the central and state governments by the scheme of the Constitution itself.
3. The division of powers between the two postulates a written and

rigid constitution, which cannot be changed without the consent of both the centre and the states.

4. Federalism also requires the provision for an independent federal judiciary to resolve disputes between the Centre and provinces/states.
5. Some scholars consider dual citizenship also as the feature of federal government—one that of entire nation and another that of the state where a person resides.

## The Creation of Indian Federation

Basically, there are two ways of creating a federal set-up. The first is on the basis of a federal alliance made by some independent federating units or sovereign states, which create the Central or Federal government and transfer certain powers of national importance to that government. The American federation has been established in this way in the **Philadelphia Convention, 1789**.

The second way to create a federation is by establishing some provincial governments by dividing a single sovereign country and conferring certain powers to those provincial governments through the provisions of the Constitution. The remaining powers are retained by the Central or Union government. The Indian federation is created on this manner as the provincial governments or federating units in India did not enjoy a sovereign or independent status before becoming a part of the federation. Even the Indian Constitution makers deliberately used the word 'Union' in place of 'Federation'. **Article-1** of the Constitution declares India to be a 'Union of States'. **B.R. Ambedkar**, the Chairman of Drafting Committee, explained in the Constituent Assembly that the use of the term 'Union' indicates two things. First, the Indian federation is not the result of an agreement by the units. Second, the component units have no

freedom to secede from the federation. However merely the use of the term Union does not indicate any particular type of federation. In order to understand the nature of Indian federation, the federal provisions of the Constitution have to be elaborated and analyzed.

**The Federal Features of Indian Constitution :** The Constitution of India displays the following federal features :

- (a) The Constitution of India makes the provision for the organization of two types of governments—the Union Government and the State Governments.
- (b) The Seventh Schedule of the Constitution makes provision for the division of powers between the Union and the States. It contains three lists :
  1. **The Union List**, which has 97 subjects of national importance and the Union Parliament has the power to enact laws with respect to these subjects;
  2. **The State List**, which contains 66 subjects of local importance and the State Legislatures have the power to enact laws with respect to these subjects;
  3. **The Concurrent List**, which contains 47 subjects and both the Parliament and the State Legislatures have the power to legislate on them. The idea of Concurrent List is inspired by the Constitution of Australia.
- (c) As per the requirement of federal system, the Indian Constitution is a written document. It is a rigid Constitution as far as the amendment of federal provisions is concerned. Thus, the provisions, affecting the interests of states, can be amended only if not less than half of the state legislatures have approved the same.



- (d) The Indian Constitution makes provision for an independent and Federal judiciary. The Supreme Court of India has the power to decide the disputes arising either between the Union and the States or between the two or more States under its Original Jurisdiction.

**Unitary Features of Indian Federation :** A noted scholar Ivor Jennings, has termed it as a '*federation with strong centralizing tendencies*'. The unitary features of Indian federation are given below :

- (a) The Indian federation is an example of '**Indestructible Union with Destructible states**'. It means that the Union shall remain intact but the physical existence of states or units can be modified. Accordingly, **Article 3 provides that the parliament may by law change the name and boundary of any state.** On the other hand, the American federalism is characterized as '**indestructible Union of indestructible States**'.
- (b) Unlike the American federation, the Indian Constitution provides for a single citizenship—citizenship of India.
- (c) The Governor of a states, who is the executive head of the state, is appointed by the President and holds office during the pleasure of the president. The Governor holds significant powers with respect to the affairs of the state.
- (d) Unlike the US Federation, states in India do not have their separate Constitution. India has a single Constitution.
- (e) Generally, in federalism, the states or units have equal representation in the second House of Parliament. But, in India, the states do not have equal representation in the Council of States (Rajya Sabha).
- (f) In the **legislative and administrative sphere**, powers of the Union vis-a-viz the states are more.

**Unitary Features During Emergency :** It is clear from the above discussion that, during normal times, there are many occasions when the Union can exercise control over the states. However during the operation

of emergency of any type, the control of the Union over states is further strengthened. Thus, during the operation of National Emergency under Article 352, the Union Government is empowered to issue directions to states as to the manner in which the executive power of the states is to be exercised. Also, the Parliament gets the power to make laws on any matter conferring powers and imposing duties upon the officers and authorities of the Union, notwithstanding the fact that such matter is not included in the Union List.

Again, during the President Rule imposed under Article 356, the administration of state comes under the direct control of the Governor, who acts as a representative of the Union Government. Thus, the affairs of the state are run by the Governor as per the direction of the Union Government. Since the Legislative Assembly of the state is either suspended or dissolved, the legislative functions of the state are performed by the Parliament. Similarly, during the enforcement of Financial Emergency under Article 360, the executive authority of the Union extends to the giving of directions to any state to observe such canons of financial propriety as the President may deem necessary and adequate for the purpose. Such directions may also include a provision for the reduction of salaries of the state government employees or requiring the Money Bills or other Bills passed by the state Legislature to be reserved for the consideration of the President.

## Centre-State Relations

**1. Legislative Relations :** Though the legislative powers are distributed between the Centre and the states in the 7th Schedule of the Constitution, the Centre enjoys more legislative powers under following constitutional provisions :

- (A) Under Article 248, the residuary powers are vested in the Union Parliament. The residuary powers are those powers which are not enumerated in any of the lists under 7th Schedule. In the US, the residuary powers are vested with the States.
- (B) According to Article 249, if the Council of States declares that

it is necessary in the national interest that Parliament should make laws with respect to any matter enumerated in the State List, the Parliament can make laws with respect to such matter of state list.

- (C) During the operation of proclamation of Emergency, the Parliament has the power to make laws in the State List.
- (D) Both the Parliament and the Legislatures of States have power to enact laws on the Subjects of Concurrent List. However, if there is any inconsistency between laws enacted by the two, the law made by the Parliament shall prevail.
- (E) The Parliament gets the power to make laws on a subject of State List if request is made for the same by two or more States.
- (F) The Parliament has the power to enact laws on the subjects of State List for the purpose of giving effect to an international agreement or treaty.
- (G) The Governor can reserve the bills passed by the State Legislatures for the consideration of the President. If a bill is so reserved, it cannot become law without the assent of the President.

**2. Administrative and Executive Relations :** In the Administrative field also, the Union Government enjoys more powers in comparison to States.

- (A) Article 256 of the Constitution provides that the executive power of every state shall be so exercised as to ensure compliance to the laws made by the Parliament.
- (B) The Union's power shall extend to giving of such directions to a state as may appear necessary to the Government of India for that purpose.
- (C) If any state fails to carry out these directions, the President may conclude that the administration of the state is not being carried on according to the provisions of the Constitution; which may even lead to the imposition of the President Rule in that state.
- (D) Again, the Union Government also exercises administrative control over states through the

provision of All India Services constituted under Article 312 of the Constitution. The members of these services are appointed to the important administrative positions in the states, but their ultimate control lies with the Union Government.

- (E) Again, during the President Rule imposed under Article 356, the administration of state comes under the direct control of the Governor, who acts as a representative of the Union Government.

## Nature of Indian Federalism

The nature of Indian Federalism has been a matter of debate among western as well as Indian scholars. Its reason is that the Indian Federation is based on the two sets of considerations, which bear a contradictory nature. The protection and expression of social and regional diversity of India and administrative contingencies arising due to its vast geographical area give rise to measures to strengthen a federal set-up. But the need for strengthening her unity and integrity, in the background of her historical experience, necessitates the provision for a strong Centre in India. Indian Constitution makers have tried to balance these contradictory considerations and thereby imparting an unique feature to Indian Federalism. If we look at the unitary and federal features of Indian Constitution, it becomes obvious that India has a Federal System which displays strong unitary tendencies. Different scholars hold different views about the Indian Federation.

Noted critic **Prof. Wheare** claims that Indian Constitution provides, 'a system of government which is quasi-federal.....a unitary state with subsidiary federal features rather than a Federal State with subsidiary unitary features'. He further comments that in the class of quasi-federal Constitution, it is probably proper to include the Indian Constitution of 1950. Another author, **Prof. Alexandrowicz** disagrees with the observation that India is a quasi-federation and claims that "India is a case *sui generis*".

Noted author, **D.D. Basu** comments, "the Constitution of India is neither purely federal nor purely

unitary but it is a combination of both. It is a Union or composite state of a novel type. It enshrines the principle that in spite of federalism the national interest ought to be paramount."

While **Paul Appleby** terms Indian Federation as 'extremely federal', another writer **Jennings** terms it as "a federation with strong centralizing tendencies."

## Cooperative Federalism

While the debate about the federal and unitary features of the Constitution goes on, there is another parameter—the level of cooperation between the Union and the States—to analyse the nature of federalism. Accordingly, **Granville Austin** terms Indian Federalism as, "Cooperative Federalism, which produces a strong central government, yet it does not necessarily result in weak provincial governments that are largely administrative agencies for central policies."

**American scholar Birch** defines Cooperative Federalism as, "the

practice of administrative cooperation between general and regional governments, the partial dependence of the regional governments upon payment from the general governments, and the fact that the general government, by the use of conditional grants, frequently promotes development in matters which are constitutionally assigned to the regions."

Some agencies working for the promotion of cooperative federalism may be identified as given below :

- (1) The National Development Council (NDC), established in 1952 ensured coordination between Union and States in the formulation and implementation of Five Year Plans. Though NDC and Planning Commission both were replaced by a new body called NITI Aayog in 2015, headed by the Prime Minister, it also aims to strengthen Cooperative federalism in development process.

## NITI Aayog

**NITI Aayog or the National Institution for Transforming India** was established on 1 January, 2015 vide a Resolution of the Union Cabinet. Thus, it is neither a Constitutional body nor a statutory body but it is an executive body headed by the Prime Minister of India. With the establishment of the NITI Aayog, the Planning Commission as well as the National Development Council stand dissolved. The NITI Aayog has been assigned the following functions :

1. To evolve a shared vision of national development priorities and strategies with the involvement of States,
2. To foster cooperative federalism through structured support initiatives and mechanisms with the States on a continuous basis,
3. To ensure that the interests of national security are incorporated in economic strategy and policy,
4. To pay special attention to the weaker sections,
5. To design strategic and long term policy and programme frameworks and initiatives,
6. To create a knowledge, innovation and entrepreneurial support system for development,
7. To maintain a state-of-the-art Resource Centre, be a repository of research on good governance and best practices,
8. To actively monitor and evaluate the implementation of programmes and initiatives,
9. To focus on technology upgradation and capacity building, and
10. To undertake other activities necessary for the national development agenda.

The National Governing Council of the Aayog is the apex decision-making body of the NITI Aayog. It is headed by the Prime Minister and all the Chief Ministers of states and Lt Governors of Union Territories are the members of the Governing Council. The Council has established three sub-groups of the Chief ministers on the three important national subjects: Centrally Sponsored Schemes, Skill India mission and Swachha Bharat Mission. The sub-groups will deliberate on the respective areas and will submit their report to the Council for further action.

The NITI Aayog has unveiled on 19 December, 2018 its comprehensive national Strategy for New India, for five years till 2022-23 with due consultations with the states. The strategy notes the progress made so far; identifies constraints and suggests measures to move ahead in forty-one crucial areas of development. It aims 9-10 per cent growth in the next five years.

(2) **The Inter-State Council** under Article 263 tries to resolve the disputes among the units of federation and to make the recommendations regarding the common issues of concern. The Inter-State Council was constituted for the first time in 1990.

(3) The State Re-organisation Act, 1956, provided for the establishment of Five **Zonal Councils** to consider the issues of development policy common to the member states of Zonal Council. Each Council is headed by the Union Minister of Home Affairs and all the Chief Ministers of that Zone are the member of that Zonal Council.

(4) **The Central Council for Local Bodies** coordinates and reviews the programmes implemented by local bodies with Central assistance.

(5) **The Finance Commission** under Article 280 makes recommendations with respect to the distribution of tax revenue between the Union and the States and Grants-in-Aid to states.

(6) Besides, the Union Government organizes conferences and meetings of Governors, Chief Ministers, other Ministers and senior officials of States from time to time to coordinate the policies and programmes at national level.

## Issues and Tensions in Indian Federalism

The working of federal systems throughout the world demonstrates the growing centralizing tendencies in all federal systems due to various reasons. In India, the Constitution is initially biased in favour of a strong centre, yet the operation of certain non-constitutional factors such as wars, national crises, terrorism, need to pursue a uniform policy of socio-economic development, natural calamities etc. has further strengthened the position of Union Government. The States in India continue to be dependent on the Centre for their financial needs. Thus, the demand for financial autonomy by States is the major issue in India. Besides, there are other issues such as the appointment of Governor in the States, arbitrary application of President Rule under Article 356 and deployment of Central forces in States without their consent, which have

encouraged tensions in the Centre-State relations. The Central Government appointed **Sarkaria Commission** to review the Centre-State relations in 1983, which submitted its Report in 1988. It recommended, inter alia, the consultation with the Chief Minister in the appointment of Governor, reasonable use of Article 356, testing the majority of State government on the floor of Legislative Assembly and deployment of Central forces with the consent of the concerned state. Though, the government has agreed to the Recommendations of the Commission, political factors obstruct their faithful implementation.

## Punchhi Commission

Meanwhile, the Central Government appointed the Second National Commission on Centre-State Relations on April 27, 2007, headed by **M.M. Punchhi** to review and suggest measures for the improvement of centre-state relations. It also submitted its report on 20 April, 2010 with following recommendations:

(1) An amendment in Articles 355 and 356 should be made to enable the Centre to bring specific trouble-torn areas under its rule for a limited period. The commission proposed 'localising emergency provisions' under Articles 355 and 356, contending that a small area may be brought under Governor's rule instead of the whole state.

(2) The Governor should have the right to give sanction for the prosecution of ministers against the advice of the state government.

(3) The Union government can allow the deployment of Central forces without the state's consent for a short period. Not exceeding seven days. A post-facto consent should be taken from the state.

(4) The Commission laid down the clear guidelines for the appointment of chief ministers. Upholding the view that a pre-poll alliance should be treated as one political party, it lays down the order of precedence that ought to be followed by the governor in case of a hung house:

- Inviting the group with the largest pre-poll alliance commanding the largest number;
- The single largest party with support of others;

(c) The post-electoral coalition with all parties joining the government; and last;

(d) The post-electoral alliance with some parties joining the government and remaining including Independents supporting from outside.

(5) The Punchhi Commission suggested the prospective nominee for the post of Governor should not have participated in active politics at even local level for at least a couple of years before his appointment. A Governor should be an eminent person and not belong to the state where he is to be posted.

(6) The commission also criticises arbitrary dismissal of governors, saying, "the practice of treating governors as political football must stop". There should be critical changes in the role of the governor—including fixed five year tenure as well as their removal only through impeachment by the state Assembly. It has also recommended that the state chief minister have a say in the appointment of governor.

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# Cyber Security : Issues, Challenges and Response

—Dhiraj Pandey

Cyber security is one of the important national security challenges that countries face all over the world. Cyber security attacks have wide threat which can compromise power grids, impact and cripple financial institutions and commit leakage of sensitive information. Cyber criminals can steal personal information, data from private or government organisations, disrupt services, cripple the financial system, trigger national security. Cyber attacks can take multiple forms like terror attacks, identity theft, circulation of offensive content, online sexual abuse, online scams, online hate crimes.

Cyber security consists of technologies, processes and controls designed to protect systems, networks and data from cyber attacks. Effective cyber security reduces the risk of cyber attacks and protects against the unauthorised exploitation of systems, networks and technologies.

Implementing effective cyber security measures is particularly challenging today because there are more devices than people, and attackers are becoming more innovative.

Robust cyber security involves implementing controls based on three pillars: people, processes and technology. This three-pronged approach helps organisations defend themselves from both organised attacks and common internal threats, such as accidental breaches and human error.

The three pillars of cyber security:

**(1) People :** Every employee needs to be aware of their role in preventing and reducing cyber threats, and specialised technical cyber security staff need to stay fully up to date with the latest skills and qualifications to mitigate and respond to cyber attacks.

**(2) Processes :** Processes are crucial in defining how the organisation's activities, roles and documentation are used to mitigate the risks to the organisation's information. Cyber threats change quickly, so processes need to be continually reviewed to be able to adapt alongside them.

**(3) Technology :** Technology is essential to giving organizations and individuals the computer security tools needed to protect themselves from cyber attacks. Three main entities must be protected : endpoint devices like computers, smart devices, and routers, networks, and the cloud. Common technology used to protect these entities include next-generation firewalls, DNS filtering, malware protection, antivirus software, and email security solutions.

## Cyber Security Challenges

- Cyberspace has inherent vulnerabilities that cannot be removed.
- Innumerable entry points to internet.
- Assigning attribution : Internet technology makes it relatively easy to misdirect attribution to other parties.
- Computer Network Defense techniques, tactics and practices largely protect individual systems and networks rather than critical operations (missions).
- Attack technology outpacing defense technology.
- Nation states, non-state actors, and individuals are at a peer level, all capable of waging attacks.

## Indian Cyber Situation

- India emerged as the third most vulnerable country in terms of risk of cyber threats, such as malware, spam and ransomware, in 2017, moving up one place over previous year, according to a report by security solutions provider Symantec.
- The U.S. remains most vulnerable to such attacks, followed by China, according to the recently released 'Internet Security Threat Report'.

- In 2017, 5.09% of global threats detected were in India, slightly less than 5.11% in 2016. The U.S. (26.61%) was most vulnerable to such attacks, followed by China (10.95%), according to 'Internet Security Threat Report'.

- The global threat ranking is based on eight metrics—malware, spam, phishing, bots, network attacks, web attacks, ransomware and cryptominers.

- As per the report, India continues to be second most impacted by spam and bots, third most impacted by network attacks, and fourth most impacted by ransomware.

- The report also pointed out that with the threat landscape becoming more diverse, attackers are working harder to discover new avenues of attack and cover their tracks while doing so.

- From the sudden spread of WannaCry and Petya/NotPetya, to the swift growth in coin-miners, 2017 provided us with another reminder that digital security threats can come from new and unexpected sources.

## India's Cybercrime Scenario

According to the annual report released by the National Crime Records Bureau (NCRB) in 2016, with 762 cases, Bengaluru had the second-highest number of cybercrime cases among the metros, behind Mumbai with 980 cases. Other metros in the list were far behind, with Hyderabad recording 291 cases, Kolkata 168, Delhi 90 and Chennai 36.

Bengaluru registered the most number of cybercrime cases in 2018. The country's technology capital saw a whopping 5,035 FIRs registered at the lone cybercrime police station in the city. A city-wise comparison of cybercrime cases indicates the figure is a lot more than in other big cities in the country. From 762 to 5,035, the number of cases have seen a sharp increase in Bengaluru.

<b>Cyber stalking</b>	Cyber stalking is use of the Internet or other electronic means to stalk someone. This term is used interchangeably with online harassment and online abuse.
<b>Hacking</b>	Hacking is a crime, which entails cracking systems and gaining unauthorized access to the data stored in them. Hacking had witnessed a 37 per cent increase in 2018.
<b>Phishing</b>	Phishing is just one of the many frauds on the Internet, trying to fool people into parting with their money. Phishing refers to the receipt of unsolicited emails by customers of financial institutions, requesting them to enter their username, password or other personal information to access their account for some reason. Customers are directed to a fraudulent replica of the original institution's website when they click on the links on the email to enter their information, and so they remain unaware that the fraud has occurred. The fraudster then has access to the customer's online bank account and to the funds contained in that account. F-Secure Corporation's summary of 'data security' threats during the first half of 2007 revealed that the study found the banking industry as soft target for phishing scams in India
<b>Cross-site scripting</b>	Cross-site scripting (XSS) is a type of computer security vulnerability typically found in web applications which allow code injection by malicious web users into the web pages viewed by other users. Examples of such code include HTML code and client-side scripts. An exploited cross-site scripting vulnerability can be used by attackers to bypass access controls.
<b>Vishing</b>	Vishing is the criminal practice of using social engineering and Voice over IP (VoIP) to gain access to private. Personal and financial information from the public for the purpose of financial reward. The term is a combination of 'voice' and phishing. Vishing exploits the public's trust in landline telephone services, which have traditionally terminated in physical locations which are known to the telephone company, and associated with a bill-payer. The victim is often unaware that VoIP allows for caller ID spoofing, inexpensive, complex automated systems and anonymity for the billpayer. Vishing is typically used to steal credit card numbers or other information used in identity theft schemes from individuals.
<b>Cyber Squatting</b>	Cyber squatting is the act of registering a famous domain name and then selling it for a fortune. This is an issue that has not been tackled in IT act 2000.
<b>Bot Networks</b>	A cyber crime called 'Bot Networks', wherein spammers and other perpetrators of cyber crimes remotely take control of computers without the users realizing it, is increasing at an alarming rate. Computers get linked to Bot Networks when users unknowingly download malicious codes such as Trojan horse sent as e-mail attachments. Such affected computers, known as zombies, can work together whenever the malicious code within them get activated, and those who are behind the Bot Networks attacks get the computing powers of thousands of systems at their disposal. Attackers often coordinate large groups of Bot-controlled systems, or Bot networks, to scan for vulnerable systems and use them to increase the speed and breadth of their attacks.

As per the data maintained by National Crime Records Bureau (NCRB), a total of 9622, 11592 and 12,317 cyber-crime cases were registered during the years 2014, 2015 and 2016 respectively.

### Cyber Crime Variants

There are a good number of cyber crime variants. A few varieties are discussed for the purpose of completion.

### Measures taken by Government of India for Addressing Issues Related to Cyber Security

India is vulnerable to cyber espionage. Government has taken a number of legislative, technical and institutional measures for addressing issues related to cyber security. These include National Cyber Security policy (2013), enactment of Information Technology (IT) Act, 2000 and setting up of Indian Computer Emergency Response Team (CERT-In). Some specific measures taken by the Government of India to strengthen cyber security system in the country are as under :

- **National Cyber Security Coordinator (NCSC)** under National Security Council Secretariat (NSCS) coordinates with different agencies at the national level for cyber security matters.
- **Information Technology Act, 2000** was enacted to provide legal recognition for electronic communication, electronic commerce and cyber crimes etc. IT Act has deterrent provisions to deal with cyber threats and cyber attacks.
- **The Indian Computer Emergency Response Team (CERT-In)** issues alerts and advisories regarding latest cyber threats and countermeasures on regular basis.
- **National Critical Information Infrastructure Protection Centre (NCIIPC)** has been established for protection of critical information infrastructure in the country.
- **Guidelines have been issued for Chief Information Security Officers (CISOs)** regarding their key roles and responsibilities for securing applications / infrastructure and compliance.
- **Cyber Swachhta Kendra (Botnet Cleaning and Malware Analysis Centre)** has been launched for detection of malicious programs and provide free tools to remove the same.
- **National Cyber Coordination Centre (NCCC)** has been set up to generate necessary situational awareness of existing and potential cyber security threats and enable timely information sharing for proactive, preventive and protective actions by individual entities.
- **All the new government websites and applications are audited** prior to their hosting and on regular basis after hosting.
- **CERT-In conducts regular training programmes** for network / system administrators and Chief Information Security Officers (CISOs) of Government and critical sector organisations regarding securing the IT infrastructure and mitigating cyber attacks.

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# New Rural Technologies for Doubling the Farmer Income

—R.S. Sengar

Only with mass production being aided by modern technology and intensive marketing can the agriculturist exploit both the domestic market and the international market to the fullest extent. Recently, the technology has come to play a very significant role even in marketing and capital investment of the production in the country.

**Agriculture Technology :** It includes wide range of improved techniques, methods, equipments, processes and products by which farmers can increase their production, productivity, input profit and overall quality of life. Generally, Technology is used to improve the human condition, the natural environment or to carry out other socio-economic activities. Agriculture Technology is a complex blend of materials, processes and knowledge.

**Classification of Agricultural Technology :** Agricultural Technology may be classified into two major categories :

(1) **Hardware (Material Technology) :** Where knowledge is embodied into a technological product such as—tools, equipments, agro-chemicals, seed materials, medicines etc.

(2) **Software (Knowledge based Technology) :** It includes technology knowledge, management skills and other processes that farmers and rural people need for better production in their enterprises. In technology context, it is the current state of humanity's knowledge of how to combine resources to produce desired products, to solve problems, fulfil needs, or satisfy wants; it includes the different technical methods, skills, processes, raw materials tools and techniques. When combined with another term, such as 'Medical Technology' or 'Space Technology', it refers to the state of the respective field's knowledge and tools.

**Technology Development :** In the conventional or 'Central Source'

view of Agricultural Research and Development, Technology emanates from 'upstream' activities in the formal research system and is adopted by 'downstream' research until it is ready for dissemination to farmers. Some people have used an analogy from home economics rather than hydrology, speaking of quarter-baked (notional), half-baked (preliminary), and fully baked (developed) technology. Others have referred to the development of experimental, prototype and off-the-shelf technologies. All these analogies imply a linear process of technology development and dissemination, culminating in the adoption of new technologies by farmers. In practice, however, agricultural innovations are derived not only from the Laboratories and Research Stations of the National and International Centers, but from multiple sources. These sources include research-minded farmers, innovative research practitioners at the local level, research-minded administrators, non-government organizations (NGOs), private corporations and extension agencies. In the 'multiple sources' model, technology consists of many old and new components. It evolves and is continually modified over time. Consequently, in contrast to technology transfer, there is no clear-cut, one-way progression from research to extension to adoption.

## New Agricultural Technologies in India

(1) **Horse Hoe :** It is horse-drawn machine, which loosened the soil and killed weeds.

(2) **Harrow :** After ploughing, other implements were used. The harrow was necessary to smoothen the soil in areas, where the soil remained rough. It consists of a wooden or metal framework bearing metal disks, teeth or sharp projecting points, called tines, which are dragged over ploughed land to crush the clods of earth and level the soil.

Harrows are also used to uproot weeds, aerate the soil and cover seeds. In the beginning the harrows were as simple as a tree branch, but the harrow became more sophisticated after the Industrial Revolution. By the 1790s, two distinct types of harrows were in use : the square and the triangle or 'A' frame. The square harrow was used on old fields that were free of large obstructions, while the triangular frame was used on freshly ploughed fields.

(3) **Plough :** Ploughing is the first preparation for planting. The plough is primarily designed to prepare the ground for cultivation by turning it over, thus burying the weeds and loosening the earth. It is generally agreed by historians that the earliest implement used for cultivation was probably a crude pointed bent stick or tree branch which was used to stir the soil surface. In effect, a hand held hoe was used in which the user scratched at the earth to form a filth where corn could be sown. Over a period of time, these hand held hoes soon developed into simple ploughs. These primitive ploughs were eventually pulled by animals like oxen, camels and even elephants. Animals enabled the land to be tilled more easily and faster; thus more food was produced. The credit for this innovation goes to the Egyptians. These ploughs had different modifications in different parts of the world. During the period from the 1820s to the 1840s, several innovations occurred in plough production.

(4) **Reaper :** The first reapers cut the standing grain and with a revolving reel, sweeping it onto a platform from which it was raked-off into piles by a man walking alongside. The reaper could thus harvest more grain than five men using the earlier cradles. The reaper was eventually replaced by the self-propelled combine, operated by one man, which cuts, gathers, threshes and sacks the grain mechanically.

(5) **Seed Drill** : Seed drill is an innovation that allowed seeds to be easily planted deep into the soil instead of on top where the majority were washed away or otherwise lost. The machine was pulled by horses and consisted of rotating drills or runners that planted seeds at a set depth.

(6) **Tractor** : Tractor is a vehicle particularly crafted to exert traction at slow speeds, for the purpose of hauling a trailer or machinery used in Agriculture. The versatility of tractor is with respect to its attachments that it supports. The more the options for connecting attachments to the tractor, the higher is the cost. The most common tractor attachments include front end loaders, mowers, box blades, spreaders, tillers, ploughs, trailers and backhoes for ploughing, tilling, disking, harrowing, planting and similar tasks.

(7) **Threshing Machines** : Threshing machine is designed for rapidly removing the husk from grain. With improvements in design and efficiency, threshing machines became progressively more common and the hand flail was gradually consigned to history. The machines could be driven by wind or water power or by horses, but the steam powered threshers became the most familiar sight.

**Irrigation Technology** : Water is an important component for all the living organisms and it plays a very important role for the development of plant since, 'Water is the first food of plant' and 'Water is the life'. Electric diesel and solar pumps can be used to extract groundwater for irrigating purpose for land; however, some cost effective technologies that are being available by a major section of farmers are as follows :

(a) **Treadle Pump** : It is a foot operated water lifting device that can irrigate small plots of land of small holders in regions that have higher water table (not deeper than 25 feet). A treadle pump is a low cost system, simple in design and easily manageable; it appropriately answers the irrigation need for the small farmers.

(b) **Drip Irrigation Technology** : Drip irrigation is a water-saving technology (upto 70% saving) which enables slow and regular application of water directly to the roots of the

plants through a network of economically designed plastic pipes and low discharge emitters. It maximizes crop productivity through increase in the crop yield and also the area for cultivation and protects the environment through conserving soil, water and fertilizer resources, thus increasing the farmer income. 'Sprinkler Irrigation System' is also being adopted in Agriculture, so as to save irrigation water. Currently, this is being promoted by the Government of India in the form of kits in the water scarce regions in India. They include : (i) Drum Kit, (ii) Bucket Kit, (iii) Family Nutrition Kit.

**Technology dissemination** : Is a system in which package of technology and services, which include appropriate technology, relevant media system, credit, input supply system, prices and marketing and trained manpower are put into practice to increase agricultural productivity.

**Ways to Technology Dissemination** : (1) Government : Extension workers, KVKs, Agri-clinics & plant-clinics, Extension programme like ATMA, NATP, NAIP, NAEP etc. (2) Private : NGOs, Input Agencies, Private Agri-clinics, Kisaan Call Center (KCC), E-choupal, Farmers Organization etc.

Transfer of Agricultural Technology Government Programme in India : First line extension systems: Realizing the scope and importance of integrated working of interrelationship between research, education and extension functions, the ICAR established a section of extension education in its headquarters in 1971, which was later on strengthened and renamed as division of agricultural extension. It was intended to enforce this functional relationship down the line in the research institutes, agricultural universities and allied institutions. There were four main transfers of technology projects of ICAR, namely the : All India Coordinated Projects on National Demonstrations (AICPND), Operational Research Project (ORP), Krishi Vigyan Kendras (KVK) and Lab to Land Project (LLP). All the projects were of mobile type, except the KVKs, which are vocational training institutions.

(1) **Krishi Vigyan Kendras (KVK)** are designed to impart need-

based and skill-oriented vocational training to the practicing farmers, in service field level extension workers and to those who wish to go in for self-employment.

(2) **All India Coordinated Projects on National Demonstrations' (AICPND)** : A nationwide programme of demonstrations, known as National Demonstrations (ND) on major food crops was launched in 1964. The rationale behind the schemes was that unless the scientists could demonstrate what they advocated, their advice might not be heeded by the farmers. This project was running with a uniform design and pattern in different parts of India.

(3) **Lab to Market** : The National Development Council envisaged an overall growth rate of 10 per cent during the 11th Five Year Plan. But, the fact remains that the agricultural sector has lagged behind pace with other sectors of the economy. To achieve the targeted 10 per cent growth, Agriculture has to gear up to attain a growth rate of 4.1 per cent as against 1.7 per cent of the 10th plan. Declined Agriculture growth during previous plan upshot serious implications on not only food and rural livelihood security but also resulted in farmers' distress and suicides. Therefore, extension principles, technology content and operational strategy demand earnest contemplation. In other words, a vibrant and dynamic approach for agricultural extension is a strategic necessity to make envisaged growth a reality. Indian Agriculture has made rapid progress / strides in the last half century by augmenting the annual food grain production from 51 million tonnes in the early fifties to 239.67 million tonnes in 2007-08 and steered the country to a status of self sufficiency. It has been successful in keeping pace with the rising food demand of a growing population. Significantly, the extension system had played its role untiringly in transfer of production technologies from lab to land, besides the agricultural scientists, farmers and marketing network.

(4) **Lab to Land Project (LLP)** : This project was launched by the ICAR in 1979-as a part of its Golden Jubilee Celebration. The overall objective of the programme was to

improve the economic condition of the small and marginal farmers and landless agricultural labourers, scheduled caste and scheduled tribes, by the transfer of new important technology developed by the agricultural universities, research institutions, and different research stations etc.

**13. Operational Research Project 82627:** (CR) was initiated in 1979, aimed at disseminating the present technology in a discipline/area among farmers or a ruralised tribe, covering the whole village or a cluster of villages and as measured by studying community (level of agricultural extension or adult literacy) or farmers to rapid spread of important technological innovations.

**Implementation of Agricultural Technologies through Mobile Phone:** Farmers all across the nation need not worry about pests and crop diseases as they will soon be able to get all this information on their mobile phones. The pilot project will be implemented in a few villages of Punjab and Uttar Pradesh initially. Agricultural experts in some of the villages are already gathering information from a national farmer network spread across the nation, where each area will conduct a regular field extension drive in crops, are being detected. The new application, known as 'Indic@id', to detect the crop diseases has been developed by Tata Consultancy Services. Till date, no more than two years in developing this mobile phone application. This sensing technology will be available to farmers through mobile phones network throughout the country. In next 3-5 months, the service providers will provide application in high-end phone users. TCS will support the low-end users. Once the application is launched on the phone, agriculture experts will send a set of questions to farmers related to symptoms of diseases in the local language. "Farmers will respond in yes or no. Answers will help experts in detecting the crop disease, which will suggest remedial measures to farmers individually. Also, farmers can receive the images showing a disease affected crop". In Punjab, experts at Punjab Agricultural University Ludhiana will help the farmers through this application.

**Kisan SOS Portal:** Kisan SOS Portal was launched on July 10, 2013 for Farmers. SOS is the word in the emergency language can be broadly classified into information, services and advisories categories. The content may include information about the schemes, advisories from the experts. Information have been grouped based on the State/District/Block and Crop/Activities selected by a farmer. SOS can send SMS to the farmers belonging to the entire area of their jurisdiction or a part of it. Grouping of farmers based on their location and their preferred crop/activity will help sending relevant messages to the farmers. The system is capable of sending messages in regional languages also. The farmers can register in this service by calling 'Kisan Call Centre' on the toll free number 1800-00-0000 or through the web portal. Helpline Kisan Channel 1800-12362 and Kisan Toll-free Number-180-000-0000. Kisan SOS is in the Chennai to H.D. New Delhi. SOS based application is a bar being introduced shortly. Farmers can give up to 8 choices for their preferred crops/activities. This also includes activities like Animal Husbandry, Fisheries, Dairying, etc. in addition to Agriculture & Horticulture. Facilities for sending Voice messages will also be started in due course for the farmers, who are not used to writing. Existing farmer databases of farmers available to Central as well as State Government are being integrated with the Portal which has a bar been linked with the Kisan Call Centre for registration of new farmers. Truly, except of new (response) information/another information can help the farmers in following way to:

1. If weather forecast can help the farmer in planning farm operation effectively on the basis of any adverse weather condition advice can be provided to the farmers an effective measure to be adopted.
2. If soil test results in a mobile will help in selecting the right fertiliser and the dosage.
3. Information on Schemes and Programs of Government of India can help every farmer to crop benefit via a farmer schemes.

Thus, widening the footprint of these schemes.

4. Gender and disease pests can be controlled as a diseases can be prevented naturally in the farmers in and around that area a critical report of the disease/pest.
  5. Direct market information will give better bargaining power to the farmers.
  6. Selection of suitable and better variety based by the farmer based on the information; advisory can be provided to him/her.
  7. Crop advisory will lead to the adoption of more appropriate technology, critical to local situations.
- Overall, these advisements and future directions will help to double the farmers' income in 2020 century in the country, for which 3 important points are: (i) to reduce production cost, (ii) to increase production, (iii) also addition and profitable marketing.

SOS

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- Under Cyber Crime Prevention for Women and Children (CCPMCA) Scheme, Government of India has released grants to 16 high ITs including Andhra Pradesh consisting of a Cyber Forensic Training Laboratory and organising capacity building programme on cyber awareness and cyber crime investigation. E-42 Cyber has been released to Andhra Pradesh for the purpose.
- E-43 It has been established under the Ministry of Home Affairs to deal with Cyber and Information Security.

The Indian Computer Emergency Response Team (CERT-In) has notified a Memorandum of Understanding (MoU) with its overseas counterparts (CERTs) for information exchange and collaboration for cyber security incident response.

SOS



improve the economic condition of the small and marginal farmers and landless agricultural labourers, scheduled caste and scheduled tribes, by the transfer of new improved technology developed by the agricultural universities, research institutes, and different research stations etc.

**(5) Operational Research Project (ORP):** ORP were initiated in 1974-75, aimed at disseminating the proven technology in a discipline/area among farmers or a watershed basis, covering the whole village or a cluster of villages and concurrently studying constraints (technological, extension or administrative) as barriers to rapid spread of improved technical knowledge.

#### Information of Agricultural Technologies through Mobile Phone:

Farmers all across the nation need not worry about pests and crop diseases as they will soon be able to get all this information on their mobile phones. The pilot project will be implemented in a few villages of Punjab and Uttar Pradesh initially. Agricultural experts in some of the villages are already gathering information from a wireless sensor network spread across the farms, wherein based on soil, weather, rainfall and other parameters diseases in crops are being detected. The new application, known as 'mKrishi', to detect the crop diseases has been developed by Tata Consultancy Services. "It took us more than two years to develop this mobile phone application. This sensing technology will be available to farmers through mobile phones network throughout the country. To cost ₹ 100 a month, the service providers will provide application to high-end phone users; TCS will support the low-end users. Once the application is loaded on the phone, agriculture experts will send a set of questions to farmers related to symptoms of diseases in the local language. "Farmers will respond in yes or no. Answers will help experts in detecting the crop disease, who will suggest remedial measures to farmers individually. Also, farmers can receive the images showing a disease-affected crop". In Punjab, experts at Punjab Agricultural University Ludhiana will help the farmers through this application.

**Kisaan SMS Portal :** Kisaan SMS Portal was launched on July 16, 2013 for Farmers. SMSs to be sent to the maximum farmers can be broadly classified into information, services and advisories categories. The content may include information about the schemes, advisories from the experts. Markets have been grouped based on the State, District, Block and the Crops/Activities selected by a farmer. Officers can send SMS to the farmers belonging to the entire area of their jurisdiction or a part of it. Grouping of farmers based on their location and their preferred crop/activity will help sending relevant messages to the farmers. The system is capable of sending messages in regional languages also. The farmers can register to this service by calling 'Kisaan Call Center' on the toll free number 1800-180-1551 or through the web portal. Delhi-DD Kisaan Channel-1800-113062 and Uttam (Tollfree Number-1800-180-5550 (Chambal Fertilizers & Chemicals Ltd., New Delhi). SMS based registration is also being introduced shortly. Farmers can give upto 8 choices for their preferred crops/activities. This also includes activities under Animal Husbandry, Fisheries & Dairying in addition to Agriculture & Horticulture. Provision for sending Voice messages will also be started in due course for the farmers who are not familiar with SMSing. Existing farmer databases of farmers available to Central as well as State Governments are being integrated with the Portal which has also been linked with the Kisaan Call Centre for registering more farmers. Timely receipt of relevant expert advice/ information/ market information can help the farmers in following ways:

1. Weather forecast can help the farmer in planning farm operation effectively on the onset of any adverse weather conditions; advice can be provided to the farmers on effective recourse to be adopted.
2. Soil test results in his mobile will help in selecting the right fertilizer and the dosage.
3. Information on Schemes and Programs of Government of India can help every farmer to reap benefits out of these schemes

thus widening the footprint of these schemes.

4. Outbreak of disease/pests can be controlled as advisories can be provided immediately to the farmers in and around the area of initial report of the disease/pest.
5. Timely market information will give better bargaining power to the farmer.
6. Selection of suitable and better variety/breed by the farmer based on the information/ advisory can be provided to him/her.
7. Crop advisory will lead to the adoption of more appropriate technologies suited to local situations.

Overall, these achievements and future directions will help to double the farmers' income in 21st century in the country, for which 3 important points are : (i) to reduce production cost, (ii) to increase production, (iii) value addition and profitable marketing.

Phogun

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- Under Cyber Crime Prevention for Women and Children (CCPWC) Scheme, Government of India has released grants to States/UTs including Andhra Pradesh for setting up of a **Cyber Forensic cum Training Laboratory** and organizing capacity building programme on cyber awareness and cyber crime investigation. ₹ 4-42 Crore has been released to Andhra Pradesh for the purpose.
- A Division has been established under the Ministry of Home Affairs to deal with Cyber and Information Security.

The Indian Computer Emergency Response Team (CERT-In) has entered into Memorandum of Understanding (MoU) with its overseas counterpart agencies/Computer Emergency Response Teams (CERTs) for information exchange and collaboration for cyber security incident response.

Phogun

# Life Without Water

—Dr. Manish Dev

If a bucket contained all the world's water, one teacup of that would be freshwater, and just one teaspoon of that would be available for us to use, from lakes, rivers and underwater reservoirs as groundwater.

In theory, this is enough to meet all the daily, basic needs of all the people around the world. Yet whether you are able to access that water for drinking, cooking, washing and other daily needs depends on who you are and where you live.

One in nine people do not have access to clean water close to home, and just under two thirds of the world's population – 4 billion – live in areas of physical water scarcity, where for at least part of the year demand exceeds supply.

Water scarcity exists for two reasons:

- I. Physical scarcity means there isn't enough water to go around.
- II. Socio-economic scarcity means there is water present, but it isn't available to all because of lack of investment and political will.

If we were to measure nations' water wealth and water poverty, not only by access to drinking water, but also by their access to water-intensive food, clothing and other products—the so-called 'virtual water' that is used in the cultivation and production of everything we eat, wear and use—the disparity becomes even more stark. Wealthy nations are able to import large amounts of water-intensive goods, which can then drive economic growth in poorer exporting nations.

But if this is not done in a sustainable way, in extreme cases poorer nations then see their water supplies depleted by production for export, even as their own people do not have access to enough clean water for basic daily use.

This impacts most on those who are already marginalised, for example people who are less physically able or who have caring responsibilities.

In 2015 the global community committed to the UN Sustainable Development Goal 6, which promises that by 2030 everyone will have a safe supply of water available whenever they need it.

But progress on delivering safe drinking water to all is threatened: by the lack of political will and financing required to deliver, by the competing demands from industry and agriculture, and by climatic changes.

The number of people living in physically water-scarce areas is predicted to rise to 5 billion by 2050, making this promise even more important, and more challenging.

In *Beneath the Surface: The State of the World's Water 2019* we reveal the countries where the most people live with physical water scarcity, how ballooning customer demands jeopardise water access for the poorest and most marginalised people, and how making thoughtful choices as consumers can help ensure access to water for basic needs is prioritised, wherever you are in the world.

## Impact of Water Scarcity

How much water people have depends very much on where they live. Some 60% of the world's population lives in Asia and the Middle East, yet that area only receives slightly more than a third of the world's water runoff—that is, rainfall or melting snow. South America, which has 6% of the world's population, has a quarter of the world's water runoff.

Even within countries there are often huge disparities from region to region, and climate change and urbanisation are amplifying those differences. For example, London is not known as a dry city, but is water-stressed because of the heavy demand imposed by nine million people.

The availability of water, and to what extent that impacts on the prospects of nations and individuals, is also affected by wealth, creating a vicious circle for the poorest and

most marginalised people. Spending hours collecting water from an unsafe source that will make you and your family sick makes it much harder to earn a good living.

Poorer communities without political influence struggle to persuade authorities and utility companies to provide water services. Wealthier communities, however, are more likely to have reliable water services, and are better able to cope with water stress. When Cape Town's drought last year threatened to make it the first modern city to run out of water, wealthier residents fitted high-tech filters to the 30,000 private boreholes in suburban gardens and bought bottled water, while poorer residents queued at standpipes.

## Defining Water Wealth and Poverty through 'Virtual Water'

This buffer zone of wealth protecting against water stress extends to what is known as virtual water—the water included in the production of everything we eat, buy and wear. The amount of water needed to create a product is its water footprint. Take your morning cup of coffee, of about 125 ml of actual water. The water used to produce the ground coffee, from irrigating coffee plants and processing the beans, is more than 1,000 times that amount, at 132 litres or nearly seven 20-litre jerrycans full.

A lunchtime hamburger of about 110 grams might not appear to contain much water, but, on average, it took 1,700 litres of water, or 85 jerrycans, to get it to your plate. The amount of water we each use physically each day for washing and drinking is dwarfed by our virtual water use. The amount of water needed to produce everything that the United Kingdom consumes in a year, added to the water physically used in the country, is 75 billion cubic metres or 3,400 litres per person per day. That's the equivalent of 170 jerrycans every day, only nine of which are for

drinking, cooking, laundry, flushing toilets and other daily physical uses.

Yet in London and the South East of the UK, the amount of water physically available is only half of that – 1,700 litres per person per day. The UK imports 75 per cent of its virtual water from other countries. This is around the same percentage as the water-scarce and desalination-dependent United Arab Emirates.

## Virtual Water's Role in Global Trade

Virtual water underpins global trade, with an estimated 22% of global water use going towards producing goods for export.

This provides valuable income for exporting countries and enables importing countries to be less dependent on water within their geographic borders. It also means consumers can eat food and wear cheaper clothes that could not be produced in their own country.

However, globally, we now use six times as much water as we did 100 years ago and that figure is growing by 1% every year. Population growth and changes in diet are expected to increase the water demands of agriculture by around 60% by 2025.

Globally, each year there should be enough freshwater available to meet the demands of agriculture, industry and domestic use. The challenge is to ensure that enough water is available where people live, throughout the year, to meet basic needs.

How do we balance the growing trade in virtual water, and countries' desires to build prosperity through exporting, with the human right to have available and affordable access to water for daily needs?

## A Bit about Water Footprints

The water footprint of any item is made up of three different types of water:

- I. 'Green water' in this context is soil moisture;
- II. 'Blue water' is used in irrigation, drawn from lakes, rivers and from groundwater sources below our feet.
- III. 'Grey water' is the amount of water needed to dilute any pollutants created in production before release back into the environment.

Rain-fed crops largely do not compete for water with households or industry, but are more vulnerable

to drought and are likely to have lower yields, resulting in lower incomes for farmers.

Blue water for irrigation comes from the same sources as for household use. When demand is high and reserves are limited, it's critical to balance these demands to protect the amount of water available for basic use. Groundwater is like a hidden savings bank with a low interest rate—whatever is taken out will eventually trickle back in through the ground, but often at a slower rate than it is being used. Overuse erodes groundwater's natural ability to even out the vagaries of cyclical drought and provide a reliable back-up. Around two thirds of global freshwater extraction is used for irrigation.

## Where does Virtual Water Come From?

In an ideal marketplace, the virtual water trade would balance resources between countries blessed with abundant water and those countries where water is in shorter supply. However, this is not the case. For example, nearly half of the UK's virtual water imports come from countries with unsustainable levels of 'blue' or irrigated water use. This includes such water-scarce countries as Spain (14%), the USA (11%), Pakistan (10%), India (7%), Iran (6%) and South Africa (6%), with sometimes worrying implications for the exporting areas. In the Upper Ganges and Lower Indus aquifers that lie under India and Pakistan the amount of water taken out is more than 50 times the amount that goes back in through natural rainfall and melting snow in the Upper Ganges, and 18 times in the Lower Indus. Meanwhile, importing goods 'saves' the UK about a third of the water it would have to use otherwise—53 billion cubic metres.

Global groundwater depletion is due to the amount of water taken from aquifers exceeds the amount that is restored naturally. Global groundwater depletion increased by 22% between 2000 and 2010.

**Wheat**: accounts for 22% of groundwater depletion. It has a global average water footprint of 1,827 litres per kilogram, although this varies by region. For instance, a 300-gram baguette from French wheat has a

### G-7 Countries with Water Footprints

Country	Water footprints per capita (litres per day)	% of water from inside the country /% imported	Average rainfall (mm/year)
USA	7800	80/20	715
France	4900	53/47	867
Germany	3900	31/69	709
Canada	6400	79/21	537
Italy	6300	39/61	832
Japan	3800	23/77	1668
UK	3400	25/75	1220

### Countries with Large Populations Living with Physical Water Scarcity

Country	Population living with water scarcity during at least one part of the year	% of water from inside the country /% imported	Water footprints per capita (liters per day)
India	1 billion	97/3	3000
China	900 million	90/10	2900
Bangladesh	130 million	83/17	2100
USA	130 million	80/20	7800
Pakistan	120 million	84/16	3600
Nigeria	110 million	95/5	3400
Mexico	90 million	57/43	5400



much lower water footprint of 155 litres than the global average.

**Rice** accounts for 40% of all global irrigation, and 17% of global groundwater depletion, with an average water footprint of 2,500 litres per kilogram.

**Asparagus** is a thirsty vegetable, with an average global water footprint of 2,150 litres per kilogram. In the Ica Valley in Peru, producers grow the crop in an area receiving 2.5 cm of rainfall a year; nearby wells serving a community of 18,000 people have dried up following heavy irrigation.

**Avocados** have an estimated water footprint of almost 2,000 litres per kilogram. In Chile's arid Putorca region, every cultivated hectare of avocados requires 100,000 litres a day of irrigation. Villagers nearby now depend on trucked-in water supplies, after underground aquifers and rivers dried up.

**Exports of cut flowers** also often require heavy irrigation. A consequence of climatic changes and heavy irrigation for horticulture in Ethiopia have been linked to the shrinking of Lake Abijata.

**Cotton** is a thirsty crop requiring heavy use of 'blue' irrigated water, which can cause long-lasting damage in arid environments. The Aral Sea, which straddles Kazakhstan and Uzbekistan, has shrunk by 80% since the 1960s because of large-scale irrigation of cotton crops. Cotton fabric grown and produced in India has a water footprint of 22,500 litres per kilogram; in Pakistan, this is an average of 9,800 litres and in the USA about 8,100 litres.

### Water Stress in India

- India's rate of groundwater depletion increased by 23% between 2000 and 2010.
- India is the third largest exporter of groundwater – 12% of the global total.
- India also uses the largest amount of groundwater – 24% of the global total.
- As many as one billion live in areas of physical water scarcity, of which 600 million are in areas of high to extreme water stress.
- 88% of households have clean water close to home, but... 75% of households do not have drinking water on the premises.
- 70% of drinking water is contaminated.

### Strong Strategy with a Political Will

Physical water scarcity is getting worse, exacerbated by growing demand on water resources and by climate and population changes. By 2040 it is predicted that 33 countries are likely to face extremely high water stress – including 15 in the Middle East, most of Northern Africa, Pakistan, Turkey, Afghanistan and Spain. Many – including India, China, Southern Africa, USA and Australia – will face high water stress. 5 billion people are projected to live in water scarcity areas by 2050, equating to one more person every two seconds having to worry about getting water. Within countries, there will also be regions facing crunch points—London, Tokyo and Moscow are among the cities likely to struggle with water availability over the coming years.

### Strategy for a Change in Water Footprint

Recent research shows water footprints can change, according to how scarce water is in an area. Take for instance the production of lamb. One kilogram of lamb on average takes about 461 litres of blue water to create. But that amount may be reduced to 88 litres for a pasture-fed flock raised in a rainy area. However, for a lamb raised on feed in a water-scarce area, the amount of blue water used in its production increases by nearly 1,000 times to 7,826 litres. Water footprint researchers may also apply a 'weighting' to the impact on the environment of using blue water when it is scarce. With that weighting, a kilogram of lamb from sheep raised in water-scarce areas uses the equivalent of an astounding 595,278 litres of water. This water footprint of food and clothing for export matters a great deal to the four billion people who face physical water scarcity, many of whom are competing for water with the industries that provide items we purchase here in the UK. One billion people in India, 900 million in China and 140 million people in Bangladesh face physical water scarcity for some or all of the year. Other large populations affected include 130 million in the USA (mostly in California, Texas and Florida), 120 million in Pakistan – most of whom are in the water-stressed Indus basin – 110 million in Nigeria and 90 million in Mexico.

The consequences of water scarcity will be global, and require a global response.

The progress made since 2000, delivering clean water to 1.5 billion people around the world, is now under threat. The human right to water must take priority ahead of other competing demands. Exporting food and crops are important sources of income for most countries. What's important is that production is made sustainable, so it does not impede people's day-to-day ability to get clean water for their basic needs.

### Sooner the Better

● **Everyone, everywhere to have secure access to water when and where they need it by 2030.** Investing in water, sanitation and hygiene needs to be a priority if we are to achieve the promises made in the UN Sustainable Development Goals, to eradicate extreme poverty and deliver a fairer, more sustainable world.

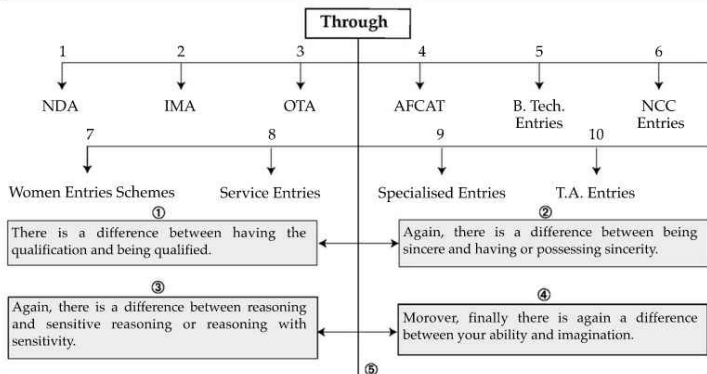
● **Governments to prioritise the human right to clean water,** ensure that effective regulations and monitoring systems are in place for sustainable water use and safely managed sanitation, and to recognise water's true value. This means imposing limits on the amount of water that can be extracted from aquifers for irrigation or manufacturing and monitoring the impact of production on shared aquifers to help ward off shortages. It means ensuring the safe separation and treatment of human waste to prevent water contamination. And it also means supporting producers to change inefficient water use practices and providing incentives for companies to recycle water, harvest rainwater, irrigate more efficiently and reduce the amount of water used in production. The focus should be on reducing water consumption in areas of greatest shortage, rather than setting general targets.

● **Businesses and investors to actively look at the threats that water shortages pose to their future growth, and understand**

*Continued on Page 97*

# SSB or How to be an Officer in Army, Navy and Air Force What ? How ? and Why ?

—J. B. Mall, Psychologist



Conclusively, difference again comes to the strike, the surprise about the potential and performance. Basically, one should not bother about the performance but he should bother about the potential. Potential is of two kinds : (a) Basic Potential, (b) Fertilized Potential.

If, I interpret fertilized potential, it would fall into potential with fertility. The persistent practice, intelligently organised and well-planned task with sincere coverage gives a fruitful rise to the component experience and when the experience is persistently practised and further pressed into the certainty, it results into potential with fertility.

The system of selection got revived in 1939 during the course of II World War. Without going into the details of why the system was revived ? What abnormalities did it have ? Did it have its own miscarriage of not producing the desired result ? Anyhow, after revival, it was named as psychology based selection.

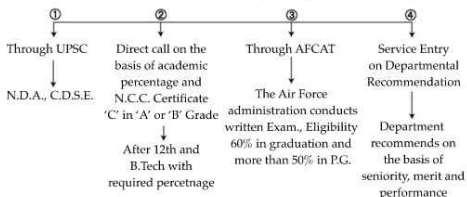
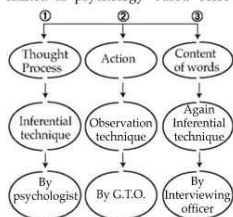
The selection system came out for the operation with three techniques.

The citizens of this country along with its neighbouring aspirants are being chosen for the recommendation as an officer in the highest cadre of this land which can briefly be said as three wings of the Armed

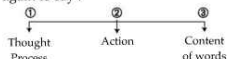
Forces which also include the cadre of the coast guard excluding the paramilitary services if any.

The eligibility criterion to force the SSB has four bifurcations.

Now, the system of selection commences its journey from subjectivity to objectivity and from objectivity to projectivity. Just to



interpret projectivity, I will distinguish and define that projectivity lays the projection and the projection is further pressed into projective technique. S.S.B. is purely a projective technique, therefore whosoever will project nicely, will get through only and projection undertakes its route into read, write and speak. These three components should have similarity, and coherence as incoherence will lead to the not-recommendation and bouncing. Projection further depends and survives on the three components only, which were laid down under the revival of the system that again to say :



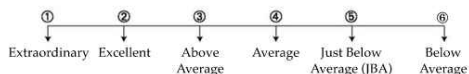
After revival of this psychological based selection in 1939, no literature was made to be available for the aspirants and whatever was avoidable, that did not lay down the definition, classification, logic, citation and interpretation with examples.

Whatever books were available on S.S.B., they only laid down about the introduction, identification and classification of the situational tests, conducted in the S.S.Bs. First time, the Upkar Prakashan, after 1999, along with its author and psychologist—J.B. Mall plunged into this field and has honour to publish eight books on S.S.B. The details of these books are given where the last content of the article will get over. Even this publisher along with the writer has published the very valuable and demanding book, 'On the screening' which has been a phobia since 1998 soon after the inception of this screening test into system. These books you can get from Upkar Prakashan itself while putting the demand on the following numbers : (0562)-4053333, 2530966, 2531101. Fax : (0562)-4053330 and you can also get from the writer of these books while floating your request on telephone nos.—09415062698, 09918576833 and even you can visit Amazon and Flipkart, if these books are not available to the nearby shops.

## The Cause of Failure and the Cause of Selection

Gentlemen, please do not consider the word 'Failure' as a phobia

as failure is not a disqualification but it is an unsuccessful attempt. Now, let us go ahead to press ourselves to find the science of the successful attempt. At the first phase you have sufficient literature written by me at your disposal. Now, the second phase comes of guidance. The guidance includes S.S.B. coachings of this country : I am coming to the word—**Guidance**. Two kinds of people are imparting S.S.B. guidance in the country : in the first hand, the people who have the licence to teach. The licence means the ex-S.S.B. experts who test pitchers (Matka-Ghara) and the second kind of people are those who bring the soil. The soil includes the fertilized and non-fertilized. If the soil is non-fertilized, the second kind of experts make it fertilized



through situational processing. In the second phase, these experts pick small pebbles and throw them out. In the third stage, these experts do further make the fermentation of the soil. In the fourth stage, Matka is made onto the mould (a container gives anything particular shape) and made it dry in the day light. In the fifth stage, these experts place pitchers onto fire and when fire is cooled down, these pitchers are tested while putting water into them. After the proper testing, these matkas are sent in respective service selection board for the recommendation in the officers' cadre and you will be glad to know and welcome that I am one of them or you can conclusively say on the basis of my sacrifices that I am the only first person. This process takes from 20 days to one and half years. Therefore, every candidate is made to undergo difficult situational process to enter the company commander.

## Difference Between Having Qualification and Being Qualified

You attain certain qualification according to your age. For example, generally a boy passes 10th at the age of 14-15 and 12th at the age of 16-17 and likewise in progressive qualification. When your qualification does not reach to your age or your

ability does not correspond to the acquired qualification → you are below average. When it reaches to your age or your ability reaches to your qualification, you qualify the mark of average one. When your ability and qualification surpass your age and qualification, you strike the marks of an above average man. The requirement of the S.S.B. is to hunt or spot out an average one. To interpret it, I would like to say that the requirements of the S.S.B., is between 70-80 from Central Board and 60-70 from state boards. The cream lot produced by these boards opt their first priority for JEEs, IITs, M.C.As. and for higher studies. The aspirants and the board products can be classified into six categories :

For defence services, mostly

below average, just below average and in some cases, average becomes the aspirants. A lot of unwanted crowd kept on crowding or striking the door of respective selection boards for the selection of the highest cadre of the land. This desirable crowd compelled the policy makers of defence secretariat and defence institute of psychological research which resulted into the induction of the screening in 1998. That too only for one year on trial and error basis. Since this crowd kept on arriving to the respective SSBs without realizing the difference between having the qualification and being qualified, this became the only reason to continue the screening. After 1998, when the screening was inducted into service selection, no book was published on the screening. The aspirants get call letters on the basis of percentage and specialized qualification and face the SSB or approach the SSB without introspecting the worth and requirement of the SSB. Often, they face bitter results of bouncing that too between 80-90% of available crowd at the first round that is screening. The first book, I have penned down is "Screening for SSB and Coast guard", which has been published by Upkar Prakashan and is available on every book store.

Without ability, please do not face the SSB. Gentlemen, ability is a basic intelligence and imagination is your practical intelligence. The selection system requires your ability along with imagination. The question arises what is imagination? Without exploring its horizon I would like to define it in a nutshell that the 'imagination' is the practical application of your scientific principles or scientific application of practical principles. To explain, I would like to add that imagination is the application of your thoughts, perception and observation, your applicable common your cognitive intelligence, practical intelligence and finally your intellect and experiential sense of your reasoning.

Your personality comes the moment you react. To interpret, the system wants that reaction and reflection of a particular situation which can project the traits of your personality upto the nature of your job. This requires a workable projection of thought process in any of the language, either Hindi or English. The expression Hindi is not 'only' enough for the selection of the highest cadre it also requires the projection of your thought process in the preferential language of English. The question does not arise for upgrading English or degrading Hindi but it will be difficult for you to get this highest cadre of the board in the absence of the applicable languages which would mean Hindi and English both. The state products are generally the victim of double education system. Under this double education system both boards are working i.e., Central and State Boards. And these different boards have different sets of syllabi. The syllabus of the central boards lays more emphasis on information, language general awareness and reasoning, which gives more exposure in comparison with the syllabus of the state boards. It is known and seen in the results of our country that the central boards' products don't hesitate to speak in either language where state board products are seen hesitant at least in 80-90% of cases.

### Required Duration to Improve the Thought Process

With reasonable effort, the state's products get around 80% either by

selective studies or by choosing the important ones. On the basis of the percentage, they get the call letter, go to the various academies for SSBs preparations and keep on getting bounced and they exhaust all their attempts as they do not know where they stand. When they get the call letter, the call letter tells them they are being called for the highest cadre of the land but neither the call letter nor any notification nor circulation nor any coaching institution tells openly that gentlemen, you are only eligible but you don't deserve to get this cadre as you don't have required level of the ability and imagination. Since I have put more than 40 years of my precious life and even the only man to author eight books after 1999, when the system got revived, now, the question comes, why twenty days are required for an average aspirant and how further six months to one and half years are required for just below average ones. The process of cultivation of thought process requires rigorous situational efforts and different sets of training sessions to breed, nurture, harbour, fertilize and enhance the multi-dimensional imagination. This regular process does not spare even Sundays or holidays. Right from 7:30 a.m. to 6 p.m. The gentlemen cadets are made to travel in variety of contradictory sessions to improve and explore the various layers of mind.

Pragati

Continued from Page 94

their role as employers and tax-paying corporations to influence decision-makers and water utilities to ensure that their workers and their neighbours also have a reliable supply of clean water.

- Companies to investigate the impact that their activities have on water and to actively reduce the amount of water used in production, especially in areas where water is scarce or predicted to become more so. Rain-

water harvesting to stop rain-water running off the land and other conservation methods will not alone make up for the rate at which water is extracted.

- Retailers to ensure their supplies come from sustainable sources, and help suppliers make the business case for more water-efficient processes.
- Consumers to think about what they are buying and where it comes from. It can be difficult to get enough information to reduce your water footprint on particular items, because producers don't often identify how much water is used in production, or where it comes from. But easy steps include eating less meat (a vegan diet has an estimated 19% lower impact on water supplies), not wasting food (a third of food produced globally is thrown away) and simply buying less. For instance, throwing away a half an avocado and buying another wastes over 500 litres of water, or more than six bathtubs' worth. Every year 450 million pairs of jeans are sold in the USA, accounting for around 3-6 billion litres of water. And the average American already owns seven pairs. Having reliable access to water of sufficient quality is a human right. Urgent attention must be given to ensuring that the push for economic development through exports of food and clothing do not imperil current and future generations' access to water, especially in the context of the growing unpredictability of water in relation to climate change.

Pragati

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# National Policy on Software Products, 2019 (NPSP-2019)

—Shankar Prasad Tiwari

## Background/Aims

- The Union Cabinet, chaired by the Prime Minister has approved the "National Policy on Software Products-2019" (NPSP-2019) to develop India as a 'Software Product Nation' (SPN) on 28 February, 2019.
- The Indian 'IT Industry' has predominantly been a progressive service industry. However, a need has been felt to move up the value-chain through innovation and modern technology oriented products and services.
- To create a robust software product ecosystem the Government has approved the "National Policy on Software Products-2019" (NPSP-2019), which aims to develop India as the 'global software product hub', driven by innovation, improve commercialisation, sustainable 'intellectual property' (IP) promoting technology 'start-ups' and specialized skill sets.
- Further, the NPSP-2019 aims to align with other 'Government Initiatives' such as : 'Start-up India', 'Make in India', 'Digital India' and 'Skill India' etc. so as to create 'Indian software products industry' of \$ 70-80 billion with direct and indirect employment of 3-5 million by 2025.

## Expenditure Involved

- Initially, an outlay of ₹1,500 crore is involved to implement the programmes/schemes envisaged under the policy over the period of 7 years.
- ₹ 1,500 is divided into 'Software Product Development' (SPDF) and 'Research and Innovation Fund'.

## Implementation Strategy and Targets

The policy will lead to the formulation of several schemes,

initiatives, projects and measures for the development of software products sector in the country as per the road-map envisaged therein. To achieve the vision of NPSP-2019, the policy has the following 5 missions :

1. To promote the creation of a sustainable Indian software product industry driven by Intellectual Property (IP), leading to a ten-fold increase in Indian share of the 'Global Software' product market by 2025.
2. To nurture 10,000 technology start-ups in software product industry including 1,000 such technology start-ups in 'Tier-II' and 'Tier-III' towns and cities and generating direct and indirect employment for 3-5 million people.
3. To create a talent pool for software product industry through : (a) up-skilling of 1000000 IT professionals, (b) motivating 100000 schools and colleges specialized professionals that can provide leadership.
4. To build a 'cluster - based' innovation driven ecosystem by developing 20 sectoral and strategically located software product development clusters having integrated ICT infrastructure, marketing, incubation, R&D/ test beds and mentoring support.

5. In order to evolve and monitor scheme and programmes for the implementation of this policy, "National Software Products Mission" (NSPM) will be set up with participation from Government, Academic and Industry.

## Major Impact

- The software product ecosystem is characterized by innovations, intellectual property (IP) creation and large value addition increase in productivity.
- The policy promotes the potential to significantly boost revenues and exports in the IT sector, create substantive employment and entrepreneurial opportunities in emerging technologies and leverage opportunities available under the 'Digital India Programme' (DIP), thus, leading to a boost in inclusive and sustainable growth.

P.0000

## Upkar Prakashan's New Books designed and prepared as per the new pattern of Railway Recruitment examinations

Various Railway Recruitment Boards had conducted multiple choice based competitive examinations in 2016. The pattern of questions was changed in the following manner :

Q. Which of the following statements is correct about NITI Aayog?

- A. It is a legislative body
- B. It is a statutory body
- C. It is an advisory body
- D. It is a constitutional body

(a) A (b) D (c) B (d) C

Ans. (d)

Keeping in mind the interests of the candidates, preparing for these examinations, Upkar Prakashan has designed and prepared its entire range of Guide Books/Practice Sets pertaining to the competitive examinations of Railway Recruitment Boards as per the revised pattern of the questions, as was adopted during the examinations of 2016. Upkar Prakashan gives highest priority to the interests of the competitors.

# Principles of Ecology

The term ecology was first coined in 1869 by the German biologist Ernst Haeckel. It has been derived from two Greek words **Oikos** meaning home or estate and **logos** meaning study. This emphasis the relationship between organisms and the components of the environment abiotic (non-living) and biotic (living).

Haeckel (1869) coined the term Ecology.

Thus Ecology may be defined as the scientific study of the relationship of living organisms with each other and with their environment.

Ecology is the study of relationships of living organisms with each other and with their environment.

Ecology not only deals with the study of the relationship of individual organisms with their environment, but also with the study of populations, communities, ecosystems, biomes and biosphere as a whole.

A large community unit, characterized by a major vegetation type and associated fauna, found in a specific climatic region is a **biome**. Biomes refer basically to terrestrial areas. The aquatic systems like the seas, rivers etc. are also divided into distinct life zones on basis of salinity.

## Habitat and Organism

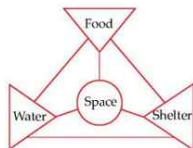
Habitat is the physical environment in which organisms live. Each organism has particular requirements for its survival and lives where the environment provides for those needs.

Habitat is a physical environment in which organisms live. Each organism has particular requirement for its survival.

The environmental requirement of an elephant would be a forest but elephant is not expected to live in a ocean nor a whale is expected to live in the forest.

A habitat may support many different species having similar requirements e.g., a single ocean habitat may support a whale, a sea horse, seal, phytoplankton and many other kinds of organisms.

The various species sharing a habitat thus having the same 'address'. Forest, ocean, river etc. are examples of habitat. Habitat features can be represented by its structural components namely (A) Space (B) Food (C) Water (D) Shelter or cover.



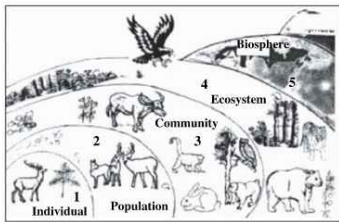
Structural Components of a Habitat

## Structural Components of Habitat

1. Space
2. Food
3. Water
4. Shelter

II. Study of human activities affecting the earth like global climate, ozone hole etc.

I. Study of physical and biological features of a particular **biome**.



Study of Levels of ecological organization

**1. Organisms** (individual) basic unit of study

**2. Population**

A group of organisms consisting of a number of different populations that live in defined area and interact with each other.

**3. Community**

A group of organisms consisting of a number of different species that live in an area and interact with each other.

**4. Ecosystem**

A communities of organisms and their physical environment, interacting as an ecological unit.

Types of study

Study of the form, physiology behaviour, distribution and adaptation of organism in relation to environment.

Study of interaction between populations and intraspecific relationships.

Study of structure and composition of community and interspecific interactions between members of community.

Study of the community in relation to the structure of its ecosystem-nutrients cycling, climate, energy flow etc. studied.

Levels of ecological organization and types of ecological studies.

Earth has four measure habitats (1) Terrestrial, (2) Fresh water, (3) Estuarine (where river meets the ocean and (4) Ocean. The human gut is the habitat of a tapeworm and the rotting log a habitat of fungus.

### Types of Habitat

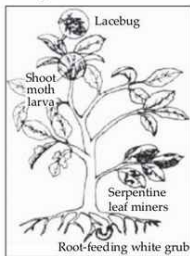
1. Terrestrial      2. Fresh water
3. Estuarine      4. Ocean

### Niche and Organism

In nature many species occupy the same habitat but they perform different functions. The functional characteristics of a species in its habitat is referred to as **Niche** in that common habitat. Though the habitat of a species is like its address (Shelter place) whereas niche can be thought of as its profession (*i.e.* activities and responses specific to the species). The **term niche means the sum of all the activities and relationships of a species by which it uses the resources in its habitat for its survival and reproduction.**

**Niche**—The functional characteristic of a species in its habitat.

A niche is unique for a species while many species share the habitat. No two species in the habitat have the same niche. This is because two species occupy the same niche. They will compete with one other until one is displaced *e.g.*, a large number of different species or insects may be pests of the same plant but they co-exist as they feed on different parts of the same plant.



Different species of insects feeding on different parts of the same plant.

In the same way forest can support a large number of plant species

as they occupy different niche the tall tree, the short three, shrubs, bushes and grasses all are part of the forest but being of varying heights they differ in their requirements for sun light and nutrients and so can survive together.

The important resources in the niches of animals are food and shelter while those of plants moisture and nutrients (Phosphorous + Nitrogen).

The most important resources in the niches of animals are food and shelter while in case of plants moisture and nutrients (Phosphorous and Nitrogen).

### Adaptation

Every organism is suited to live in its particular habitat. As coconut cannot be grown in a desert area. while camel cannot survive in a ocean. Each organism is adapted to its particular environment "An adaptation is thus" **the appearance or behaviour or structure or mode of life of an organism that allows it to survive in a particular environment.**

Each organism is adapted to its particular environment : Camel in desert, coconut in mangrove.

Presence of gills and fins are examples of adaptation in fishes to aquatic habitat. In aquatic flowering plants absence of wood formation and highly reduced root system are adaptations to aquatic environment. Adaptations have genetic basis and have been produced and perfected through evolution. The adaptations have developed over many generations to help a species survive successfully in its environment.

Examples of basic adaptations that help animals and plants to survive in their respective environments.

- Shape of bird's beak—useful for pulling worms out of wood.
- Thickness and Thinness of fur.
- Presence of feathers and wings in birds
- Evergreen and deciduous nature of trees.
- Presence and absence of thorns and leaves and stems.

### Species

A species is defined as "a group of similar populations of organisms whose members are capable of interbreeding and to produce fertile offspring (Children). A tiger, a lion, a lotus and a rose are examples of different species. Every species has a scientific name, understood by people all over the world. Humans belong to species of Homo-Sapiens. Only members of the same species can inter-breed to produce fertile offspring. Every species has its own set of genetic characteristics that makes the species unique and different from other species.

**Species**—A group of similar population of organism.

However, species are generally composed of a number of distinct populations which freely interbreed even though they appear to be different in appearance.

Difference in colour of skin, type of hair, eye colour, blood type among different ethnic groups represent variations within human species. Similarly different shape and size of cows, dogs and cats etc are examples of variation in species. In plants short and tall pea varieties, various shape and size exhibit variations among these plant species. Variations are produced as a result of chance mutation. Competition and natural selection determine as to which variation will succeed and survive. In plants this variable can also be observed *e.g.*, size and shape of mango and brinjal.

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## Indian Polity and Constitution

- ★ The Right to Equality is granted by 5 Articles in the Indian Constitution. These articles are  
—Articles 14 to 18
- ★ Which Articles of the Constitution of India ensure the 'Freedom of Religion' ?  
—Articles 25 to 28
- ★ Which part of the Constitution of India deals with the relations between the Union and States ?  
—Part XI
- ★ The Part XI of the Constitution of India consists of  
—Articles 245 to 263
- ★ Who is the author of the book 'Indian Parliamentary Diplomacy—Speaker's Perspective' ?  
—Former Lok Sabha Speaker Meira Kumar
- ★ If the President and the Vice-President of India both have resigned, who will act as the President ?  
—The Chief Justice of India
- ★ 'Judicial Activism' in India is related to  
—Public Interest Petition
- ★ The concepts of 'Bi-cameral Parliamentary System' and 'Office of CAG' in the Constitution of India are inspired from the  
—Constitution of Britain
- ★ At least how many days are required to give the prior notice for the impeachment of the President of India ?  
—14 days
- ★ Jharkhand and Assam carry equal number of members in the Lok Sabha. It is  
—14 members in each state

## Indian National Movement

- ★ Which country imposed strict restrictions on the Indian immigrants from landing, carried by the ship 'Kamagatamaru' in 1914 ?  
—Canada
- ★ Which great nationalist leader was associated with the 'Leader' newspaper ?  
—Madan Mohan Malaviya
- ★ The headquarters of the Ghadar Party was located in  
—San Francisco
- ★ Who was the British Governor-General of India when the Chauri-Chaura event took place ?  
—Lord Reading
- ★ Who was the President of the Central Legislative Assembly in August 1925 ?  
—Vithal Bhai Patel
- ★ Who was the author of the book 'The Sepoy Mutiny and Revolt of 1857' ?  
—R.C. Majumdar

- ★ When did Mahatma Gandhi give the slogan of 'Swaraj in a year' ?

—During Non-cooperation Movement

- ★ Who blamed rogue policies of the British rulers for the poor economic conditions of Indians and India in his book 'Economic History of India' (1901) ?  
—R.C. Dutta
- ★ Which freedom fighter published 'The Bhavani Mandir' in 1905 ?  
—Barindra Kumar Ghosh
- ★ The first session of the Indian National Congress was attended by  
—72 delegates

## History and Culture of India

- ★ 'Aitareya' and 'Kaushitiki' Brahmanas are associated with  
—Rig Veda
- ★ Who was the founder of the Haryanka dynasty in ancient India ?  
—Bimbisara
- ★ Which emperor was called the 'Kaviraja' (King of poets) in the Prayaga Prasasti ?  
—Samudragupta
- ★ Which Mughal Prince was accorded the title of 'Shah Buland Iqbal' by emperor Shahjahan ?  
—Prince Dara Shikoh
- ★ What was the name of the capital of Chedi Mahajanapada in ancient India ?  
—Suktimati
- ★ Which Turk Sultan was given the title of 'Lakh Bakhsh' for his generosity ?  
—Qutubuddin Aibak
- ★ Which Indian scholar first explained that the rotation of the earth on its axis accounts for the daily rising and setting of the sun ?  
—Aryabhata

- ★ Which Maratha Peshwa preached and popularised the ideal of Hindu-pad-Padshahi (Hindu Kingdom) ?  
—Peshwa Bajji Rao I
- ★ Who was the founder of the 'Dharma Sabha' in 1829 ?  
—Radhakant Dev
- ★ Who is called the 'Father of India's Local Self-Government' ?  
—Lord Ripon

## Economic Affairs of India

- ★ What is India's rank of the WEF's Global Energy Transition Index, 2019 ?  
—76th rank
- ★ What is India's position on the UN World Happiness Report, 2019 ?  
—140th rank



- ★ 'Mission Indradhanush' of the Union Government is associated with  
—Immunization of children through vaccine
- ★ Financial transactions and other traditional banking activities of non-banking financial intermediary is called  
—Shadow banking
- ★ MUDRA Bank was set up with the corpus of  
—₹ 2000 crore
- ★ Which bank emerged on top of the Public Sector Banks' list of the Finance Ministry?  
—Punjab National Bank (PNB)
- ★ Trade related transactions of which State in India are not managed by RBI?  
—Jammu & Kashmir
- ★ Who has become India's first Lokpal, the anti-corruption ombudsman?  
—Justice (ret'd.) Pinaki Chandra Ghose
- ★ A fiscal tool in the hands of the government to bridge the gap between revenue receipt and revenue expenditure is called  
—Deficit financing
- ★ Where is the headquarters of ICRA, a credit rating agency located?  
—Gurugram

## Geography (India and the World)

- ★ The second largest continent in the world in terms of area is  
—Africa
- ★ The Sargasso Sea is located in the  
—North Atlantic Ocean
- ★ After the Pacific Ocean, the largest ocean in the world is  
—The Atlantic Ocean
- ★ The Ashtamudi Kayal, a Lagoon is located in  
—Kerala
- ★ The Red Indians or the American Indian belongs to  
—Mongoloid race
- ★ The Beaufort scale is used to measure  
—The velocity of winds
- ★ The Earth turns through  $360^\circ$  in 24 hours. Each 150 longitude represents  
—One hour
- ★ Beyond Farakka, the main stream of the river Ganga flows into Bangladesh. There the river is known as  
—Padma
- ★ The highest point of the Aravalli mountain range is known as  
—Gurusikhar peak
- ★ The Fujiyama in Japan and the Vesuvius in Italy are major examples of volcanic mountains formed due to  
—Central volcanic eruption

## Science & Technology

- ★ Red ink is generally prepared from  
—Eosin
- ★ Cow milk is yellowish white in colour due to the presence of  
—Carotene together with Casein

- ★ Whether an object will float or sink in a liquid, depends on  
—Difference in the densities of the object and liquid
- ★ A simple periscope functions on the basis of the phenomenon of  
—Reflection of light
- ★ The accidental touch of Nettle leaves creates a burning sensation, which is due to inject of  
—Methanoic acid
- ★ What is the chemical formula of washing soda?  
— $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$
- ★ AIDS is caused by a virus whose genetic material is  
—Single stranded RNA
- ★ The most important stimulant present in tea leaves is  
—Caffeine
- ★ Cream separator works on the principle of  
—Centrifugal force
- ★ The amount of energy released during dissolution of one mole of compound into water, is called  
—Hydration energy

## Agriculture

- ★ Generally Orobanche weed is found in  
—Tobacco field
- ★ Dolomite powder is applied in some agricultural lands to increase  
—The pH of the soil
- ★ CO.1148 is an important variety of  
—Sugarcane
- ★ The highest protein content is found in the grain of  
—Soyabean
- ★ The proper seed rate for transplanting of Basmati rice is  
—15 to 20 kg per hectare
- ★ 'Humus' is an example of  
—Soil structure
- ★ SRI method is related to  
—Paddy
- ★ 'Vardan' is a variety of  
—Mustard
- ★ The rotation intensity of Maize-Potato-Mung bean is  
—300%
- ★ The most ideal region for the cultivation of cotton in India is  
—Deccan plateau

## Environment, Biodiversity, Climate Change etc.

- ★ A worldwide rise or fall in sea level is called  
—Eustasy
- ★ Which type of species is most sensitive to environmental change?  
—Amphibian
- ★ Prestigious 'Tyler Prize' is given in the field of  
—Environmental protection
- ★ 'Lumbering' is an act that disturbs the  
—Ecological balance
- ★ 'Ecology' is the study of relationship between  
—Organism and environment

- ★ Which is the largest eco-system of the earth ?  
—Hydrosphere
- ★ The first summit of 'International Solar Alliance' was held in March, 2018 in  
—New Delhi
- ★ Which ecological cycle is directly driven by sunlight ?  
—Sulphur
- ★ 'Conservation ecology' is also known as  
—Resource ecology
- ★ Fakim Wildlife Sanctuary is located in  
—Nagaland

## Communication

- ★ There will be effective communication in classroom if the teacher  
—Talks extempore with examples from other subjects
- ★ Communication skills of listening, speaking, reading and writing are critical and are known as  
—Generic skills
- ★ Expressive communication is driven by  
—Encoder's personality characteristics
- ★ The concept of stereotypes was advocated in mass media by  
—Walter Lippman
- ★ What connects the source (a speaker) and the receiver (a listener) ?  
—A channel
- ★ The place or setting in which a communication event occurs is called  
—Situation
- ★ The two-step flow theory emerged from the field of  
—Politics
- ★ The communication component of the dependency paradigm is most often referred to as  
—Cultural imperialism
- ★ For a public relations practitioner, status difference is one of the main barriers in  
—Organisational communication
- ★ Institutionalised stereotypes are referred to as  
—Myths

## Education and Child Psychology

- ★ The primary aim of educational psychology is  
—To contribute to an understanding of sound educational practices
- ★ According to Psychology, all education is  
—Self-education
- ★ The best definition of Educational Psychology as a study of teaching and learning has been given by  
—Charles E. Skinner
- ★ The primary task of the teacher is  
—To stimulate and guide student learning
- ★ A creative learner refers to one who is  
—good at lateral thinking and problem solving
- ★ Individual learners differ from each other in  
—rate of development
- ★ Every learner is unique means that  
—No two learners are alike in the abilities, interests and talents Later childhood

- ★ Development of concept is primarily a part of  
—intellectual development
- ★ Heredity is considered as a social structure  
—static
- ★ The most intense and crucial socialization takes place  
—during adolescence

## Sports and Games

- ★ Which team clinched Sultan Azlan Shah Hockey Title, 2019 ?  
—South Korea
- ★ Who clinched his 100th ATP Singles title, becoming only the second to have attained this feat in Tennis history ?  
—Roger Federer
- ★ Which team emerged champion of the Syed Mushtaq Ali T20 trophy, 2019 ?  
—Karnataka
- ★ 'Shillong Lajong', 'Minerva Punjab' and 'Churchill Brothers' are major  
—Football Clubs in India
- ★ Who emerged champions of the All England Badminton Championship, 2019 Singles titles ?  
—Kento Momota (Men's Singles) and Chen Yufei (Women's Singles)
- ★ 'Ratchanon Intanon', 'Tai Tzu Ying' and 'Nozomi Okuhara' are famous female players of  
—Badminton
- ★ The playground for cycling is called  
—Velodrome
- ★ 'Butter fly' and 'Crawl' are the terms associated with the game of  
—Swimming
- ★ Who is the most successful all-time Olympian in terms of number of Olympic medals ?  
—American swimmer Michael Phelps
- ★ Holkar Cricket Stadium is located in  
—Indore

## Miscellany

- ★ Who became the first woman to win the Abel Prize, generally referred to as the Nobel Prize for mathematics ?  
—Karan Uhlenbeck
- ★ What is the new name of Kazakhstan's capital 'Astana' ?  
—Nursultan
- ★ International Human Rights Day is observed on  
—December 10
- ★ Diet (Kokkai) is the name of the Parliament of  
—Japan
- ★ 'Ustad Shafat Ahmed Khan' and 'Ustad Zakir Hussain' are great exponents of  
—Tabla
- ★ 'Bhangra', 'Giddha', 'Daff', 'Dhaman' are famous folk dances of  
—Punjab
- ★ In Binary system, one megabyte is equal to  
—1024 kilobytes
- ★ What is 'Solar Impulse 2' ?  
—Solar-powered plane
- ★ Which country retained its top position as the happiest nation on the UN World Happiness Report, 2019 ?  
—Finland
- ★ Marco Polo was a famous traveller from  
—Italy

# Important Concepts in News

## ART AND CULTURE

### Jodi Sankha Dance

Jodi Sankha, which literally means Double Conch, is a unique folk dance native to Ganjam District of Odisha. It is a combined presentation of rural music along with Badya and Nrutya. Blowing of the shells on special occasions and festivals is the profession of a class of people in Odisha. With commanding control of breaths, they even blow two conches at a time bringing out the uncanny rhythm of various drums and other percussion instruments. The blower is capable of controlling his breath in an astonishing instrument. He can as well as blow to conch-shells at a time in a single breath for several minutes. The most noteworthy part is the harmony between the modulation of the conch and the physical movements of the artists. This martial art is performed mainly by non-Aryans embellished in colorful costumes. The main accompanying instruments include Changu-Baja and Mahuri which combined with the thrills of the conch present an emotional Orchestra of rural music.

### Oppari

An oppari is an ancient form of lamenting in Southern India, particularly in Tamil Nadu and North-East Sri Lanka where Tamils form the majority. Oppari is a folk song tradition and is often an admixture of eulogy and lament. The oppari is typically sung by a group of women relatives who come to pay respects to the departed in a death ceremony. It is a means to express one's own grief and also to share and assuage the grief of the near and dear ones of the deceased. Many communities use the oppari to express their grief at a funeral. Sometimes professional oppari singers are recruited, but it is a dying practice. Oppari is a repertoire of songs that describe, eulogise the dead, and expresses the deep agony felt by the singer.

### Dhangar Dance

Dhangars, a shepherd community believed to have migrated from Kathiawar region of South Gujarat and settled in the hilly northwestern fringes of Goa, are very pious and worship the God called 'Bira Deva'. During Navaratri (literally meaning 'nine nights') festival, the leader of the house observes abstinence and fast, takes bath at early hours in the morning, milks his share of lone one cup of milk per day and prays and dances before the family deity.

On the tenth day, after a feast, all the families take out their family idols to an open space in the village, called 'Mand' and perform a vigorous session of dance accompanied by song.

The dance begins with a slow beat and simple footwork to the accompaniment of Dhol, cymbals and a long flute called 'Pawa'. Their traditional songs centre on the love story of the Hindu God Krishna and his beloved Radha. The Kathiawari-styled white dress and turban in this dance point to their ancestral lineage.

## SCIENCE AND TECHNOLOGY

### Precision Medicine

According to the Precision Medicine Initiative, precision medicine is "an emerging approach for disease treatment and prevention that takes into account individual variability in genes, environment, and lifestyle for each person." This approach will allow doctors and researchers to predict more accurately which treatment and prevention strategies for a particular disease will work in which groups of people. It is in contrast to a one-size-fits-all approach, in which disease treatment and prevention strategies are developed for the average person, with less consideration for the differences between individuals.

Although the term 'precision medicine' is relatively new, the concept has been a part of healthcare for many years. For example, a person who needs a blood transfusion is not given blood from a randomly selected donor; instead, the donor's blood type is matched to the recipient to reduce the risk of complications. Although examples can be found in several areas of medicine, the role of precision medicine in day-to-day healthcare is relatively limited. Researchers hope that this approach will expand to many areas of health and healthcare in coming years.

### Double Asteroid Redirection Test (DART) Mission

The Double Asteroid Redirection Test (DART) mission is directed by NASA to the Johns Hopkins University Applied Physics Laboratory (JHU/APL) with support from NASA centers : the Jet Propulsion Laboratory (JPL), Goddard Space Flight Center (GSFC), and Johnson Space Center (JSC).

DART will be the first demonstration of the kinetic impact technique to change the motion of an asteroid in space. DART is a planetary defense-driven test of one of the technologies for preventing the Earth impact of a hazardous asteroid : the *kinetic impactor*. DART's primary objective is to demonstrate a kinetic impact on a small asteroid. The binary near-Earth asteroid (65803) Didymos is the target for DART. While Didymos' primary body is approximately 800 meters across, its secondary body (or 'moonlet') has a 150-meter size, which is more typical of the size of asteroids that could pose a more common hazard to Earth.

The DART spacecraft will achieve the kinetic impact by deliberately crashing itself into the moonlet at a speed of approximately 6 km/s, with the aid of an onboard camera and sophisticated autonomous navigation software. The collision will change the speed of the moonlet in its orbit



around the main body by a fraction of one percent, enough to be measured using telescopes on Earth.

The DART spacecraft will utilize the NASA Evolutionary Xenon Thruster – Commercial (NEXT-C) solar electric propulsion system as its primary in-space propulsion system. NEXT-C is the next generation system that is based on the Dawn spacecraft propulsion system and was developed at NASA's Glenn Research Center in Cleveland, Ohio. By utilizing electric propulsion, DART is able to gain significant flexibility to the mission timeline and widen the launch window, as well as decrease the cost of the launch vehicle that gets the mission off Earth and into orbit.

NASA's DART spacecraft's launch window range begins in late December 2020 and runs through May 2021. It will intercept Didymos' moonlet in early October 2022, when the Didymos system is within 11 million kilometers of Earth, enabling observations by ground-based telescopes and planetary radar to measure the change in momentum imparted to the moonlet.

### Event Horizon Telescope (EHT)

The Event Horizon Telescope (EHT)—a planet-scale array of eight ground-based radio telescopes forged through international collaboration—was designed to capture images of a black hole. The image reveals the black hole at the centre of Messier 87, a massive galaxy in the nearby Virgo galaxy cluster. This black hole resides 55 million light-years from Earth and has a mass 6.5 billion times that of the Sun. The EHT links telescopes around the globe to form an unprecedented Earth-sized virtual telescope. The EHT offers scientists a new way to study the most extreme objects in the Universe predicted by Einstein's general relativity during the centenary that first confirmed the theory.

Black holes are extraordinary cosmic objects with enormous masses but extremely compact sizes. The presence of these objects affects their environment in extreme ways, warping spacetime and superheating any surrounding material.

Multiple calibration and imaging methods have revealed a ring-like structure with a dark central region the black hole's shadow that persisted over multiple independent EHT observations. The EHT observations use a technique called very-long-baseline interferometry (VLBI) which synchronises telescope facilities around the world and exploits the rotation of our planet to form one huge, Earth-size telescope observing at a wavelength of 1.3 mm. VLBI allows the EHT to achieve an angular resolution of 20 micro-arcseconds.

## ENVIRONMENT BIODIVERSITY AND CLIMATE CHANGE

### Primary Forests

Primary forests are forests of native tree species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed. Primary forests are those that exist in their original condition and are virtually untouched by humans.

Sometimes referred to as old growth forests, these areas can harbour trees that are hundreds, even thousands, of years old.

These old forests really matter as stores of carbon dioxide. Primary forests are ecosystems of great strength and resilience, a kind of super-organism supported by massive old trees that constantly adapt to changes resulting from natural disturbances such as fires, floods or tree falls. At the same time they are fragile, and industrial activity can rapidly change their structure and composition, altering them in ways that are at worst irreversible and at best require decades or even centuries to recover from.

Given their enormous biological productivity, primary forests are essential for many local communities and indigenous people who live in or near them. They are nurturing places that provide shelter and essential resources, including food, medicinal elements and fresh water.

Primary forests are critical to the health of both people and the planet, and their continued degradation and loss threaten our well-being.

### Bhojunda Stromatolite Park

Bhojunda Stromatolite Park is located near Bhojunda village which is about 6 km south-west of Chittaurgarh city in Rajasthan, India. It is spread across 8 acres on either side of the Chittaurgarh-Udaipur state highway. It was declared as a National Geological Monument in 1976 by GSI.

Bhojunda stromatolite park is an exposure inside the Bhagwanpura Limestone of the Lower Vindhyan range. They are formed by blue-green algae which forms a mat by attracting and bonding carbonate particles through their filaments into stratiform, columnar and nodular structures in carbonate rocks. Stromatolites are an indication of the earliest form of life on earth and is formed by a combination of life activity, sediment trapping and binding activity of algae and bacteria. They generally form in shallow water. The site is being maintained and protected by Sheep and Wool authority of Rajasthan.

### Lonar Lake

Lonar lake is a lake of lagoon in Buldhana district of Maharashtra state. It was created due to a meteorite. It is the only major meteorite crater in the basalt floor. About 52,000 years ago, a 2 million ton meteor that plummeted towards Earth, is believed to have hit at this spot in Lonar. The hyper-velocity impact created a 150-metre deep and 1.8-km wide bowl-shaped hole or crater. This is now the site where Lonar Lake, an unusually saline water body, is located. The Lonar Lake is Earth's largest and only salt water lake in basaltic rock.

Lonar Lake has been declared as Wildlife Sanctuary for the conservation and conservation of Lonar lake. There are temples around 1250 years ago. Of these, 15 temples are in reversal. In a research paper published in 2010, the age of the lake is estimated at 570,000 ± 47,000 years. Organizations such as the Smithsonian Institution, United States Geographic Survey in America and the Geological Society of India, Physical Research Laboratory of India have done a lot of research on this lake.



## POLITY AND GOVERNANCE

### Contempt of Court

In common parlance, 'contempt of court' can be understood as an offence of lowering or defying the authority of the court by disobeying its instructions. It's worth noting, however, that the term has been defined in the Act for the very first time in the history of the contempt law. **Section 2(a) of The Contempt of Court Act, 1971**, defines the term to mean 'civil contempt or criminal contempt'. The two although fundamentally different in character and essence can sometimes be very hard to differentiate. While civil contempt is a wrong of private nature that injures the interests of the party that is entitled to benefit from the order so disobeyed, criminal contempt is a misdeed against the society at large where the contemner by his words or actions undermines the authority of the court and brings it into disrepute.

Sections 2(b) and 2(c) of the Contempt Act seek to very meticulously define civil and criminal contempt respectively. Whereas civil contempt is a 'wilful disobedience to any judgement, decree, direction, order, writ or other processes of a Court or wilful breach of an undertaking given to the court', 'criminal contempt' is 'the publication (whether by words, spoken or written, or by signs, or by visible representation, or otherwise) of any matter or the doing of any other act whatsoever which:

- Scandalises or tends to scandalise, or lowers or tends to lower the authority of any court, or
- Prejudices, or interferes or tends to interfere with the due course of any judicial proceeding, or
- Interferes or tends to interfere with or obstructs or tends to obstruct, the administration of justice in any other manner.'

## ECONOMY/FINANCE

### Artpart Specific Fund

SEBI has recently approved an Artpart Specific Fund.

As a Category II Alternative Investment Fund it can raise a capital of up to ₹ 10,000 crore.

Chennai-based Taking off to The Future Investment Management LLP is the sponsor and the investment manager of the fund. This company has a presence in the airport sector.

The fund would receive contributions from banks, corporate, institutional investors, insurance companies, pension funds, high net worth individuals and other investors in India and abroad as permitted under the AIF Regulations. The fund is targeting a minimum capital contribution of ₹ 3,500 crore and a maximum capital contribution of ₹ 7,000 crore. The trustee and the Investment Manager shall have the option, at their discretion, to revise the target Capital commitments, subject to the maximum size of the fund, not exceeding ₹ 10000 crore.

### National Rural Economic Transformation Project (NRETP)

The World Bank will provide a \$ 250-million loan for the National Rural Economic Transformation Project (NRETP). National Rural Economic Transformation Project is a new sub-component under the Deendayal Antyodaya Yojana—National Rural Livelihoods Mission (DAY-NRLM) of the Ministry of Rural Development. NRETP supports enterprise development programmes for rural poor women and youth by creating a platform to access finance including start-up financing options to build their individual and/or collectively owned and managed enterprises. The project also involves developing financial products using digital financial services to help small producer collectives scale-up and engage with the market.

It also supports youth skills development, in coordination with the Deen Dayal Upadhyaya Grameen Kaushalya Yojana. The key focus of the project is to promote women-owned and women-led farm and non-farm enterprises across value chains, enabling them to build businesses that help them access finance, markets and networks; and generate employment.

The \$ 250-million loan from the World Bank has a 5-year grace period and a final maturity of 20 years.

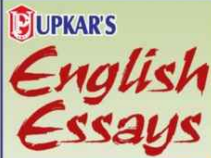
### One Nation One Card

In order to make it easier for citizens to pay for public transport,

Prime Minister Narendra Modi has launched a new initiative called 'One Nation One Card'. With the help of the One Nation One Card, citizens can pay for all types of public transport along with other services. The card is National Common Mobility Card (NCMC) compliant and is powered by RuPay card payment scheme by the National Payments Corporation of India (NPCI).

The card can be used for making payments across all segments including metro, bus, suburban railways, smart city and retail shopping. The mobility card can be issued in the form of debit, credit or prepaid card of a partner bank.

The card is similar to any RuPay debit/credit card, which will be available with more than 25 banks, including the State Bank of India (SBI). The card can be used for making payments across all segments including metro, bus, suburban railways, smart city and retail shopping. The card can also be used for paying at toll plazas and for parking. The card offers cashback on bill payments and more than thousand other offers. A cardholder can also avail 5 per cent cash back at ATMs and 10 per cent cash back at merchant outlets while travelling abroad. It is supported by indigenously developed Automatic Fare Collection Gate 'Swagat' and an Open Loop Automatic Fare Collection System 'Sweekar'. Both 'Swagat' and 'Sweekar' were launched by PM Modi on March 4, 2019.



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## Growing Steps of Research and Development Activities in Environment, Forest and Climate Change Sector : At a Glance

Undoubtedly ! Since long the Ministry of Environment and Forests has been a nodal agency in the Central Government for overseeing the implementation of India's environment, forest policies and programmes. The 'Climate Change' has been added to the Ministry through its nomenclature to the Ministry of Environment, Forest and Climate Change (MoEFCC, GoI).

The 'Forest Survey of India' (FSI)—an organization under the Ministry, is engaged in the assessment of the country's forest resources on regular intervals. Established in 1981 the 'Forest Survey of India' succeeded the 'Pre-Investment Survey of Forest Resources' (PISFR), a project initiated in 1965 by the Government of India with the sponsorship of 'FAO' and 'UNDP'. In its report in 1976, the National Commission on Agriculture (NCA) recommended the creation of a countrywide comprehensive forest resources survey at regular intervals. Consequently, 'PISFR' was reorganized in FSI in 1981.

A landmark report of the 'UN Intergovernmental Panel on Climate Change (IPCC)' was released in Incheon in South Korea on 8th October, 2018. The report says, there is only a dozen years for global warming to be kept to a maximum of 1.5°C, indicates Alarm Bells.

As per the Annual Report 2017-18 of the Ministry of Environment, Forest and Climate Change (MoEFCC, GoI), several unique achievements were obtained during the year. These can be highlighted in brief as :

### Major Achievements and New Directions

**Organizational Set-up/Infrastructure and Functional Activities of the Ministry of Environment, Forest and Climate Change (MoEF&CC, Government of India-GoI)**

- In the Ministry of Environment, Forest and Climate Change

(MoEFCC-Government of India-GoI), the supreme post is of 1-Secretary and under the Secretary, 1-Additional Secretary (Finance Advisor), 1-Additional Secretary (AKM); 1-Additional Secretary (AKJ), 1-Senior Advisor (AS) etc. several posts are working for environment wing's division. The Hq. of the 'MoEFCC, GoI' is located at Indira Environment Bhawan, New Delhi-110003. For public information, the E-mail of the Statistical Advisor Shri M.P. Johnson is : Johnson.mp@nic.in.

- The Ministry (MoEFCC) is guided by the principle of holistic development, while implementing the policies and programmes.

### Facts : At a Glance

#### Research & Development Activities Related to Environment, Forest & Climate Change

- As per the India State Forest Report (ISFR) 2017, the total forest cover area is 21-54% of the total geographical area V/s 33% forest area should be for proper environment in the country. (the grand total of forest area in India-7,08,273 km<sup>2</sup>).
- In India, the total forest area related—1st rank-77,414 km<sup>2</sup> of Madhya Pradesh; II. 66,964 km<sup>2</sup> of Arunachal Pradesh; III. 55,547 km<sup>2</sup> of Chhattisgarh; IV. 51,345 km<sup>2</sup> of Odisha and V. 50,682 km<sup>2</sup> of Maharashtra States.
- **FOREST**—stands for : F-Food; O-Oxygen (O<sub>2</sub>), R-Rains/ Rainfall, E-Environmental Protection, S-Soil Conservation, T-Timber and finally funds.
- In April, 2015, PM Narendra Modi started 'AQI' (Air Quality Index) from 14 cities and now this work is being done in 34 cities in India.
- As per NEP (National Environment Policy) 2006, Section 5.2.8 (IV), a Protocol has been prepared for sound investigation network.

- The ministry is also the nodal agency for the United Nations Environment Programmes (UNEP); South Asia Cooperative Environment Programme (SACEP); ICIMOD, and UNCED as well as CSD, GEF, SAARC and ESCAP for matters pertaining to environment.

- With regard to the climate change, "National Mission for Sustaining the Himalayan Ecosystem" (NMSHE) and "National Mission for Strategic Knowledge on Climate Change" (NMSKCC)—launched under the "National Action Plan for Climate Change" (NAPCC) are under implementation by the Department of Scientific and Technological Development. The Department is poised to make every effort to take India to a much higher level globally in the arena of Science & Technology and thereby contribute to the overall socio-economic empowerment of the society.

- In Agriculture Sector, burning of crop waste-residues is creating air pollution. For its control 'National Green Tribunal' (NGT) with Supreme Court has fixed the punishment of ₹ 2,500 upto 2 Acre land; ₹ 5,000 from 2 to 5 acre land and ₹ 15,000 on above 5 acre land-crop-waste (Parali) burning residues. As per the 'Haryana Pollution Control Department'—Chief Secretary Shrikant Valgarh, the State Government is serious to end parali burning, through punishment to the farmers. National Bio-Agro Centre, Ghaziabad (U.P.) has developed a new technique "Waste De-composer Technique"—a bio-liquid culture, having micro-bacterias, to convert waste residue into manure. Similarly, 'IPL' (Indian Potash Limited) for balanced food, 1%

urea is used i.e., 40 gm urea in 4 litre water solution for wheat straw treatment.

- In the year 2018, Shri Narendra Modi-PM of India has been awarded/honoured in United Nations Environment Programme—UN Environment 'United Nation's Champions of the Earth'—a good indication for proper environment.
- To free from plastic wastes, 'Dehradun Zoo' has adopted 3R<sub>1</sub>—Residue, 3R<sub>2</sub>—Recycle and 3R<sub>3</sub>—Re-use. The Ex-D.G. ICAR, New Delhi Dr. M.S. Swaminathan. Eminent Agro. Scientist has given the message to conserve natural resources "If the protection of Natural Resources is not properly done, then there is nothing right."
- With regard to Environment Technology Publicity, all AIR (All India Radio) Stations are providing information with wide publicity to the legal factors concerning environment and forestry. AIR projects are indicating the success of governmental initiatives in forestry, wildlife conservation and ecological balance. The 'World Environmental Day' (WED) w.e.f. 1972 in Stockholm conference is observed by all the stations on 5th June every year with "Think Eat, Save Reduce our Food Print"—theme so as to create awareness about preservation of environment. The theme of 'WED' on 5th June, 2018 was kept "to finish/close plastic pollution" in the country. Issues of social forestry, preventing land degradation and desertification ozone hole depletion, climate change, water harvesting and noise pollution were also addressed suitably in the programming schedules.
- Statement about Environment by Herskovites Scientist "Environment is the sum total of all the external conditions and the influences on the developmental cycle of biotic elements over the earth's surface" is to be adopted, so as to protect environment. In the atmosphere gases are: 78.03% nitrogen, 21% Oxygen, 0.93% argon, 0.03% CO<sub>2</sub> and 0.01%

hydrogen present. Besides these neon, helium, ozone etc. are important gases, found mostly in upper biosphere.

- Under the New Development Programme "Secure Himalaya Project"—the Centre on October 2, 2017 launched a six-year project to ensure conservation of locally and globally significant biodiversity, land and forest resources in the high Himalayan ecosystem spread over 4 states of India i.e., Jammu Kashmir, Himachal Pradesh, Uttarakhand and Sikkim (NER), so as to secure livelihoods, conservation, sustainable use and restoration of high range as well as specific landscapes and forest resources.

### Conclusion

Based on the Annual Report 2017-18 of the Ministry of Environment, Forest and Climate Change (MoEFCC, GoI), several achievements in Environment, Forest & Climate Change Sectors were accrued during the year; these can safely be concluded in a nutshell as:

- The landmark report by the UN-Intergovernmental Panel on Climate Change (IPCC) was released in Incheon in South Korea on October 8, 2018. As per the report, there is only a dozen years for global warming to be kept to a maximum of 1.5 °C; beyond which even half a degree will significantly worsen the risks of drought, floods, extreme heat and poverty for hundreds of million of people. It indicates that renewable energy would need to supply 70 to 85% of electricity by 2050 to stay within a 1.5 °C limit, compared with about 25% now.
- On burning of crop waste reduces, the 'National Green Tribunal' (NGT) with Supreme Court has issued the punishment to the farmers e.g., ₹ 2,500 upto 2 acre; ₹ 5,000 upto 2 to 5 acre and ₹ 15,000 on more than 5 acre land. The 'Waste De-composer Technique' developed by National Bio-Agro Centre, Ghaziabad (U.P.) is the best solution to free the atmosphere from the burning wastes.

- As per National Air Quality Index (AQI), programme in 34 Cities w.e.f. April, 2015 is indicating a good result on air pollution control. Besides these, other several achievements are:

### Memorable Points : Related to Environment, Forest and Climate Change

- In 2018, PM Shri Narendra Modi has been awarded 'United Nations Champion of the Earth' by UN Environment.
- For proper environmental conditions, the Forest area should be 33% of geographical area (V/s 21.54% in 2017 the forest cover)
- In India, Lakshadweep UT has highest forest cover about 90-33% of its geographical area (as per 2017-SFR), and 'Second' place of Mizoram (86-27% forest cover).
- Arid Forest Research Institute (AFRI) Hq. Jodhpur (Raj.)
- Rain Forest Research Institute (RFRI) Hq. Jorhat (Assam-7 Sisters of India)
- G.B. Pant National Himalayan Environment & Development Institute (GBPNIHE&D) Hq. Kosi, Katarmal, Almora (Uttarakhand)—estd. in 1988.
- On 'World Elephant Day'-12 August, 2017, the First All India Periodic Elephant Census-2017 was started.
- All India Tiger Census-2018 was started—as per Tiger Project/NTCA (National Tiger Conservation Association).

### Objective Questions

- In the year 2018, who (Indian) has been honoured/awarded UN Environment—"United Nations Champion of the Earth" in "United Nations Environmental Programme"?  
(A) PM (India) Shri Narendra Modi  
(B) Dr. M.S. Swaminathan  
(C) Dr. Harsh Vardhan  
(D) None of the above
- As per the 'India State of Forest Report (ISFR) 2017' released by the Union Environment Minister (GoI)—Ministry of Environment & Forests and Climate Change (MoEFCC, GoI), Forest and Tree

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# Prominent Historical Personalities of India



—Danish Bilal

## Bhaskara II or Bhaskaracharya

Bhaskara II was a great mathematician and astronomer who flourished in 12th century India. There was another scholar of the same name in 6th century India. That is why Bhaskara has been referred to as Bhaskara II to distinguish him from the previous one. Bhaskara II was a luminary figure in mathematics and astronomy fields in India as he gave many new and great principles and theories in these fields.

He was born in 1114 AD in South India as he himself mentioned the details of his birth in his works. His father Mahesvara himself was a mathematician and astronomer and he developed his son's interest in these branches of learning. Following footsteps of his father he studied mathematics and astronomy with deep dedication and later went on to become the head of an astronomical observatory at Ujjain. His great contribution to the field of mathematics and astronomy is his book '**Siddhanta Shiromani**' (Crown of Treatises). Composed in Sanskrit language, Siddhanta Shiromani is divided into four parts—*Lilavati*, *Bijaganita*, *Grahaganita* and *Goladhyaya*, having total 1450 verses. These four parts deal with four different mathematical and astronomical sections.

*Lilavati*, the first and most important part of the book comprises 13 chapters, carrying arithmetical terms with definitions, principles, of arithmetical and geometrical progressions, plane geometry etc. The second section *Bijaganita* consists of 12 chapters. The last two sections of Siddhanta Shiromani deal with astronomical mathematics. He defined many astronomical quantities, including the length of the sidereal year in these parts. He also explained solar and lunar eclipses, true and mean longitudes of the planets in these parts.

Bhaskara II is also known for his great discoveries and contribution in calculus and trigonometry branches of mathematics. He propounded the principles of differential calculus and also applied them to solve many astronomical problems and computations. He dedicated his entire life to open new avenues of learning in mathematics and astronomy.

- It is believed his work '*Lilavati*' is named after his daughter.
- Bhaskara II is also known for his principle of 'perpetual motion' which he gave in Siddhanta Shiromani. This principle led to the development of the concept of power technology in the course of time.

## Pandita Ramabai

Pandita Ramabai was a crusader of women's rights and educationist. She is chiefly remembered for her

efforts for women's education and upliftment. Ramabai was born on April 23, 1858 in Karnataka. Her father Anant Shastri Dongara was a Brahmin. She attained profound knowledge of Sanskrit and Indian philosophy though women education was rare in that age Indian society. Ramabai earned the title of 'Pandita' (a learned lady) for her immense knowledge of Indian philosophy and great command over Sanskrit language.

The death of her parents and brother at her early age laid huge impact on her life and she decided to dedicate her life to root out social evils and illiteracy and to work for women's education. She flouted the hollow rules of casteism by marrying Bipin Bihari Medhavi, an outcaste law graduate. After the death of her husband, she settled in Pune, leaving Calcutta (Now Kolkata). In 1883 she went to England as a professor to teach Sanskrit there. She also visited the USA to exchange ideas about education system and women's upliftment. She was very disappointed with many evil practices like caste system, illiteracy, superstitions in that time Hindu society and she always opposed these evils.



Pandita  
Ramabai

In brief she always remained active to eradicate social evils in the society. She expressed her reformative ideas on education, caste system and women's upliftment in many of her books. She passed away on April 5, 1922.

- She founded the Arya Mahila Samaj to promote women education and to stop child marriage.
- She described different aspects of the caste system and women condition in the Indian society in her book '**The High Caste Hindu Woman**'.
- '**Stree Dharma Niti**' (Morals for Women) was another book by Pandita Ramabai.
- She penned down her experiences of the stay in the USA in a book named **United States Chi Lokasthiti Ani Pravasvritta** (Status of Society of United States and travelogue).
- In 1889 she set up 'Sharada Sadan' school in Bombay (now Mumbai) to promote women education. She firmly believed that the objective of women upliftment could be achieved only by educating them.
- She also founded 'Mukti Sadan' in Pune to rehabilitate the people struck by great famine in the region.

## Mangal Pandey

Mangal Pandey was a leading and early figure of the Indian opposition to the British rule. His name became



synonymous with the 1857 Revolt, a historic event which is widely accepted the fore runner of the Indian national movement. It was Mangal Pandey's bravery and martyrdom which triggered the 1857 great revolt.

Mangal Pandey was born on July 19, 1827 in Nagwa village, Ballia (Now in Uttar Pradesh) in a religious Brahman family. In 1849 he joined the British army of Bengal as a soldier. He had been giving his services as a loyal soldier of the 34th Bengal Native Infantry though there was a sense of indignation brewing up among all Indians due to British company's cruelties, unfair policies and oppression on the Indians. But the event which forced Pandey to oppose the British was the introduction of the Enfield rifle in the army. In 1856, the British Company government introduced new and deadly Enfield rifles in place of old-fashioned musket 'Brown Bess'. The loading process of the new rifle involved bringing the cartridge to the mouth and biting off the top paper with mouth. The news that grease used in the new rifle cartridge contained the fat of pig or cow, spread among Indian soldiers like a wildfire. Religious sentiments of Indian soldiers involving Hindu and Muslim soldiers were deeply hurt with the usage of the greased cartridges as cow is extremely respected among Hindus and pig is strictly forbidden for Muslims. Hence, Indian soldiers like Mangal Pandey openly refused to use these cartridges. The British company did not try to pacify the anger of Indian soldiers. Moreover, it took it as an act of insubordination and disloyalty.



Mangal Pandey

Mangal Pandey, a man of bravery and indomitable spirit, vehemently and violently opposed the British Company. He also invoked his fellow soldiers in Barrackpore to revolt against the British on March 29, 1857. The Indian sepoy refused to use the new cartridges. Mangal Pandey got furious and he attacked his British officers.

In the end he was overpowered and sentenced to death on April 8, 1857. The 34 N.I. regiment was disbanded and sepoys guilty of rebellion were punished.

Though Mangal Pandey's resistance was very shortlived, his bravery and martyrdom had huge impact on the anti-British campaign in India. He charged the Indians with new zeal and vigour against the British rule. In brief, he remained to be an inspiring soul for the patriots and nationalist leaders of India during the freedom struggle.

### **Pandit Govind Ballabh Pant**

Pandit Govind Ballabh Pant was one of those freedom fighters who played a key role in building modern India in post independence period after attaining the goal of India's freedom as a patriot and freedom fighter. He was born on September 10, 1887 at Khoont near Almora, Uttarakhand in a Brahmin family. His father Manorath Pant was a government officer. After completing his early education, he joined the Muir College,

Allahabad and completed his graduation with Mathematics, English and Politics. He took a degree in Law in 1909 with the Lumsden gold medal for his top academic performance as a law student.

He was deeply influenced with the articles and speeches of Gokhale, Dadabhai Naoroji and Bankim Chandra. He started his career as a lawyer in Kashipur. Having gained notable success as a lawyer, Pantji joined active politics with a purpose to serve his countrymen and oppose the oppressive policies of the British effectively. He was elected to the Legislative Assembly of the United Provinces of Agra and Oudh. He had to face the British Police brutality for his active participation in the Anit-Simon Commission March in Lucknow. He was also imprisoned for his active participation in the Salt Satyagrah of Mahatma Gandhi. In 1935 he was elected to the Central Legislative Assembly. On the one hand, he actively participated in the public protests against the British government and created awareness and zeal in the Indians to continue and further intensify the fight against the British rule. On the other hand, he raised his voice in the Assembly against the unfair and unjust British policies in an effective way. Being a proficient parliamentarian and debator, he successfully drew the government's attention towards misery and plight of Indians under the British rule in the Assembly.



Pandit Govind Ballabh Pant

In 1937 elections the Congress Party under his leadership got success in the United Provinces and he became the Chief Minister of the United Provinces under the Government of India Act, 1935.

He was again imprisoned during the Quit India Movement. In March 1945, he was released after J.L. Nehru pleaded his release due to his deteriorating health in jail. He again became the Chief Minister of the United Provinces after leading his party to success in 1946 elections for the Provincial Legislatures. He also became the first Chief Minister of Uttar Pradesh after independence in 1947. He was inducted into the Union Cabinet led by Prime Minister Jawaharlal Nehru in 1955 and he remained as part of the Cabinet till his death in 1961. He became the Union Home Minister. He passed away on March 7, 1961.

- Pandit Govind Ballabh Pant along with Pandit Badri Durr Pandey launched a weekly paper called 'Shakti' to highlight the problems of the people of Kumaon region.
- He was honoured with the Bharat Ratna, India's highest civilian honour for his great services to India and his fellow countrymen.
- His son Krishna Chandra Pant was also a seasoned parliamentarian. He had been the defence minister and deputy chairman of the Planning Commission (now defunct).



1. India's current account deficit (CAD) was ..... per cent during April-December 2018.  
(A) 2.6% (B) 2.7%  
(C) 2.8% (D) 2.9%
2. India's current account deficit (CAD) was.....per cent during October-December 2018 (Q3 of 2018-19).  
(A) 2.5% (B) 2.6%  
(C) 2.7% (D) 2.8%
3. Angle Tax is applicable to—  
(A) Listed companies  
(B) Unlisted companies  
(C) Mutual funds of foreign origin  
(D) Foreign institutional investors
4. Minimum Support Price for Minor Forest Produces is declared by—  
(A) Ministry of Environment, Forest and Climate Change  
(B) Ministry of Consumer Affairs  
(C) Ministry of Tribal Affairs  
(D) Commission for Agricultural Costs and Prices
5. Repo rate is .....as per 1st revision of Bi-Monthly Review of Monetary Policy 2019-20.  
(A) 6.00% (B) 6.25%  
(C) 6.50% (D) 7.00%
6. As on April 4, 2019, Reverse Repo rate is—  
(A) 5.50% (B) 5.75%  
(C) 6.00% (D) 6.25%
7. India's exports during 2018-19 were at—  
(A) US \$ 301 billion  
(B) US \$ 321 billion  
(C) US \$ 331 billion  
(D) US \$ 311 billion
8. India's Imports during 2019-20 were at—  
(A) US \$ 507.44 billion  
(B) US \$ 407.44 billion  
(C) US \$ 475.44 billion  
(D) US \$ 547.44 billion
9. India's Exports during 2018-19 were at—  
(A) ₹ 25-14 lakh crore  
(B) ₹ 24-14 lakh crore  
(C) ₹ 23-14 lakh crore  
(D) ₹ 20-44 lakh crore
10. India's Imports during 2018-19 were at—  
(A) ₹ 30-48 lakh crore  
(B) ₹ 33-58 lakh crore  
(C) ₹ 34-68 lakh crore  
(D) ₹ 35-48 lakh crore
11. Which of the following statements is correct in respect of India's foreign trade ?  
(A) India's exports registered a positive growth of 9.06 per cent in US dollar terms in 2018-19  
(B) India's imports registered a positive growth of 8.99 per cent in US dollar terms in 2018-19  
(C) Trade deficit during 2018-19 reached at US \$ 176.42 billion  
(D) All of the above
12. In rupee terms India's exports increased by .....during 2018-19.  
(A) 18.29% (B) 18.88 %  
(C) 5.62 % (D) 11.22 %
13. In rupee terms India's imports increased by.....during 2018-19.  
(A) 18.23% (B) 5.23%  
(C) 6.23% (D) 10.26%
14. Trade deficit during 2018-19 reached at the level of—  
(A) US \$ 142.23 billion  
(B) US \$ 80.23 billion  
(C) US \$ 176.42 billion  
(D) US \$ 186.23 billion
15. ....is the third largest solar market in the world after China and US.  
(A) Germany (B) UK  
(C) India (D) Brazil
16. As per WTO's data Value of India's exports in 2018 was—  
(A) US \$ 326 billion  
(B) US \$ 301 billion  
(C) US \$ 296 billion  
(D) US \$ 276 billion
17. As per WTO data value of India's imports in 2018 was—  
(A) US \$ 496 billion  
(B) US \$ 507 billion  
(C) US \$ 511 billion  
(D) US \$ 528 billion
18. As per WTO data India's share in world exports in 2018 was—  
(A) 1.5% (B) 1.6%  
(C) 1.7% (D) 1.8%
19. As per WTO data India's share in world imports in 2018 was—  
(A) 2.3% (B) 2.4%  
(C) 2.5% (D) 2.6%
20. According to World Trade Organisation Data value of India's exports of commercial services in 2018 was—  
(A) US \$ 206 billion  
(B) US \$ 216 billion  
(C) US \$ 230 billion  
(D) US \$ 240 billion
21. According to World Trade Organisation Data value of India's imports of commercial services in 2018 was—  
(A) US \$ 195 billion  
(B) US \$ 180 billion  
(C) US \$ 176 billion  
(D) US \$ 152 billion
22. Which country of the world has been given the title of the world's most miserable economy in Bloomberg's Misery Index, 2019 ?  
(A) Argentina  
(B) Venezuela  
(C) South Africa  
(D) North Korea
23. Bloomberg's Misery Index is calculated as the sum of country's—  
(A) Inflation Rate and Unemployment Rate  
(B) Inflation Rate and Savings Rate  
(C) Unemployment Rate and Labour Force Participation Rate  
(D) Unemployment rate and inverse of Investment rate

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1. Which of the following statements is/are correct about Electoral bonds ?

- These bonds can be bought by any person or organization or a firm or a company at a bank in denominations ranging from ₹ 1,000 to ₹ 1 crore.
- These bonds are given to a political party, which can exchange them for cash.
- These bonds do not carry the name of the donor and are exempted from tax.
- The move is being criticised for allegedly legalising large anonymous donations that can potentially lead to businesses and foreign companies gaining influence over the elections.

Correct code is—

- Only I is correct
- Only II and III are correct
- Only IV is correct
- I, II, III and IV are correct

2. With the successful testing of 'Anti-satellite missile' on March 27, 2019, India enters into 'super four' league; which are other three countries of the world in this group ?

- United States of America
- Russia
- China
- Japan
- Germany

Correct code is—

- I, II and III only
- I, II, III and IV only
- I, II, III, IV and V only
- I and II only

3. Which of the following BSE Sensex stocks is not a part of \$ 100 billion club ?

- Reliance Industries
- ITC
- TCS
- HDFC Bank

4. Infosys, a software giant, was associated with which Grand Slam tennis tournament ?

- Australian Open
- French Open
- Wimbledon
- US Open

5. Consider the following statements regarding India's Agricultural exports :

- Agricultural Export Policy, 2018 aims to double agricultural exports to \$ 60 billion by 2022.
- Transport and marketing Assistance scheme is one of the key initiatives to increase the agricultural exports.

- Only I is correct
- Only II is correct
- I and II both are correct
- Neither I nor II is correct

6. Consider the Assertion (A) and Reason (R) given below and choose the correct code :

**Assertion (A) :** According to WTO's report 2019, growth in global trade volumes is likely to slow down to 2-6 per cent in 2019 compared to 3 per cent in 2018.

**Reason (R) :** World witnessed rising trade tensions between major economic powers and increased economic uncertainty during 2018 and 2019.

Correct code is—

- Assertion (A) and Reason (R) both are correct and (R) is the correct explanation of Assertion (A)
- Assertion (A) and Reason (R) both are correct and R is not the correct explanation of Assertion (A)
- Assertion (A) is correct but Reason (R) is incorrect
- Assertion (A) is incorrect and Reason (R) is correct

7. In a first, certain private sector specialists have been selected in April, 2019 for appointment as Joint Secretaries in Central government's departments. These are :

- Amber Dubey, Arun Goel, and Rajeev Saxena.

- Sujit Kumar Bajpayee, Saurabh Mishra, and Dinesh Dayanand Jagdale.

- Suman Prasad Singh, Bhushan Kumar, and Kokoli Ghosh.

- Only I and II
- Only II and III
- Only III
- I, II and III

8. Which of the following statements is incorrect about India's external sector's performance in 2018-19 ?

- India was the net importer of steel during 2018-19, the first time in the last three years.
- India's trade deficit against China declined by US \$ 10 billion in 2018-19.
- India's finished steel exports fell by 34 per cent in 2018-19 to 6.36 million tonnes
- India's finished steel imports increased by 4.7 per cent to 7.84 million tonnes in 2018-19.

Correct code is—

- Only II
- Only I
- I, II, III and IV all
- Only I, III and IV

9. Consider the following statements and choose the correct code given below :

- The Minimum Support Price (MSP) for Minor Forest Produce (MFP) scheme was started by the central government in 2013 to ensure fair and remunerative prices to MFP gatherers.
- Ministry of Tribal Affairs is the final authority over the list of MFPs covered under the scheme.
- As on April 1, 2019, 49 MFPs are under the MSP scheme.

Correct code is—

- Only I is correct
- I and III are correct only
- Only II and III are correct
- I, II and III all are correct

10. Which of the following statements is correct about National Rural Economic Transformation Project (NRETP)?  
 (A) It is IBRD (World Bank) funded project  
 (B) It is being implemented under Deendayal Antyodaya Yojana-National Rural Livelihood Mission (DAY-NRLM)  
 (C) It is a sub component of MGNREGA  
 (D) Both (A) and (B)
11. National Survey on 'Extent and Pattern of Substance Use', released by the Ministry of Social Justice and Empowerment on February 18, 2019, shows :  
 I. That Prevalence of opioid use in India is three times the global average.  
 II. The most common opioid is heroin.  
 III. The current use of heroin is 1-14%, followed by pharmaceutical opioids (0-96%) and opium (0-52%)  
 IV. Uttar Pradesh is the most affected state by drug abuse followed by Punjab and Haryana  
 Correct code is—  
 (A) Only III and IV  
 (B) Only I and II  
 (C) Only I, II and III  
 (D) I, II, III and IV
12. Which of the following statements is correct about National Financial Reporting Authority (NFRA)?  
 I. NFRA can make auditors accountable.  
 II. It has powers similar to civil courts.  
 III. It can levy penalties against auditing firms.  
 IV. It can black list auditing firms and auditing professionals.  
 Correct code is—  
 (A) Only I and II  
 (B) Only II and III  
 (C) Only I, II and III  
 (D) I, II, III and IV
13. Inflation rate is highest in the world in 2019 in which country?  
 (A) Venezuela  
 (B) Russian Federation  
 (C) South Africa  
 (D) Argentina
14. After Pulwama terrorist attack in February 2019, Government of India took following decisions against Pakistan.  
 I. GoI withdrew Most Favoured Nation status granted to Pakistan.  
 II. Government of India has suspended the trade across the Line of Control (LoC) with Pakistan from April 19, 2019.  
 Correct code is—  
 (A) Only I  
 (B) Only II  
 (C) Both I and II  
 (D) Neither I nor II
15. California almonds were in the news in March-April 2019 because of following reasons.  
 I. California almonds are known worldwide for their high nutritional value.  
 II. The almonds produced in California (US) have been regularly finding their way through LOC trade.  
 III. These were being used in cross-Line of control trade between India and Pakistan as a mode to earn profit through under-invoicing.  
 IV. Profit earned in the trade of California almonds was funneled to terrorists and separatists in Jammu and Kashmir.  
 Correct code is—  
 (A) Only I  
 (B) Only II and IV  
 (C) Only I, II and III  
 (D) I, II, III and IV
16. Notre-Dame Cathedral, a masterpiece building of twelfth century was hugely damaged by a fire in April 2019. It is situated in—  
 (A) Paris (France)  
 (B) Rome (Italy)  
 (C) Athens (Greece)  
 (D) Moscow (Russia)
17. Commission for Agricultural Costs and Prices is mandated to advise on the price policy for certain crops. These include :  
 I. Seven cereal crops  
 II. Five pulse crops  
 III. Seven oilseeds crops  
 IV. Copra, cotton, raw jute, and sugarcane.  
 Correct code is—  
 (A) Only I  
 (B) Only I and II  
 (C) Only I, II and III  
 (D) I, II, III and IV
18. Consider the List-I (Innovative ideas of public participation in Mid-Day meal programme) and List-II (State) and choose the correct code given below :  
**List-I**  
 (a) Tithi Bhojan  
 (b) Samarpit Bhojan  
 (c) Utsav Bhoj  
 (d) Dham  
**List-II**  
 (1) Rajasthan  
 (2) Himachal Pradesh  
 (3) Gujarat  
 (4) Assam  
 Correct code is—  

	(a)	(b)	(c)	(d)
(A)	3	4	1	2
(B)	4	3	1	2
(C)	1	2	3	4
(D)	4	3	2	1
19. Which of the following is odd one out?  
 (A) SAKSHAM  
 (B) PAHAL  
 (C) PRAGATI  
 (D) ISHAN-UDAY
20. Which of the following schemes/programmes are of energy sector?  
 I. DDUGJY  
 II. SAUBHAGYA  
 III. UDAY  
 IV. PMUY  
 Correct code is—  
 (A) I, II, III and IV  
 (B) Only II and IV  
 (C) Only II  
 (D) Only I, III and IV
21. Which of the projects have been initiated for the protection of wildlife?  
 I. Project Tiger  
 II. Project Elephant  
 III. Project Great Indian Bustard  
 IV. UNDP Sea Turtle Project  
 V. Crocodile Conservation Project  
 Correct code is—  
 (A) Only I, II and III  
 (B) Only II, III and IV  
 (C) Only III, IV and V  
 (D) I, II, III, IV and V



22. Which of the following pairs is not matched correctly?

(A) **Basel Convention**—The control of Trans boundary Movements of Hazardous Waste and their disposal

(B) **Minimata Convention**—Safe disposal of Lead and its compounds

(C) **Rotterdam Convention**—Prior informed consent procedure for certain Hazardous Chemicals and Pesticides in International Trade

(D) **Stockholm Convention**—Persistent Organic Pollutant

23. Which of the following statements is incorrect about 'Sowa-Rigpa'?

(A) It is among the oldest surviving health traditions of the world with a living history of more than 2500 years

(B) It has been in vogue and practiced in Leh and Laddakh

(C) It has its roots in aborigines of Andaman and Nicobar Islands

(D) It is explained in terms of the body and mind as the locus of treatment

24. Which of the following pairs is /are matched correctly?

I. **National Institute of Ayurveda**—Jaipur

II. **National Institute of Unani Medicine**—Aligarh

III. **National Institute of Siddha**—Chennai

IV. **National Institute of Homeopathy**—Kolkata

Correct code is—

(A) I, III and IV only

(B) I, II, III and IV

(C) II and III only

(D) Only II

25. The Beige Book, an economic tracker, is used by the—

(A) US Federal Reserve

(B) Bank of England

(C) RBI

(D) Bank of Japan

26. What is 'Tankan'?

(A) Stock Market Index

(B) Economic Survey

(C) Tax Treaty

(D) Trade Agreement

27. If the Purchasing Managers' Index number is below 50, it indicates—

(A) Inflation is on downward trend

(B) Inflation is on upward trend

(C) Growing optimism

(D) Deteriorating Economic Conditions

28. If a country's median income is \$ 5000 per annum, it means that

(A) The average income is \$ 5000

(B) The highest income is \$ 5000

(C) Most number of citizens earn \$ 5000

(D) The midpoint of all the incomes earned is \$ 5000

29. It is estimated that the commercial banks, especially the Public Sector Banks, have written off ₹ 7 trillion worth of bad loans during the last ten years. What is the implication of this exercise?

I. Liabilities of the bank becomes higher than its assets.

II. After a write off, the bank can continue with its recovery efforts

III. Since the balance sheet is cleaned up, there is very little incentive for the bank to pursue the defaulter.

IV. Identities of the beneficiaries of the write-offs are not disclosed

Correct code is—

(A) Only I and II

(B) Only III and IV

(C) Only I, II and III

(D) I, II, III and IV

30. Which of the following statements is/are correct about the massive written off bad loans by the commercial banks in India?

(A) Since the identities of the beneficiaries of the write-offs are not revealed, so it is a classic case of crony capitalism

(B) It happens under a closed nexus among big businesses senior, bureaucrats and politicians in the power

(C) Banks are recapitalized by the government from budgetary resources post write-offs of bad loans, so it is a massive public subsidization of private gains

(D) All of the above

31. Consider the List-I and List-II and choose the correct code given below:

#### List-I

(Institution)

(a) Confederation of Indian Industry

(b) Life Insurance Corporation of India

(c) National Legal Services Authority

#### List-II

(Head)

(d) NASSCOM

1. M.R. Kumar

2. Keshav Muruges

3. S.A. Babde

4. Vikram Kriloskar

Correct code is—

(a) (b) (c) (d)

(A) 4 1 3 2

(B) 1 4 3 2

(C) 1 2 3 4

(D) 4 3 2 1

32. Which of the following pairs is not matched correctly?

(A) **Order of St. Andrew the Apostle**—Prime Minister (India) Narendra Modi

(B) **Grand Order of the King of Tomislav**—President of India Ram Nath Kovind

(C) **Zayed Medal**—Prime Minister (Pakistan) Imran Khan

(D) **Nishan-e-Pakistan**—Prime Minister (Malaysia) Mahathir Mohamad

33. Which of the following statements is correct about 'gig economy'?

(A) A gig economy is a work environment where organizations hire temporary workers or freelancers instead of full-time long-term employees

(B) Companies provide temporary positions to workers and the latter reach independent, short-term contracts with them

(C) It is useful where workforce is highly mobile and work can be done from anywhere, anytime

(D) All of the above

34. Which of the following companies/start-ups is/are the examples of 'gig economy'?

I. Ola

II. Uber

III. Zomato

IV. Swiggy

Correct code is—

(A) Only I and II

(B) Only III and IV

(C) I, II, III and IV all

(D) None of the above

35. Which of the following statements is/are correct about Pradhan Mantri Jan-Dhan-Yojana ?

- The total balance in the Jan Dhan accounts was at ₹ 97,665-66 crore as on April 3, 2019.
- The total number of Jan Dhan accounts have crossed 35-39 crore as on April 3, 2019.
- The accident insurance cover is ₹ 2 lakh for new accounts opened after August 28, 2018.
- The overdraft limit per account is ₹ 10,000.

Correct code is—

- Only I and II
- Only III and IV
- I, II, III and IV
- Only III

36. Consider the following statements about the Pradhan Mantri Jan Dhan Yojana and choose correct code given below :

- The focus of the scheme is on accounts from 'every household' to 'every unbanked'.
  - The PMJDY envisages channelling all government benefits to the beneficiary accounts and pushing the Direct Benefit Transfer (DBT) scheme of the central government.
- Only I is correct
  - Only II is correct
  - I and II both are correct
  - Neither I nor II is correct

37. Consider the List-I (Committee) and List-II (Chairperson/Head) and choose the correct code given below :

**List-I**

- Digital Payments and Financial inclusion through Fintech
- Transformative Mobility
- Offshore rupee Market
- Mediation panel on Ram Janm Bhumi Babri-Masjid case

**List-II**

- Amitabh Kant
- Nandan Nilekani
- Justice Kalifullah
- Usha Thorat

Correct code is—

- |     | (a) | (b) | (c) | (d) |
|-----|-----|-----|-----|-----|
| (A) | 2   | 1   | 4   | 3   |
| (B) | 4   | 3   | 2   | 1   |
| (C) | 1   | 2   | 3   | 4   |
| (D) | 1   | 2   | 4   | 3   |

38. Which of the following statements is correct about the Lokpal ?

- The Chairperson and members of Lokpal shall hold office for term of six years or till they reach 70 years of age
- The Chairperson and members of Lokpal shall hold office for term of five years or till they reach 70 years of age
- The Chairperson and members of Lokpal shall hold office for term of five years or till they reach 75 years of age
- The Chairperson and members of Lokpal shall hold office for term of five years or till they reach 75 years of age

39. Which of the following facts are correct about the Second National Annual Rural Sanitation Survey (NARSS 2018-19) ?

- The NARSS 2018-19 is Third Party survey conducted by IPE Global in a joint venture with Hindustan Thompson Ltd. Represented by Kantar Public under the world bank supported project.
- About 93-1% of rural Indian households have access to toilets and 96-5% of these toilets are in constant use.
- About 90-7% villages of the country are open defecation free villages.
- The countrywide coverage in rural sanitation is about 98%.

Correct code is—

- Only I
- Only II, III and IV
- Only III and IV
- I, II, III and IV

40. As per World Trade Organisation's 'Agreement on Agriculture' which type of subsidy has no mention in this agreement ?

- Green Subsidies
- Yellow Subsidies
- Red Subsidies
- Amber Subsidies

## Answers with Hints

- (D) 2. (A) 3. (B)
- (B) Infosys announced a three year technology partnership with Roland-Garros, hosts of the French Open. The deal works towards providing fans, players and coaches, solutions in artificial intelligence, big data analytics, mobility as well as virtual and augmented reality.
- (C) 6. (A) 7. (D) 8. (C) 9. (D) 10. (D) 11. (D) 12. (D) 13. (A) 14. (C) 15. (D)
- (A) Notre-Dame de Paris; meaning 'Our Lady of Paris'), is a medieval Catholic Cathedral on the Île de la Cité in the 4th arrondissement of Paris, France. The Cathedral is consecrated to the Virgin Mary and considered to be one of the finest examples of French Gothic architecture. Its innovative use of the rib vault and flying buttress, its enormous and colourful rose windows, and the naturalism and abundance of its sculptural decoration set it apart from the earlier Romanesque style. On 15 April, 2019, a fire broke out beneath the roof of Notre-Dame Cathedral, Paris. Its interior, upper walls, and windows had been severely damaged.
- (D) MSPs are announced by the GoI, on the recommendations of CACP, for seven cereals (paddy, wheat, Jwar, bajra, maize, ragi & barley); five pulse crops (gram, tur, urad, moong, and lentil); seven oilseeds (groundnut, sunflower seed, soyabean, rapeseed/mustard, safflower, nigerseed and sesamum); Copra, cotton, raw jute. Fair and Remunerated Price is announced for sugarcane.
- (A) *Tithi Bhojan* (Gujarat) is an innovative concept under Mid-Day-Meal programme to ensure greater public participation. It is known by *Samarpit Bhojan* in Assam, *Dham* in Himachal Pradesh, *Sneh Bhojan* in Maharashtra, *Shaagagi Navau Neevu* in Karnataka, *Anna Dhanam* in Puducherry, *Priti Bhoj* in Punjab and *Utsav Bhoj* in Rajasthan.

Continued on Page 117

# Important Objective Questions on National Income Accounting

1. Base year for the estimation of national income is—

(A) 2010-11  
(B) 2011-12  
(C) 2012-13  
(D) 2013-14

2. Methodology of estimation of national income in India changed from the year—

(A) 2012-13  
(B) 2013-14  
(C) 2014-15  
(D) 2015-16

3. The current national income accounting format is the System of National Accounting (SNA), prepared by—

(A) The United Nations  
(B) The International Monetary Fund  
(C) World Bank  
(D) Organisation for Economic Cooperation and Development (OECD) and European Community

4. Consider the following statements and choose the correct code given below :

I. The current national income accounting format is the System of National Accounting (SNA).

II. SNA has been prepared by the United Nations and ratified by the IMF, World Bank, OECD and EC.

(A) Only I is correct  
(B) Only II is correct  
(C) Both I and II are correct  
(D) Neither I nor II is correct

5. Which of the following statements is correct about the estimation of national income in India?

(A) Gross Domestic Product (GDP) at Market Price is estimated now  
(B) Gross Domestic Product (GDP) at Factor Cost is estimated now

(C) Gross Domestic Product (GDP) at Basic Price is estimated now

(D) Gross Domestic Product (GDP) at Real Price is estimated now

6. Which of the following is the correct formula used for the estimation of Gross Domestic Product at Market Price?

(A)  $GDP \text{ at MP} = GVA \text{ at Base Prices} + \text{Product Taxes} - \text{Product Subsidies}$   
(B)  $GDP \text{ at MP} = GVA \text{ at MP} + \text{Product Taxes} - \text{Product Subsidies}$   
(C)  $GDP \text{ at MP} = GVA \text{ at Base Prices} + \text{Production Taxes} - \text{Production Subsidies}$   
(D)  $GDP \text{ at MP} = GVA \text{ at Base Prices} - \text{Product Taxes} + \text{Product Subsidies}$

7. Which of the following is/are the part of Gross Value Added at Basic Prices?

I. Compensation of Employees (CE)  
II. Operating Surpluses (OS)  
III. Mixed Income (MI) of self-employed people  
IV. Consumption of Fixed Capital (CFC)  
V. Production Taxes Less Subsidies

Correct code is—

(A) Only I, II and III  
(B) Only I and II  
(C) Only II, III and V  
(D) I, II, III, IV and V

8. Which of the following is not a production tax?

(A) Registration fees  
(B) Land revenue  
(C) Import Duties  
(D) Stamp duties

9. Which of the following is/are Product Tax?

I. Goods and Services Tax  
II. Excise Duties  
III. Customs Duties  
IV. Sales Tax

Correct code is—

(A) Only I, II and III  
(B) Only I, III and IV  
(C) Only II, III and IV  
(D) I, II, III and IV

10. Consider the following statements about production taxes and choose the correct code given below :

I. Production taxes are paid by the producer independent of the quantity of production.

II. Production tax is not per unit tax imposed on a commodity. Rather it is a general tax

(A) Only I is correct  
(B) Only II is correct  
(C) Both I and II are correct  
(D) Neither I nor II is correct

11. Consider the following statements about product taxes and choose the correct code given below :

I. Production taxes are paid by the producer and they are dependent on the quantity of production.

II. Production tax is per unit tax imposed on a commodity.

Correct code is—

(A) Only I is correct  
(B) Only II is correct  
(C) Both I and II are correct  
(D) Neither I nor II is correct

12. In simple words which of the following measures is termed as the National Income of a country?

(A) Net National Product at Factor Cost (NNP at FC)  
(B) Net National Product at Market Price (NNP at MP)  
(C) Gross National Income at Factor Cost (GNI at FC)  
(D) Net Domestic Product at Market Price (NDP at MP)

13. Which of the following is the correct measurement of National Income ?  
 (A) NNP at market prices + (Indirect taxes – Subsidies)  
 (B) NNP at market prices – (Indirect taxes – Subsidies)  
 (C) NNP at market prices – (direct taxes – Subsidies)  
 (D) NNP at market prices – (Indirect taxes + Subsidies)
14. Which of the following is the correct measurement of National Disposable Income ?  
 (A) National Disposable Income = Gross National Product at market prices + Other current transfers from the rest of the world  
 (B) National Disposable Income = Net Domestic Product at market prices + Other current transfers from the rest of the world  
 (C) National Disposable Income = Net National Product at market prices + Other current transfers from the rest of the world  
 (D) National Disposable Income = Gross National Product at Factor Cost + Other current transfers from the rest of the world
15. Estimation of national income in India is done by—  
 (A) Reserve Bank of India  
 (B) Office of Economic Adviser, Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, GoI  
 (C) Central Statistics Office, Ministry of Statistics and Programme Implementation, GoI  
 (D) Chief Economic Advisor, GoI
16. As per the Second Advanced Estimates of National Income for the year 2018-19, value of which of the following estimates is highest ?  
 (A) Gross Domestic Product at Constant Prices (Base year 2011-12)  
 (B) Gross National Income at Constant Prices (Base year 2011-12)  
 (C) Gross Value Added at Basic Prices at Constant Prices (Base year 2011-12)  
 (D) Net National Income at Constant Prices (Base year 2011-12)

17. Which of the following is regarded as a better measurement of economic development ?  
 (A) National Income  
 (B) National Disposable Income  
 (C) Per Capita Income  
 (D) Private Disposable Income

### Answers

1. (B) 2. (C) 3. (A) 4. (C) 5. (A)  
 6. (A) 7. (D) 8. (C) 9. (D) 10. (C)  
 11. (C) 12. (A) 13. (B) 14. (C) 15. (C)  
 16. (A) 17. (C)

### Continued from Page 108

- cover of the country's area has increased by..... sq. km (1% in 2017), as compared to assessment of 2015.  
 (A) 7,021 km<sup>2</sup>  
 (B) 8,021 km<sup>2</sup>  
 (C) 9,021 km<sup>2</sup>  
 (D) None of the above
3. In India, the total forest cover : 2017 was..... per cent (7,08,273 km<sup>2</sup>) of the geographical area.  
 (A) 19.00 (B) 20.00  
 (C) 21.54 (D) 25.00
4. 'G.B. Pant National Himalayan Environment & Development Institute (GBPNIE&D), Hq. Kosi, Katarmal, Almora (Uttarakhand), was established in the year..... (August).  
 (A) 1980 (B) 1982  
 (C) 1985 (D) 1988
5. 'Arid Forest Research Institute' (AFRI) is located at ..... in Rajasthan State.  
 (A) Jodhpur (B) Jaipur  
 (C) Bikaner (D) Bharatpur
6. In NER (North Eastern Region-7) Sisters of India, the Rain Forest Research Institute (RFRI) is located at—  
 (A) Jorhat (Assam)  
 (B) Barapani (Meghalaya)  
 (C) Dirang (Arunachal Pradesh)  
 (D) Gangtok (Sikkim-Called as Organic Farming State)

### Answers

1. (A) 2. (B) 3. (C) 4. (D) 5. (A)  
 6. (A)

### Continued from Page 115

19. (B) PAHAL (Pratyaksh Hansthantrit Labh) is a scheme of Direct Benefit Transfer of LPG (DBTL) subsidy, while SAKSHAM is a scholarship scheme for differently-abled children; PRAGATI is a scholarship scheme for girls students; and Ishan Uday is a special scholarship scheme for students of North East region.
20. (A) DDUGJY — Deendayal Upadhyaya Gram Jyoti Yojana; SAUBHAGYA-Sahaj Bijali Har Ghar Yojana; UDAY — Ujjwal DISCOM Assurance Yojana; PMUY — Pradhan Mantri Ujjwala Yojana.
21. (D)
22. (B) Minamata Convention is on the development of a global legally binding instrument on Mercury.
23. (C) 24. (A)
25. (A) It is the summary of comments on Current Economic Condition of the US. It is published by the Federal Reserve Board eight times a year. The name Beige Book originates from the colour of the cover page.
26. (B) It is a quarterly poll of business confidence reported by the Bank of Japan.
27. (D) PMI is economic indicator derived from the monthly surveys of private companies.
28. (D) 29. (D) 30. (D) 31. (A)
32. (C) Zayed Medal highest civilian award of UAE. It has been conferred upon Prime Minister Narendra Modi.
33. (C) 34. (C) 35. (C) 36. (C) 37. (A)
38. (C) 39. (D)
40. (B) Subsidies have been classified under three categories : **Red subsidies**-Subsidies with high trade-distorting effects, such as export subsidies, and those which favour the use of domestic goods over imported goods; **Green Subsidies**-Subsidies that are not specific to an enterprise or industry or a group of industries or industries are not actionable; **Amber subsidies**-Subsidies that are neither red nor green belong to Amber category.



(Held on 8-7-2018)

## Visual Arts

## Paper-II

- Raja Ravi Verma's Oleographs are considered as—  
(A) Expressionistic style  
(B) Bazar style  
(C) European style  
(D) All of the above
- Which are the relief printing processes?  
(A) Planography and Serigraphy  
(B) Lithography and wood cut  
(C) Aquatint and Dry point  
(D) Lithography, Dry point and wood cut
- Brayer is also known as—  
(A) Soft Ground  
(B) Block of wood  
(C) Rubber Roller  
(D) Squeeze
- 'Construction - I' is the creation of—  
(A) Renoir  
(B) Picasso  
(C) Jagdish Dey  
(D) I. Swaminathan
- The print 'Five faces' is made by:  
(A) Bishan Kumar Bharadwaj  
(B) Subha Gosh  
(C) Shukla Sawant  
(D) Moti Zharotia
- Raja Ravi Verma's prints are called—  
(A) Serigraphs  
(B) Lithographs  
(C) Oleographs  
(D) Collographs
- In silk screen printing what makes the surface photosensitive?  
(A) Potassium permanganate  
(B) Potassium Dichromate  
(C) Sodium Hydrochloride  
(D) Nitric Acid
- During what period lithography printing start in India?  
(A) 1825-1830 (B) 1830-1860  
(C) 1890-1905 (D) 1920-1930
- The Royal Academy, London was Founded by—  
(A) Sir Joshua Reynolds  
(B) David Annesley  
(C) Francis Bacon  
(D) Michael Ayrton
- Name the Author of the book entitled, "The Non-Objective World".  
(A) Paule Klee  
(B) Moholy Nagy  
(C) Robert Motherwell  
(D) Kajimir Malvich
- Who wrote the book, "Kangra Painting on Love"?  
(A) O. C. Ganguly  
(B) W. G. Archer  
(C) M. S. Randhawa  
(D) A. K. Coomaraswamy
- The painting entitled, 'Ankuran' is painted by whom?  
(A) M. F. Husain  
(B) S. H. Raza  
(C) F. N. Souza  
(D) K. K. Habber
- Which of the miniature school have largely produced painting on 'Hunting' theme?  
(A) Kishangarh School  
(B) Kota school  
(C) Kangra school  
(D) Basoli school
- The first international exhibition of Abstract art was held in the year of—  
(A) 1932 AD New York  
(B) 1930 AD Paris  
(C) 1940 AD Weimer  
(D) 1942 AD Dublin
- Name the place where an exhibition on 'New Tantra' theme was organized during Bharat Mahotsava (1985-86).  
(A) Moscow (B) Los Angeles  
(C) London (D) Paris
- The famous international exhibition of Modern art known as 'ARMORY SHOW' was organized by:  
(A) Mark Rothko and Arshile Gorky  
(B) Walt Kuhn and Arthur B. Davies  
(C) J. Pollock and De Kooning  
(D) Franz Kline and Mark Tobey
- Generic term to describe a wide range of typeface designs with Serif forms:  
(A) Roman (B) Gothic  
(C) Uncials (D) Pseudo Serif
- The Iconic symbol of "Apple Computers Inc." designed by:  
(A) Steve Jobs  
(B) Steve Wazniak  
(C) Isaac Newton  
(D) Rob Janoff
- Name the typographer who admonished "Letters are not pictures but signs for sounds".  
(A) John Baskerville  
(B) Charlie Hebdoo  
(C) Eric Gill  
(D) Federic Gony
- Who experimented with the photographic technique of 'Solarization' from the mid-1920's?  
(A) Man Ray  
(B) Louis Daguerre  
(C) W. Henry Fox Talbot  
(D) Johann Heinrich Schulze
- Initial letter of the first word in a text set in larger size, extends into the lines of type below is referred as—

- (A) Descender  
(B) Drop Cap  
(C) Small Capitals  
(D) Grotesque
22. 'Polish school of Posters' emerged historically as a new and creative branch of contemporary art—  
(A) After World War - II  
(B) After World War - I  
(C) At the end of Cold war  
(D) After the defeat of the 'Spanish Armada'
23. The first fully - fledged all - photographic news magazine in the United States was—  
(A) Harper's Bazaar  
(B) Shutterbug  
(C) Life  
(D) Fortune
24. 'Italic characters' with extravagant Calli-graphic flourishes are known as—  
(A) Rockwell characters  
(B) Swash characters  
(C) Logotype  
(D) Asymmetric characters
25. Who is the author of the book 'Art and Visual Culture in India' ?  
(A) Geeta Kapoor  
(B) Anish Kapoor  
(C) Saryu Doshi  
(D) Gayatri Sinha
26. Which of the following temple represents to the fully evolved Kalinga style Temple Architecture ?  
(A) Parasuramesvara Temple  
(B) Raja Rani Temple  
(C) Linga Raj Temple  
(D) Sun Temple of Konark
27. Who was the Chief Architect of Humayun's Tomb ?  
(A) Mirak Mirza Ghiyas  
(B) Ustad Ahmad  
(C) Mir Abdul Karim  
(D) Ustad Isa Shirazi
28. Name the European painter who is known for painting elongated shadows, empty roads and arcades in mysterious way—  
(A) Edvard Munch  
(B) Edward Hopper
- (C) Giorgio Chirico  
(D) Alberto Savinio
29. Name the art critique who spoke about 'significant form' in aesthetic—  
(A) Clive Bell  
(B) Roger Fry  
(C) I. A. Richards  
(D) Herbert Read
30. Tala Mana is associated with—  
(A) Iconography  
(B) Music  
(C) Dance  
(D) Drama
31. Nainsukha is famous painter of Pahari painting, mainly associated with—  
(A) Basohli (B) Jammu  
(C) Guler (D) Jasrota
32. From following, who is known for Geometrical Abstraction ?  
(A) Kazimir Malevich  
(B) Wassily Kandinsky  
(C) Piet Mondrian  
(D) Jaisan Cianelli
33. Auguste Rodin principally worked with—  
(A) Plasticine (B) Wax  
(C) Clay (D) Marble
34. Which is not alloy ?  
(A) Bronze  
(B) Brass  
(C) Copper  
(D) White metal
35. 'Investment mould' is associated with—  
(A) Multiple casting  
(B) Bronze casting  
(C) Fibre - Glass casting  
(D) Rubber casting
36. Who was the sculptor of famous 'Ecstasy of St. Teresa' ?  
(A) Donatello  
(B) Bernini  
(C) Jean Baptiste Pigalla  
(D) Francisco Salzillo
37. Name of the sculptor who was the Chairman of Lalit Kala Akademi, New Delhi—  
(A) Dhanraj Bhagat  
(B) Chintamani Kar  
(C) B. S. Katt  
(D) Shankho Chaudhuri
38. Name of the Sculptor who was commissioned for the Stone Sculpture (Yaksha-Yakshini) for Reserve Bank of India Building, New Delhi—  
(A) D. P. Roychaudhuri  
(B) Sharbati Roychaudhuri  
(C) Ramkinkar Baij  
(D) Shankho Chaudhuri
39. Biscuit Firing is related with—  
(A) Lost wax casting  
(B) Ceramics  
(C) Sand casting  
(D) Dogra Casting
40. Mallet is related with—  
(A) Stone carving  
(B) Wood carving  
(C) Bronze casting  
(D) Direct metal sculpture
41. Match the following—  
(a) Apocalypse  
(b) The Dance of Death  
(c) Los Caprichos  
(d) Three Crosses  
1. Rembrandt  
2. Hans Holbein  
3. Albrecht Durer  
4. Francisco Goya
- Codes :**
- |     | (a) | (b) | (c) | (d) |
|-----|-----|-----|-----|-----|
| (A) | 1   | 3   | 2   | 4   |
| (B) | 3   | 2   | 4   | 1   |
| (C) | 2   | 1   | 4   | 3   |
| (D) | 4   | 2   | 3   | 1   |
42. Match the following :  
(a) Digging 1. Blade  
(b) Cutting 2. Engraver  
(c) Carving 3. Needle  
(d) Scratching 4. Gooze
- Codes :**
- |     | (a) | (b) | (c) | (d) |
|-----|-----|-----|-----|-----|
| (A) | 2   | 1   | 4   | 3   |
| (B) | 1   | 3   | 2   | 4   |
| (C) | 3   | 2   | 4   | 1   |
| (D) | 4   | 1   | 2   | 3   |
43. Match the inventions of the following—  
(a) 105 AD 1. Offset  
(b) 220 AD 2. Wood Block  
(c) 1512 AD 3. Paper  
(d) 1904 AD 4. Etching

**Codes :**

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 2 | 1   | 4   | 3   |
| (B) 3 | 2   | 4   | 1   |
| (C) 4 | 1   | 2   | 3   |
| (D) 1 | 3   | 4   | 2   |

**44. Match the following—**

- (a) Planography  
(b) Stencil  
(c) Collography  
(d) Wood cut
1. Textured material is adhered to the printing surface
  2. Printing material is pressed through membrane
  3. Method of block printing
  4. Matrix retain its original surface

**Codes :**

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 2 | 1   | 3   | 4   |
| (B) 3 | 2   | 1   | 4   |
| (C) 4 | 2   | 1   | 3   |
| (D) 4 | 3   | 2   | 1   |

**45. Match the following artist associated with—**

- (a) Kanwal Krishna  
(b) Himmat Shah  
(c) Anupam Sud  
(d) Mohan Samant
1. Group 1890
  2. Delhi Shilpi Chakra
  3. Group 8
  4. Bombay Group

**Codes :**

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 2 | 3   | 4   | 1   |
| (B) 2 | 1   | 3   | 4   |
| (C) 4 | 2   | 3   | 1   |
| (D) 1 | 4   | 2   | 3   |

**46. Match the following—**

- (a) Speaking Tree  
(b) Beginning of Sound  
(c) City square  
(d) Armory Show
1. Giocometti
  2. Arthur B. Davies
  3. P. T. Reddy
  4. Richard Lennox

**Codes :**

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 2 | 1   | 3   | 4   |
| (B) 4 | 3   | 1   | 2   |
| (C) 3 | 2   | 1   | 4   |
| (D) 4 | 2   | 3   | 1   |

**47. Match the following—**

- (a) Temple of Angkorwat  
(b) Temple of Hera-I  
(c) Temple of Inscriptions  
(d) Ziggurat
1. Greek Art
  2. Khmer Art
  3. Mayan Art
  4. Elamite Art

**Codes :**

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 1 | 4   | 2   | 3   |
| (B) 2 | 3   | 4   | 1   |
| (C) 4 | 2   | 3   | 1   |
| (D) 2 | 1   | 3   | 4   |

**48. Match the following artist with paintings—**

- (a) Anjolie Ela Menon  
(b) Arpana Caur  
(c) Gogi Saroj Pal  
(d) Arpita Singh
1. A Tree
  2. Mutation
  3. Eternal Bird
  4. Threatened City

**Codes :**

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 1 | 3   | 4   | 2   |
| (B) 2 | 4   | 3   | 1   |
| (C) 3 | 2   | 4   | 1   |
| (D) 2 | 3   | 1   | 4   |

**49. Match the finest corporate marks with the designers—**

- (a) Nike Swoosh  
(b) Deutsche Bank  
(c) Nuclear Disarmament  
(d) Apple Computer
1. Rob Janoff
  2. Gerald Halton
  3. Carolyn Davidson
  4. Anton Stankowski

**Codes :**

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 1 | 2   | 3   | 4   |
| (B) 3 | 4   | 2   | 1   |
| (C) 4 | 2   | 3   | 1   |
| (D) 3 | 2   | 4   | 1   |

**50. Match the crucial inventions in photography with inventors—**

- (a) Camera Obscura  
(b) Daguerrotype  
(c) Calotype  
(d) Flexible Roll film

1. Joseph Nicephore Niepce
2. Louis Daguerre
3. George Eastman
4. W. H. Fox Talbot

**Codes :**

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 1 | 2   | 3   | 4   |
| (B) 2 | 3   | 4   | 1   |
| (C) 1 | 2   | 4   | 3   |
| (D) 4 | 2   | 1   | 3   |

**51. Match the posters with the designers—**

- (a) 1954 Pirelli Poster  
(b) 1896 Salon de Cent Exhibition Poster  
(c) 1981 Asian Performing Art Institute Poster  
(d) 1919-1923 Title Page of Bauhaus Poster

1. Alphonse Mucha
2. Testa Armando
3. L. Moholy Nagy
4. Ikko Tanaka

**Codes :**

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 2 | 1   | 4   | 3   |
| (B) 1 | 2   | 3   | 4   |
| (C) 4 | 3   | 2   | 1   |
| (D) 3 | 1   | 4   | 2   |

**52. Match the following—**

- (a) Rubber Blanket  
(b) Charged Couple Device  
(c) Depth of field  
(d) Guillotine trimmer
1. Postpress
  2. Photography
  3. Scanner
  4. Offset printing

**Codes :**

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 4 | 3   | 2   | 1   |
| (B) 3 | 4   | 1   | 2   |
| (C) 3 | 2   | 4   | 1   |
| (D) 3 | 1   | 4   | 2   |

**53. Match the following—**

- (a) Meaning of Art  
(b) Dance of Shiva  
(c) Art as Experience  
(d) Feeling and Form

1. Susanne Langer
2. Ananda Coomaraswamy
3. Herbert Read
4. John Dewey

**Codes :**

	(a)	(b)	(c)	(d)
(A)	2	3	1	4
(B)	3	2	4	1
(C)	4	2	1	3
(D)	1	3	2	4

54. Match the following—

- (a) Reims Cathedral  
(b) Colosseum  
(c) School of Athens  
(d) The Stone Breakers
1. Rome
  2. Raphael
  3. Gustav Courbet
  4. Gothic

**Codes :**

	(a)	(b)	(c)	(d)
(A)	4	1	2	3
(B)	3	2	1	4
(C)	4	2	3	1
(D)	2	4	1	3

55. Match the following—

- (a) Minimalism  
(b) Anstract Painting  
(c) Dada  
(d) Surrealism
1. Rene Magritte
  2. Wassily Kandinsky
  3. Frank Stella
  4. Marcel Duchamp

**Codes :**

	(a)	(b)	(c)	(d)
(A)	1	2	3	4
(B)	4	3	2	1
(C)	3	2	4	1
(D)	2	1	3	4

56. Match the following :

- (a) Gopuram  
(b) Sfumato  
(c) Pylon  
(d) Trifoil Arch
1. Atala Masjid, Jaunpur
  2. Martand Sun Temple
  3. Painting Technique
  4. Meenakshi Temple

**Codes :**

	(a)	(b)	(c)	(d)
(A)	4	3	1	2
(B)	3	4	2	1
(C)	1	2	3	4
(D)	2	3	4	1

57. Match the following :

- (a) Gupta period  
(b) Kushan period

- (c) Shunga period  
(d) Maurya period
1. Seated Buddha found at Katra, Mathura
  2. Pushyamitra (Bharhut)
  3. Standing Buddha, Sarnath 5th Cen. A.D.
  4. Lion Capital of Ashoka, National Emblem of India

**Codes :**

	(a)	(b)	(c)	(d)
(A)	3	1	2	4
(B)	4	3	1	2
(C)	3	2	1	4
(D)	2	1	3	4

58. Match the following :

- (a) Indus Valley Civilization  
(b) Gupta Art  
(c) Temple of Khajuraho  
(d) Mauryan Sculpture
1. Dancing Girl
  2. Kandariya Mahadeo
  3. Dashavata, Deogarh
  4. Didarganj Yakshi

**Codes :**

	(a)	(b)	(c)	(d)
(A)	1	3	2	4
(B)	2	3	1	4
(C)	1	2	3	4
(D)	1	4	3	2

59. Match the following :

- (a) The Thinker  
(b) Continuity in space  
(c) Portrait of Modemoiselle Pogani  
(d) Cloud Gate
1. Umberto Boccioni
  2. Anish Kapoor
  3. Rodin
  4. Brancusi

**Codes :**

	(a)	(b)	(c)	(d)
(A)	3	2	4	1
(B)	1	4	3	2
(C)	2	3	4	1
(D)	3	1	4	2

60. Match the following :

- (a) Flexible mould  
(b) Spruing  
(c) Burnout  
(d) Waste mould
1. Moulding from Plastic medium
  2. Removal of wax
  3. Movement of metal
  4. For multiple casting

**Codes :**

	(a)	(b)	(c)	(d)
(A)	4	3	2	1
(B)	3	1	2	4
(C)	2	1	4	3
(D)	3	2	4	1

61. Choose the correct chronological sequence of the following works in Printmaking :

- (A) Sleep of reason, Prodigalson, Scream, Jane avril at Jardin de Paris  
(B) Jane avril at Jardin de Paris, Prodigalson, Sleep of reason, Scream  
(C) Scream, Prodigalson, Sleep of reason, Jane avril at Jardin de Paris  
(D) Prodigalson, Sleep of reason, Jane Avril at Jardin de Paris, Scream

62. Select the correct sequence of Machine used in printmaking :

- (A) Lithopress Machine, Etching Press Machine, Routing Machine, Block Printing Machine  
(B) Block Printing Machine, Etching Press Machine, Lithopress Machine, Routing Machine  
(C) Etching Press Machine, Lithopress Machine, Routing Machine, Block Printing Machine  
(D) Routing Machine, Block Printing Machine, Etching Press Machine, Lithopress Machine

63. Select the reverse chronology of the Famous printmakers :

- (A) William Hogarth, Rembrandt, Ottavio Leoni, Michael Wolgemut  
(B) Ottavio Leoni, Michael Wolgemut, Rembrandt, William Hogarth  
(C) Rembrandt, Ottavio Leoni, Michael Wolgemut, William Hogarth  
(D) Michael Wolgemut, William Hogarth, Ottavio Leoni, Rembrandt

64. Arrange the following in the evolution of sequence in using wood as a material for print :

- (A) Wood cut, Wood engraving, Impression of natural texture of wood, Wood scratching



- (B) Impression of natural texture of wood, Wood scratching, Wood cut, Wood engraving  
(C) Wood scratching, Wood engraving, Wood cut, Impression of natural texture of wood  
(D) Wood engraving, Wood scratching, Wood cut, Impression of natural texture of wood
65. Arrange the following artists in ascending order—  
(A) Anupam Sud, Vivan Sunderam, Jatin Das, Jai Zharotia  
(B) Jai Zharotia, Anupam Sud, Vivan Sunderam, Jatin Das  
(C) Jatin Das, Vivan Sunderam, Anupam Sud, Jai Zharotia  
(D) Vivan Sunderam, Anupam Sud, Jatin Das, Jai Zharotia
66. Choose the correct sequence of the paintings in chronological order—  
(A) The School of Athens, Virgin of Rocks, The Tempest, Last Judgment (Micheal Angelo)  
(B) The Tempest, The School of Athens, Virgin of Rocks, Last Judgment (Micheal Angelo)  
(C) Virgin of Rocks, The Tempest, The School of Athens, Last Judgment (Micheal Angelo)  
(D) The Tempest, Last Judgment (Micheal Angelo), Virgin of Rocks, The School of Athens
67. Choose the correct sequence of the paintings in chronological order—  
(A) A River carries its past, Speak out, Interaction, Krishna eating the fire  
(B) Krishna eating the fire, Interaction, Speak out, A River carries its past  
(C) Krishna eating the fire, A River carries its past, Interaction, Speak out  
(D) Speak out, Krishna eating the fire, Interaction, A River carries its past
68. Arrange the following artists in descending order :  
(A) Franz Kline, Erich Heckel, Giorgio Chirico, Marc Chagall  
(B) Marc Chagall, Franz Kline, Erich Heckel, Giorgio Chirico  
(C) Erich Heckel, Marc Chagall, Giorgio Chirico, Franz Kline  
(D) Giorgio Chirico, Franz Kline, Marc Chagall, Erich Heckel
69. Arrange the multilingual softwares in order of their appearance—  
(A) Adobe Photoshop, Adobe InDesign, Adobe Creative Cloud, Quark Xpress  
(B) Quark Xpress, Adobe InDesign, Adobe Photoshop, Adobe Creative Cloud  
(C) Adobe Creative Cloud, Adobe InDesign, Adobe Photoshop, Quark Xpress  
(D) Quark Xpress, Adobe Photoshop, Adobe InDesign, Adobe Creative Cloud
70. Arrange the leading Newspapers in order of their circulations—  
(A) Dainik Jagron (Kanpur), Dainik Bhaskar (Bhopal), Hindustan (New Delhi), The Times of India (Mumbai).  
(B) The Times of India (Mumbai), Hindustan (New Delhi), Dainik Bhaskar (Bhopal), Dainik Jagron (Kanpur).  
(C) Dainik Jagron (Kanpur), Dainik Bhaskar (Bhopal), The Times of India (Mumbai), Hindustan (New Delhi).  
(D) The Times of India (Mumbai), Hindustan (New Delhi), Dainik Jagron (Kanpur), Dainik Bhaskar (Bhopal)
71. Arrange the following in order of turnovers—  
(A) Public is Group, Paris, Omnicom Group, N. York, Dentsu, Tokyo, WPP Group, London  
(B) WPP Group, London, Omnicom Group, N. York, Public is Group, Paris, Dentsu, Tokyo  
(C) Public is Group, Paris, Dentsu, Tokyo, WPP Group, London, Omnicom Group, New York  
(D) Omnicom Group, New York, Dentsu, Tokyo, WPP Group, London, Publics Group Paris.
72. Arrange Chronologically the following 'most influential photographic images of all times :  
(A) The Burning, Monk, The Terror of War, 'V-J Day' Kiss in Times Square, Starving Child and Vulture  
(B) 'V-J Day' Kiss in Times Square, The Burning, Monk, The Terror of War, Starving Child and Vulture  
(C) Starving Child and Vulture, 'V-J Day' Kiss in Times Square, The Terror of War, The Burning, Monk  
(D) The Burning, Monk, The Terror of War, Starving Child and Vulture, 'V-J Day' Kiss in Times Square
73. Choose correct chronological order of the Gothic Cathedral from the following :  
(A) Notre Dame, Reims, Chartres, St. Denis  
(B) St. Denis, Chartres, Reims, Notre Dame  
(C) Reims, St. Denis, Chartres, Notre Dame  
(D) Chartres, St. Denis, Reims, Notre Dame
74. Select correct chronological order of the Paintings of picasso from the following :  
(A) Guernica, Blue Nude, Acrobat, Large Bather  
(B) Large Bather, Blue Nude, Acrobat, Guernica  
(C) Blue Nude, Large Bather, Acrobat, Guernica  
(D) Acrobat, Blue Nude, Large Bather, Guernica
75. Choose correct chronological order of the temples at Khajuraho :  
(A) Chausath Yogini, Lakshman, Parsvanath, Kandariya Mahadev  
(B) Parsvanath, Chausath Yogini, Kandariya Mahadev, Lakshman  
(C) Lakshman, Parsvanath, Chausath Yogini, Kandariya Mahadev  
(D) Kandariya Mahadev, Chausath Yogini, Lakshman, Parsvanath
76. Select correct chronology of the following Indo-Islamic monuments—  
(A) Qutb Minar, Jahaj Mahal, Taj Mahal, Gol Gumbaj  
(B) Qutb Minar, Taj Mahal, Jahaj Mahal, Gol Gumbaj

- (C) Gol Gumbaj, Taj Mahal, Qutb Minar, Jahaj Mahal  
(D) Jahaj Mahal, Qutb Minar, Taj Mahal, Gol Gumbaj
77. Select the correct sequence of Sculptures in Chronological order:  
(A) Santhal Family, The Thinker, Cloud Gate, Maman  
(B) Cloud Gate, Maman, The Thinker, Santhal Family  
(C) Maman, Cloud Gate, The Thinker, Santhal Family  
(D) The Thinker, Santhal Family, Maman, Cloud Gate
78. Select the correct sequence of Bronze Casting:  
(A) Burnout, Waxing, Spruing and Venting Arrangements, Pouring  
(B) Waxing, Spruing and Venting Arrangements, Burnout, Pouring  
(C) Pouring, Spruing and Venting Arrangements, Burnout, Waxing  
(D) Waxing, Spruing and Venting Arrangements, Pouring, Burnout
79. Arrange the artists in correct chronological sequence:  
(A) Rajnikanth Panchal, Ramkinkar, Dhanraj Bhagat, Raghav Kaneria  
(B) Ramkinkar, Dhanraj Bhagat, Rajnikanth Panchal, Raghav Kaneria  
(C) Rajnikanth Panchal, Raghav Kaneria, Ramkinkar, Dhanraj Bhagat  
(D) Ramkinkar, Dhanraj Bhagat, Raghav Kaneria, Rajnikanth Panchal
80. Select the correct sequence of metal in order of melting temperature from low to high:  
(A) Lead, Zinc, Magnesium, Silver  
(B) Zinc, Lead, Magnesium, Silver  
(C) Magnesium, Silver, Lead, Zinc  
(D) Silver, Magnesium, Lead, Zinc
81. **Assertion (A)** : Excessive dampening is required in Lithography in relation to other Printing Processes.
- Reason (R)** : Because the limestone surface is non-hydrophilic and non-sensitive to grease.
- Codes** :  
(A) (A) is correct and (R) is incorrect  
(B) (A) is incorrect and (R) is correct  
(C) (A) and (R) both are correct  
(D) (A) and (R) both are incorrect
82. **Assertion (A)** : Viscosity colour printing facilitate making multiple colour prints from a single plate.
- Reason (R)** : Because hard roller is used for taking prints in this process.
- Codes** :  
(A) (A) is correct, but (R) is incorrect  
(B) (A) is incorrect and (R) is correct  
(C) (A) and (R) both are correct  
(D) (A) and (R) both are incorrect
83. **Assertion (A)** : Print making has its root in Graphic art.
- Reason (R)** : Because print making took a biparted recourse towards pure visual expression.
- Codes** :  
(A) (A) is correct and (R) is incorrect  
(B) (A) is incorrect and (R) is correct  
(C) (A) and (R) both are correct  
(D) (A) and (R) both are incorrect
84. **Assertion (A)** : Over the planten of a printing press a sheet of woolen felt is placed before taking print.
- Reason (R)** : Because felt serves the purpose of cushion for paper for better impression.
- Codes** :  
(A) (A) is correct, but (R) is incorrect  
(B) (A) is incorrect and (R) is correct  
(C) (A) and (R) both are correct  
(D) (A) and (R) both are incorrect
85. **Assertion (A)** : The paintings of Manjeet Bawa is a combination of traditional subject and icons.
- Reason (R)** : Because all traditional arts are the reflection of Iconography.
- Codes** :  
(A) (A) is correct, but (R) is incorrect  
(B) (A) is incorrect and (R) is correct  
(C) (A) and (R) both are correct  
(D) (A) and (R) both are incorrect
86. **Assertion (A)** : Men imposes instinctual emotions on to the external world.
- Reason (R)** : Because men's unsatiated desires leads towards aesthetic manifest.
- Codes** :  
(A) (A) is correct, but (R) is incorrect  
(B) (A) is incorrect and (R) is correct  
(C) (A) and (R) both are incorrect  
(D) (A) and (R) both are correct
87. **Assertion (A)** : The concept of museum is to store and display the rare and objects of cultural identity
- Reason (R)** : But the derth of these objects are influenced by market powers hence the museums has marginalised.
- Codes** :  
(A) (A) is correct, but (R) is incorrect  
(B) (A) is incorrect and (R) is correct  
(C) (A) and (R) both are correct  
(D) (A) and (R) both are incorrect
88. **Assertion (A)** : The art of J. Swaminathan can be considered as folk art.
- Reason (R)** : Because the folk arts is a combination of distinct lines and basic colours.
- Codes** :  
(A) (A) is correct, but (R) is incorrect  
(B) (A) is incorrect and (R) is correct  
(C) (A) and (R) both are incorrect  
(D) (A) and (R) both are correct
89. **Assertion (A)** : The invention of Photography revolutionised art. Ernst Gombrich saw photography as one of the progenitors of the development of modern art.
- Reason (R)** : Because photography can be as subjective and emotional as any drawing

**Codes :**

- (A) (A) is correct, but (R) is incorrect
- (B) Both (A) and (R) are correct
- (C) Both (A) and (R) are incorrect
- (D) (A) is incorrect, but (R) is correct

90. **Assertion (A) :** A good 'Symbol' of any Corporate Speaks for itself in any language.

**Reason (R) :** In the Context of Changing definitions 'Mark' has become popular as a useful 'Catch-all'

**Codes :**

- (A) Both (A) and (R) are correct
- (B) Both (A) and (R) are incorrect
- (C) Both (A) and (R) are correct, but (R) is not the reason for (A)
- (D) (A) is correct, but (R) is incorrect

91. **Assertion (A) :** A Sophisticated approach to branding have established 'Apple' as one of the twenty-first century' best known household names.

**Reason (R) :** Because from the Bible to Sir Isaac Newton and beyond the humble apple has left an indelible imprint on the design culture

**Codes :**

- (A) Both (A) and (R) are correct
- (B) (A) is correct, but (R) is not correct
- (C) Both (A) and (R) are incorrect
- (D) (A) is incorrect, but (R) is correct

92. **Assertion (A) :** The Computer now performs every aspect of design activity, but designers should always have control over it.

**Reason (R) :** Because, one of the things, a designer does that a computer can't do is 'think'.

**Codes :**

- (A) (A) is correct, but (R) is not correct
- (B) (A) is incorrect, but (R) is correct
- (C) Both (A) and (R) are not correct
- (D) Both (A) and (R) are correct

93. **Assertion (A) :** Term Abstract Art denotes rejection of representation of the exterior world.

**Reason (R) :** Abstract art conceives painting and Sculpture as an arrangement of pure forms and colours capable of evoking, aesthetic emotions.

**Codes :**

- (A) (A) and (R) both are correct
- (B) (A) and (R) both are not correct
- (C) (A) is correct, but (R) is not correct
- (D) (A) is not correct, but (R) is correct

94. **Assertion (A) :** Right from Greek times, arts were divided into imitative and productive.

**Reason (R) :** Both require skill, but imitative tends to copy nature for pleasure while productive intends towards utility.

**Codes :**

- (A) (A) is correct, but (R) is not correct
- (B) (A) and (R) both are correct
- (C) (A) and (R) both are not correct
- (D) (A) is not correct, but (R) is correct

95. **Assertion (A) :** Buddha himself made no super natural claims.

**Reason (R) :** He indeed denied the idea of eternal soul.

**Codes :**

- (A) (A) and (R) both are correct
- (B) (A) and (R) both are incorrect
- (C) (A) is incorrect, but (R) is correct
- (D) (A) is correct, but (R) is incorrect

96. **Assertion (A) :** Cubism was a movement deliberately set out to dislocate space and eliminate perspective.

**Reason (R) :** Cubism was based on intellectual representation dealing with complex organisation of form and pictorial space.

**Codes :**

- (A) (A) and (R) both are not correct
- (B) (A) is correct, but (R) is not correct
- (C) (A) is not correct, but (R) is correct.
- (D) (A) and (R) both are correct

97. **Assertion (A) :** People don't tend to think of Satish Gujral as a sculptor, but he conceived his images in a three dimensional form.

**Reason (R) :** He wants to take liberty which is not possible in two dimension.

**Codes :**

- (A) (A) is incorrect (R) is correct
- (B) (A) and (R) both are incorrect
- (C) (A) is correct (R) is incorrect
- (D) (A) and (R) both are correct

98. **Assertion (A) :** Maquette is essential for a large size monumental sculpture for the purpose of measurement.

**Reason (R) :** For the purpose of life size life study maquette is also essential.

**Codes :**

- (A) (A) and (R) both are correct
- (B) (A) is correct, but (R) is incorrect
- (C) (R) is correct, but (A) is incorrect
- (D) (R) and (A) both are incorrect

99. **Assertion (A) :** Patina on Bronze Sculpture is essential because the colour of surface changes in periodical manner.

**Reason (R) :** Reaction of the particular chemical on the surface depends on the composition of Bronze.

**Codes :**

- (A) (A) is incorrect, but (R) is correct
- (B) (A) and (R) both are correct
- (C) (A) is correct, but (R) is incorrect
- (D) (A) and (R) both are incorrect

100. **Assertion (A) :** Normally Downdraft furnaces are used for ceramics firing because it makes even temperature in the chamber.

**Reason (R) :** Downdraft furnace is also essential in Burnout of wax in Dogra casting.

**Codes :**

- (A) (A) and (R) both are incorrect
- (B) (A) and (R) both are correct
- (C) (R) is correct, but (A) is incorrect
- (D) (A) is correct, but (R) is incorrect

## Answers with Hints

1. (D) **Raja Ravi Varma** was a celebrated **Malayali** Indian painter and artist. He is considered among the greatest painters in the history of Indian art for a number of aesthetic and broader social reasons.
2. (B)
3. (C) A **brayer** is a hand-tool used historically in **printing** and **printmaking** to break up and 'rub out' (spread) ink before it was 'beaten' using **inking balls** or **composition rollers**.
4. (C) 5. (A)
6. (C) **Oleograph** produced by preparing a separate stone by hand for each colour to be used and **printing** one colour in register over another.
7. (B) **Potassium dichromate** is a common **inorganic** chemical reagent, most commonly used as an **oxidizing agent** in various laboratory and industrial applications. As with all **hexavalent chromium** compounds, it is acutely and chronically harmful to health. It is a crystalline ionic solid with a very bright, red-orange colour.
8. (A)
9. (A) **Sir Joshua Reynolds** was an English painter, specialising in portraits. He promoted the 'Grand Style' in painting which depended on idealization of the imperfect. He was a founder and first president of the Royal Academy of Arts, and was knighted by George III in 1769.
10. (D) **Kazimir Severinovich Malevich** was a **Russian avant-garde** artist and art theorist, whose pioneering work and writing had a profound influence on the development of non-objective, or **abstract art**, in the 20th century.
11. (C) **Kangra painting** is the pictorial art of Kangra, named after Kangra, Himachal Pradesh, a former princely state, which patronized the art. It became prevalent with the fading of **Basohli** school of painting in mid-18th century, and soon produced such a magnitude in paintings both in content as well as volume, that the **Pahari painting** school, came to be known as Kangra paintings.
12. (B) 13. (B) 14. (B) 15. (B)
16. (B) **Walt Kuhn** was an **American** painter and an organizer of the famous **Armory Show** of 1913, which was America's first large-scale introduction to European Modernism.
17. (A)
18. (D) **Rob Janoff** is a **graphic designer** of corporate logos and identities, printed advertisements and television commercials. He is known for his creation of the **Apple logo**.
19. (C)
20. (A) **Pseudo-solarisation** is a phenomenon in **photography** in which the image recorded on a **negative** or on a photographic print is wholly or partially reversed in tone. Dark areas appear light or light areas appear dark.
21. (B) 22. (A) 23. (C) 24. (B)
25. (D) **Gayatri Sinha** is an art critic and curator based in New Delhi. Her primary areas of enquiry are around the structures of gender and iconography, media, economics and social history. She has initiated Critical Collective, a forum for thinking on conceptual frames within art history and practice in contemporary India.
26. (C) **Lingaraja Temple** is a **Hindu temple** dedicated to **Shiva** and is one of the oldest temples in **Bhubaneswar**. The temple is the most prominent landmark of Bhubaneswar city and one of the major tourist attractions of the state.
27. (A) 28. (C)
29. (A) **Arthur Clive Heward Bell** was an English art critic, associated with **formalism** and the **Bloomsbury Group**.
30. (A)
31. (D) **Jasrota**, in the **Sivalik Hills** of the **Western Himalayas**, was the capital of the **Jasrota Rajputs**. It was founded by **Jas Dev**, a ruler of the **Royal House of Jammu and Kashmir**.
32. (A) 33. (C) 34. (C) 35. (B)
36. (B) **Gian Lorenzo Bernini** was an **Italian** sculptor and architect while a major figure in the world of architecture, he was, also and even more prominently, the leading sculptor of his age, credited with creating the **Baroque** style of sculpture.
37. (D)
38. (C) **Ramkinkar Baij** was an **Indian sculptor** and painter, one of the pioneers of modern Indian sculpture and a key figure of **Contextual Modernism**.
39. (B) A **ceramic** is a non-metallic solid material comprising an **inorganic compound of metal, non-metal or metalloid** atoms primarily held in **ionic and covalent** bonds.
40. (B) **Wood carving** is a form of **woodworking** by means of a cutting tool (knife) in one hand or a **chisel** by two hands or with one hand on a chisel and one hand on a mallet, resulting in a wooden figure or **figurine**, or in the **sculptural** ornamentation of a wooden object.
41. (B) 42. (A) 43. (B) 44. (C) 45. (B)
46. (B)
  - Speaking Tree—Richard Leinoy
  - Beginning of Sound—P.T. Ready
  - City Square—Giocometti
  - Armory Show—Arthur B. Davies
47. (D) 48. (B) 49. (B) 50. (C) 51. (A)
52. (A)
  - Robber Blanket—Offset Printing
  - Charged Couple Device—Scanner
  - Depth of Field—Photography
  - Guillotine trimmer—Post-press
53. (B) 54. (A) 55. (C) 56. (A) 57. (A)
58. (A)
  - Indus Valley Civilization—Dancing Girl
  - Gupta Art—Dashavatara, Deogarh
  - Temple of Khajuraho—Kandariya Mahadeo
  - Mauryan Sculpture—Didarganj Yakshi
59. (D) 60. (A) 61. (D) 62. (B)



63. (A) William Hogarth—10 November, 1697 – 26 October, 1764
64. (B) 65. (C)
66. (C)
- *Virgin of the Rocks*—1483—86
  - *The Tempest*—1506—08
  - *The School of Athens*—1509—11
  - *The Last Judgment*—1534—41
67. (C)
- *Krishna Eating the Fire* (c. 1980),
  - *A River Carries its Past* (1992),
  - "Interaction Painting"—2016
  - *Speak Out*—2017
68. (C)
- *Erich Heckel* 1883-1970
  - *Marc Chagall* 1887-1985
  - *Giorgio de Chirico*, 1888-1978
  - *Franz Kline* 1910-1962
69. (D)
- *QuarkXPress*—1987
  - *Adobe Photoshop*—1990
  - *Adobe InDesign*—1999
  - *Adobe Creative Cloud*—2017
70. (A) 71. (B)
72. (B)
- *V-J Day in Times Square*—1945
  - *The Burning Monk*—1963
  - *The Terror of War*—1972
  - *The Culture and the Little Girl*—1993
73. (B) 74. (C) 75. (A)
76. (A)
- *Qutub Minar*—1192
  - *Jahaz Mahal*—1452
  - *Taj Mahal*—1643
  - *Gol Gumbaz*—1656
77. (D) 78. (B)
79. (D)
- *Ramkinkar Baij* 1906-1980
  - *Dhanraj Bhagat* 1917-1988
  - *Raghav Kaneria* 1936—
  - *Rajnikant Panchal*, 1947—
80. (A) 81. (A) 82. (A) 83. (C) 84. (C)
85. (A) 86. (D)
87. (D) A **museum** is an institution that **cares for a collection** of artifacts and other objects of **artistic, cultural, historical, or scientific** importance. Many public museums make these items available for public viewing through **exhibits** that may be permanent or temporary.
88. (B) **Jagdish Swaminathan** was a leading **Indian** artist, painter, poet and writer. He is one of the most influential artists of India, instrumental in establishment of the **Bharat Bhawan**, a multi-art complex in **Bhopal**, in 1982, and served as the director of its Roopankar art Museum till 1990.
89. (B) 90. (C) 91. (B) 92. (D)
93. (A) **Abstract art** uses a **visual language** of shape, form, colour and line to create a composition which may exist with a degree of independence from visual references in the world.
94. (B) 95. (A) 96. (D) 97. (D) 98. (B)
99. (B) 100. (D)

Continued from Page 111

24. The total online retail in India is pegged at.....in 2019.
- (A) \$ 18 billion
- (B) \$ 25 billion
- (C) \$ 30 billion
- (D) \$ 32 billion
25. Which of the following is not a statutory body ?
- (A) SEBI
- (B) Finance Commission
- (C) NITI Aayog
- (D) RBI


### Answers

1. (A) 2. (A) 3. (B) 4. (C) 5. (A)
6. (B) 7. (C) 8. (A) 9. (C) 10. (D)
11. (D) 12. (A) 13. (A) 14. (C) 15. (C)
16. (A) 17. (C) 18. (C) 19. (D) 20. (A)
21. (C) 22. (B) 23. (A) 24. (A) 25. (C)

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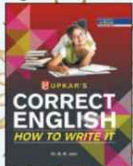
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**UPKAR PRAKASHAN, AGRA-2**

(Held on 17-2-2018)

## General Studies

1. Transport, Communication Commerce come under the—

(A) Primary activities  
(B) Secondary activities  
(C) Tertiary activities  
(D) Rural activities

2. 'Alha' is a popular folk song of which area—

(A) Rohilkhand  
(B) Bundelkhand  
(C) Purvanchal  
(D) Western Uttar Pradesh

3. Consider the following events and arrange them in chronological order.

I. Battle of Daurah  
II. Battle of Kannauj  
III. Battle of Samugarh  
IV. Battle of Chausa

Select the correct answer using the code given below :

(A) II, III, I, IV  
(B) I, IV, II, III  
(C) I, II, IV, III  
(D) II, I, IV, III

4. Match List-I with List-II and choose the correct answer from the codes given below :

## List-I

(Author)

(a) V.D. Savarkar  
(b) R.C. Majumdar  
(c) S.B. Chaudhari  
(d) Ashok Mehta

## List-II

(Title of the Book)

1. The Great Rebellion  
2. The Indian war of Independence  
3. The Sepoy Mutiny and the Revolt of 1857  
4. Civil Rebellion in the Indian Mutinies (1857-59)

## Codes :

(a) (b) (c) (d)  
(A) 2 3 4 1  
(B) 2 3 1 4  
(C) 3 2 4 1  
(D) 3 1 2 4

5. In which of the following state is Black Pepper and Cardamom produced ?

(A) Assam  
(B) Jammu & Kashmir  
(C) Himachal Pradesh  
(D) Kerala

6. Which of the following does not require a medium ?

(A) Radiation  
(B) Convection  
(C) Conduction  
(D) None of these

7. Work as intermediaries between biotic and abiotic components—

(A) Parasite  
(B) Decomposers  
(C) Producers  
(D) Consumers

8. Gupta gold coin was called—

(A) Karshapana (B) Dinara  
(C) Nishka (D) Suvarna

9. Match List-I (Naturally occurring substances) with List-II (Elements) and select the correct answer from the codes given below the lists.

## List-I

(a) Diamond (b) Marble  
(c) Sand (d) Ruby

## List-II

1. Calcium  
2. Silicon  
3. Aluminium oxide  
4. Carbon

## Codes :

(a) (b) (c) (d)  
(A) 1 2 3 4  
(B) 4 1 2 3  
(C) 3 1 2 4  
(D) 4 2 1 3

10. Match List-I with List-II and select the correct answer using the codes given below :

## List-I

(a) Ashtadhyayi  
(b) Mahabhashya  
(c) Nirukta  
(d) Varttika

## List-II

1. Yaska 2. Katyayan  
3. Patanjali 4. Panini

## Codes :

(a) (b) (c) (d)  
(A) 4 3 1 2  
(B) 2 3 1 4  
(C) 1 2 3 4  
(D) 3 1 4 2

11. Which of the following is not a greenhouse gas ?

(A) Oxygen  
(B) Carbon dioxide  
(C) Chlorofluorocarbons  
(D) Methane

12. Which number will come at the place of ? in the following table/figure ?

1	3	7
5	12	14
25	?	28
125	192	56

(A) 40 (B) 48  
(C) 56 (D) 64

13. In West Asia, the highest Petroleum producing country is—

(A) Iraq  
(B) Iran  
(C) Saudi Arab  
(D) Lebanon

14. Which of the following is not among the major resources of Russia ?

(A) Coal  
(B) Iron - ore  
(C) Diamonds  
(D) Uranium

15. What will come in place of question mark ?

9	11	99
10	25	50
28	35	?

- (A) 110 (B) 140  
(C) 148 (D) 175

16. As part of New Forest Inventory design implement in 2016, the revisit time has been reduced to—

- (A) 5 years (B) 2 years  
(C) 6 months (D) 10 years

17. Complete the following series—

2, 9, 28, 65, ?

- (A) 121 (B) 195  
(C) 126 (D) 103

18. Given below are two statements, one labelled as Assertion (A) and other as reason (R).

**Assertion (A) :** The biosphere is an example of open system.

**Reason (R) :** There can not be reinvestment of new substances in the bio-sphere but there is no restriction on the investment and exit of energy.

Select the correct answer using the codes below :

- (A) Both (A) and (R) are true and (R) is correct explanation of (A)  
(B) Both (A) and (R) are true but (R) is not the correct explanation of (A)  
(C) (A) is true but (R) is false  
(D) (A) is false but (R) is true

19. Which Union Territory of India has the lowest Sex-Ratio as per the 2011 census.

- (A) Chandigarh  
(B) Dadra and Nagar Haveli  
(C) Daman and Diu  
(D) Lakshadweep

20. Match List-I with List-II and select the correct answer using the codes given below :

**List-I**

(Country)

- (a) Chad (b) Niger  
(c) Rwanda (d) Benin

**List-II**

(Principal Primary Export)

1. Cotton 2. Uranium  
3. Petroleum 4. Coffee

**Codes :**

- (a) (b) (c) (d)  
(A) 4 1 3 2  
(B) 2 4 1 3  
(C) 3 2 4 1  
(D) 1 3 2 4

21. Part of which state of the country is not included in National Capital Region ?

- (A) Delhi  
(B) Uttar Pradesh  
(C) Haryana  
(D) Madhya Pradesh

22. At current rate of growth, the urban population of India by the year 2030 will reach—

- (A) 575 million (B) 675 million  
(C) 750 million (D) 900 million

23. Who is the father of scientific management ?

- (A) Henry Fayol  
(B) Elton Mayo  
(C) Cheston Bernard  
(D) F.W. Taylor

24. In long-sightedness, images are formed at following—

- (A) On Retina  
(B) Infront of Retina  
(C) Behind Retina  
(D) On blind Spot

25. Consider the following events and arrange them in chronological order—

- I. Cripps Mission  
II. August Offer  
III. Nehru Report  
IV. Wavell Plan

Select correct answer from the codes given below :

**Code :**

- (A) III, I, II, IV (B) III, II, I, IV  
(C) II, I, III, IV (D) I, III, II, IV

26. Which of the following pair is not correct matched ?

**List-I**

(Crop/Plantation)

- (A) Jute  
(B) Tea  
(C) Sugarcane  
(D) Rubber

**List-II**

(Largest producer state)

- (A) West Bengal  
(B) Assam  
(C) Uttar Pradesh  
(D) Himachal Pradesh

27. On the banks of which river did Mahavira Swami attained enlightenment ?

- (A) Swarnasikta  
(B) Palashini  
(C) Ganga  
(D) Rjupalika

28. A man is facing east, rotates in clockwise direction 60° and then anti-clockwise direction 255° and finally clockwise direction 105°. Which direction is he facing now ?

- (A) North-East (B) North  
(C) West (D) South-East

29. Improvement of profit volume ratio can be done by the following—

- (A) Increasing selling price  
(B) Altering sales mixture  
(C) Reducing Variable cost  
(D) All of the above

30. For every action there is an equal and opposite reaction. This law was given by—

- (A) Newton  
(B) Albert Einstein  
(C) Bohr  
(D) Handane

31. Who translated 'Baburnama' into english ?

- (A) Leyden and Erskine  
(B) William Hawkins  
(C) Finch  
(D) William Jones

32. Match List-I with List-II and select the correct answer using the codes given below :

**List-I**

- (a) Stupa  
(b) Painting  
(c) Headless statue of Kanishka  
(d) Dashavatara Temple

**List-II**

1. Bagh 2. Sanchi  
3. Deogarh 4. Mathura

**Codes :**

- (a) (b) (c) (d)  
(A) 1 2 3 4  
(B) 2 1 4 3  
(C) 4 3 2 1  
(D) 3 2 1 4

33. Match List-I with List-II and select the correct answer using the codes given below :

### List-I

- Ballabhacharya
- Ramanuj
- Madhvacharya
- Shankar

### List-II

- Dwaitvad
- Pushtimarg
- Vishistadwait
- Adwaitvad

### Codes :

- |     | (a) | (b) | (c) | (d) |
|-----|-----|-----|-----|-----|
| (A) | 1   | 3   | 4   | 2   |
| (B) | 2   | 4   | 1   | 3   |
| (C) | 2   | 3   | 1   | 4   |
| (D) | 4   | 1   | 3   | 2   |

- Which Article of the Indian Constitution provides right to vote i.e. adult suffrage for electing representatives of Lok Sabha and Vidhan Sabha ?  
(A) Article 326  
(B) Article 325  
(C) Article 324  
(D) Article 323
- Malampuzha dam is situated on which river ?  
(A) Bharatpuzha  
(B) Korapuzha  
(C) Malampuzha  
(D) Pamba
- Which number is wrong in the given series ?  
1235, 2425, 3158, 4235  
(A) 1235 (B) 2425  
(C) 3158 (D) 4235
- Match List-I with List-II and select the correct answer using the codes given below :

### List-I

(News Paper)

- Bengalee
- Bangbasi
- Vande Mataram
- Amrit Bazar Patrika

### List-II

(Publisher)

- Jogendra Nath Bose
- Arvind Ghosh
- Surendranath Banerjee
- Moti Lal Ghosh

### Codes :

- |     | (a) | (b) | (c) | (d) |
|-----|-----|-----|-----|-----|
| (A) | 2   | 1   | 3   | 4   |
| (B) | 3   | 1   | 2   | 4   |
| (C) | 3   | 4   | 2   | 1   |
| (D) | 4   | 3   | 2   | 1   |

- Chitrakot waterfall is situated in—  
(A) Chitrakoot (B) Bastar  
(C) Jabalpur (D) Banda
- Complete the sequence with the correct option from the following codes.  
V, I, B, ..., ..  
(A) G, Y, O, R (B) G, O, Y, R  
(C) G, O, R, Y (D) Y, G, O, R

- Consider the following statements about Western Ghats—  
1. It is a block mountain  
2. Its eastern slope is a gently lowering down plateau.  
3. Its northern section is covered by lava (Basalt)

Which of the above statements are correct ?

- (A) 1 and 2 (B) 2 and 3  
(C) 1 and 3 (D) 1, 2 and 3

- Which one is a fundamental particle ?  
(A) Neutron (B) Proton  
(C)  $\pi$ -meson (D) quark
- Superior Lake region in North America is famous for—  
(A) iron - ore reserves  
(B) coal reserves  
(C) gold reserves  
(D) uranium reserves

- Who among the following has not scored a century on Test debut ?  
(A) Sourav Ganguly  
(B) Virendra Sehwag  
(C) Prithvi Shaw  
(D) Sunil Gavaskar
- Whom did Simona Halep defeat to win the French Open Tennis Tournament 2018 ?  
(A) Sloane Stephens  
(B) Serena Williams  
(C) Venus Williams  
(D) None of the above

- Harnessing of nuclear energy often causes—  
(A) Air Pollution  
(B) Water Pollution  
(C) Thermal Pollution  
(D) Noise Pollution

- In the matrix given below, what are the values of A, B and C.

9	A	12
B	10	7
8	C	11

- (A) A = 9, B = 11, C = 13  
(B) A = 13, B = 9, C = 11  
(C) A = 9, B = 13, C = 11  
(D) A = 13, B = 11, C = 9

- Which of the following alternatives will come in place of X ?

27, 31, 40, 56, 81, 117, X

- (A) 156 (B) 165  
(C) 166 (D) 169

- A bill other than Money Bill which is passed by Legislative Assembly for the first time, may remain pending in the legislative council for how many months ?  
(A) For not more than one month  
(B) For not more than two months  
(C) For not more than three months  
(D) None of the above

- Ozone layer of upper atmosphere is being destroyed by which of the following ?  
(A) Sulphur dioxide  
(B) Photo - chemical oxidants  
(C) Chlorofluorocarbons  
(D) Smog

- Which one of the following vitamins is formed in skin in the presence of sunlight ?  
(A) Vitamin A (B) Vitamin D  
(C) Vitamin K (D) Vitamin E

- Which of these is not a viral disease ?  
(A) Measles (B) Rabies  
(C) Polio (D) Tuberculosis

- Order of the size of Nucleus is following—  
(A)  $1 \times 10^{-15}$  meter  
(B)  $1 \times 10^{-12}$  meter  
(C)  $1 \times 10^{-10}$  meter  
(D) None of the above

- What kind of tax is G.S.T. ?  
(A) Direct Tax  
(B) Indirect Tax  
(C) Depends on the type of goods and services  
(D) None of the above

- India and Asia's first Dolphin Research Centre - NDRC is being set up on the banks of the Ganga river at—  
(A) Haridwar (B) Patna  
(C) Varanasi (D) Bhagalpur



55. Which one of the following will not have a direct impact on human capital formation ?  
 (A) Education  
 (B) Medical care  
 (C) Training  
 (D) Irrigation
56. Which of the following is not considered as social indicator of poverty ?  
 (A) Less number of means of transport  
 (B) Illiteracy  
 (C) Lack of access of health care  
 (D) Lack of job opportunities
57. Where in Uttar Pradesh is Knowledge park being established ?  
 (A) Lucknow  
 (B) Prayagraj  
 (C) Varanasi  
 (D) Greater NOIDA
58. 'Flower' is related to 'Petals' in the same way as 'Book' is related to—  
 (A) Library (B) Author  
 (C) Pages (D) Content
59. Uruguay round pertains to—  
 (A) WTO (B) IMF  
 (C) GATT (D) World Bank
60. Which of the following commodities has highest export from India in 2017 ?  
 (A) Agriculture and allied products  
 (B) Engineering goods  
 (C) Textiles  
 (D) Chemicals
61. Match List-I with List-II and select the correct answer using the codes given below :
- List-I**
- Black Pottery
  - Ceramic Pottery
  - Brass Artifact
  - Glass Artifact
- List-II**
- Moradabad
  - Khurja
  - Firozabad
  - Nizamabad
- Codes :**
- |     | (a) | (b) | (c) | (d) |
|-----|-----|-----|-----|-----|
| (A) | 1   | 3   | 2   | 4   |
| (B) | 4   | 2   | 1   | 3   |
| (C) | 3   | 1   | 4   | 2   |
| (D) | 2   | 4   | 3   | 1   |
62. Where in Uttar Pradesh is located the State Leather Development and Marketing Corporation ?  
 (A) Agra  
 (B) Kanpur  
 (C) Moradabad  
 (D) Ghaziabad
63. Where in Uttar Pradesh is Artificial Limbs Manufacturing Corporation situated ?  
 (A) Varanasi (B) Prayagraj  
 (C) Kanpur (D) Agra
64. Who is the fiscal agent and advisor to government in monetary and financial matters ?  
 (A) NABARD  
 (B) S.B.I.  
 (C) R.B.I.  
 (D) None of the above
65. 'Uttar Pradesh Ratna Award' has been conferred on which Indian - American ?  
 (A) Sam Pitroda  
 (B) Sunita Williams  
 (C) Frank Islam  
 (D) Kalpana Chawla
66. Which of the following is not correctly matched ?  
 (A) Anga - Champa  
 (B) Koshala - Ahichhatra  
 (C) Vats - Kaushambi  
 (D) Matsya - Viratnagar
67. Which of the following crop is transplanted ?  
 (A) Mustard (B) Rice  
 (C) Wheat (D) Maize
68. Who among the following has been appointed Goodwill Ambassador for tourism and culture by the Nepalese Government ?  
 (A) Jaya Prada  
 (B) Hema Malini  
 (C) Priyanka Chopra  
 (D) None of the above
69. Consider the following statements regarding Lucknow metropolitan—
- In the later half of 18th Century, Nawab Asaf-ud-daula developed the town in a planned manner.
  - In British period, Sir Harcourt Butler gave attention to its shapely development.
  - Residential area is found on 23% part of the total land of the Metropolis.
- Which is correct of the above statements ?  
 (A) Only 2 (B) 1 and 2  
 (C) 2 and 3 (D) 1, 2 and 3
70. Part 16 of the Indian Constitution is related to—  
 (A) Administrative Tribunal  
 (B) All India Services  
 (C) Finance Commission  
 (D) Special provisions for certain classes
71. Net export equals to—  
 (A) Export x Imports  
 (B) Export + Imports  
 (C) Export - Imports  
 (D) Exports of services only
72. Match List-I with List-II and select the correct answer using the codes given below :
- List-I**  
 (Battles)
- Battle of Chandawar
  - Invasion of Taimur
  - Battle of Talikota
  - Battle of Ghaghra
- List-II**  
 (Year)
- |         |         |
|---------|---------|
| 1. 1398 | 2. 1194 |
| 3. 1529 | 4. 1565 |
- Codes :**
- |     | (a) | (b) | (c) | (d) |
|-----|-----|-----|-----|-----|
| (A) | 1   | 2   | 3   | 4   |
| (B) | 2   | 3   | 4   | 1   |
| (C) | 1   | 4   | 3   | 2   |
| (D) | 2   | 1   | 4   | 3   |
73. Which Union Territory of India has the lowest literacy rate as per the Census of 2011 ?  
 (A) Chandigarh  
 (B) Dadra and Nagar Haveli  
 (C) Daman and Diu  
 (D) Lakshadweep
74. Which of the following is not correctly matched ?  
 (A) Baikal - Russian Federation  
 (B) Malawi - Asia  
 (C) Caspian Sea - Asia - Europe  
 (D) Tanganyika - Africa
75. Which country topped the medal tally in 2018 Commonwealth Games ?  
 (A) Australia (B) England  
 (C) Canada (D) India
76. Which place in Uttar Pradesh is famous for 'Surma' Industry ?

- (A) Varanasi  
(B) Prayagraj  
(C) Moradabad  
(D) Bareilly

77. A tariff—

- (A) increase in volume of trade  
(B) reduces the volume of trade  
(C) has no effect on volume of trade  
(D) Both (A) and (C)

78. Who is the winner of Nobel Prize for Literature-2018 ?

- (A) Kazuo Ishiguro  
(B) Bob Dylan  
(C) Patrick Modiano  
(D) None of the above

79. Which film has been chosen as India's official entry of Oscar Awards 2019 ?

- (A) Sui Dhaga  
(B) Pataakha  
(C) Village Rockstars  
(D) Batti Gul Meter Chalu

80. Consider the statements :

**Assertion (A) :** Sugar industry is more developed in South India.

**Reason (R) :** Per hectare production and quantity of juice of sugarcane is higher in the southern states.

**Codes :**

- (A) Both (A) and (R) are true and (R) is the correct explanation of (A)  
(B) Both (A) and (R) are true but (R) is not the correct explanation of (A)  
(C) (A) is true but (R) is false  
(D) (A) is false but (R) is true

81. Which of the following word cannot be made from the letter of DETERMINATION

- (A) TERMIDE (B) MODERN  
(C) TENDER (D) MOTHER

82. In Uttar Pradesh, which of the following tribe celebrates Diwali as a sorrow ?

- (A) Sahariya (B) Baiga  
(C) Parahariya (D) Tharu

83. Maha Kumbh Mela is generally organised every—

- (A) 10th year (B) 12th year  
(C) 14th year (D) 16th year

84. Match List-I with List-II and select the correct answer using the codes given below :

**List-I**

- (a) Demetrius  
(b) Rudradaman  
(c) Gondophernes  
(d) Vim

**List-II**

1. Parthian 2. Kushana  
3. Indo-Greek 4. Sythean

**Codes :**

- |     | (a) | (b) | (c) | (d) |
|-----|-----|-----|-----|-----|
| (A) | 1   | 3   | 2   | 4   |
| (B) | 4   | 3   | 1   | 2   |
| (C) | 3   | 4   | 1   | 2   |
| (D) | 1   | 2   | 3   | 4   |

85. Stainless Steel is an alloy in which following is added along with iron.

- (A) Zinc (B) Chromium  
(C) Tin (D) Copper

86. Which of the following pair is not correctly matched ?

- (A) Indu Prakash—M.G. Ranade  
(B) Native Opinion

—B.N. Mandlik

- (C) Bombay Chronicle

—Gopal Krishna Gokhale

- (D) Indian Mirror

—Devendranath Tagore

87. Match List-I with List-II and select the correct answer using the codes given below :

**List-I**

(Political Parties)

- (a) Indian National Congress  
(b) Bharatiya Jan Sangh  
(c) Communist Party of India  
(d) A.I.A.D.M.K.

**List-II**

(Year)

1. 1951 2. 1972  
3. 1885 4. 1925

**Codes :**

- |     | (a) | (b) | (c) | (d) |
|-----|-----|-----|-----|-----|
| (A) | 3   | 1   | 4   | 2   |
| (B) | 2   | 3   | 4   | 1   |
| (C) | 4   | 3   | 2   | 1   |
| (D) | 2   | 1   | 4   | 3   |

88. Match List-I with List-II and select the correct answer using the codes given below the lists :

**List-I**

- (a) Harappa  
(b) Hastinapur  
(c) Takshashila  
(d) Kaushambi

**List-II**

1. N.G. Majumdar (1936-37)  
2. John Marshal (1913-34)  
3. Daya Ram Sahani (1923-24 & 1924-25)  
4. B.B. Lal (1950-52)

**Codes :**

- |     | (a) | (b) | (c) | (d) |
|-----|-----|-----|-----|-----|
| (A) | 4   | 2   | 1   | 3   |
| (B) | 1   | 3   | 4   | 2   |
| (C) | 3   | 4   | 2   | 1   |
| (D) | 4   | 1   | 3   | 2   |

89. Which of the following pair is not correctly matched ?

- (A) Lahore Proposal

—Fazl-ul-Haq

- (B) Pirpur Report

—Raj Mohammad Mehdi

- (C) People's Plan

—Vinobha Bhave

- (D) Gandhian Plan

—S.N. Agrawala

90. United Nation's highest environmental honour—'Champion of the Earth' award 2018 was conferred on—

- (A) Narendra Modi  
(B) Medha Patkar  
(C) Uma Bharti  
(D) Sonam Wangchuk

91. Who among the following was called as a 'Zindapir' ?

- (A) Bahadur Shah I  
(B) Shah Alam II  
(C) Aurangzeb  
(D) Adil Shah

92. Which of the following Union Territories of India has the lowest population density as per the census of 2011 ?

- (A) Andaman and Nicobar Islands  
(B) Lakshadweep  
(C) Daman and Diu  
(D) Dadra and Nagar Haveli

93. Which of the following city has not been identified as part of National Heritage City Development and Augmentation Yojana ?

- (A) Agra (B) Ajmer  
(C) Amravati (D) Amritsar

94. The nomenclature of rural local governments as 'Panchayati Raj' was the result of the suggestion of which Indian leader ?

- (A) Jawaharlal Nehru  
(B) Dr. Rajendra Prasad  
(C) Sardar Patel  
(D) M.K. Gandhi

95. Match List-I with List-II and select the correct answer using the codes given below :

**List-I**

(Committees)

- (a) P.K. Thungan  
(b) Ashok Mehta  
(c) B.R. Mehta  
(d) I.M. Singhvi

**List-II**

(Year)

- |         |         |
|---------|---------|
| 1. 1957 | 2. 1986 |
| 3. 1977 | 4. 1988 |

**Codes :**

- |     |     |     |     |     |
|-----|-----|-----|-----|-----|
|     | (a) | (b) | (c) | (d) |
| (A) | 1   | 3   | 4   | 2   |
| (B) | 2   | 1   | 3   | 4   |
| (C) | 4   | 1   | 2   | 3   |
| (D) | 4   | 3   | 1   | 2   |

96. Which of the following statement regarding Project Elephant launched by Government of India is **not** correct ?

- (A) It was launched in 1991-92.  
(B) It addresses issues of man-animal conflict.  
(C) Welfare of only wild elephants is taken care off.  
(D) It was launched as a centrally sponsored scheme

97. Who amongst the following has been appointed chief economist of International Monetary Fund ?

- (A) Gita Gopinath  
(B) Maurice Obstfeld  
(C) Christine Lagarde  
(D) Radha Paul

98. In which of the following place in Indian Vegetable Research Institute situated ?

- (A) Agra (B) Kanpur  
(C) Lucknow (D) Varanasi

99. Singrauli Small Hydro Power Project is located in—

- (A) Madhya Pradesh  
(B) Bihar  
(C) Chhattisgarh  
(D) Uttar Pradesh

100. Which of the following do not have a major reserve of Lignite.  
(A) Gujarat (B) West Bengal  
(C) Jharkhand (D) Puducherry

101. Lombok strait is located between which two islands ?

- (A) Bali and Lombok  
(B) Lombok and Sumbawa  
(C) Sumbawa and Java  
(D) Java and Bali

102. Cheruthoni Dam is situated on which river ?

- (A) Periyar (B) Pampar  
(C) Bhavani (D) Kabini

103. Which of the following is a warm current ?

- (A) Falkland Current  
(B) Brazil Current  
(C) Labrador Current  
(D) Canary Current

104. Which of the following imparts deep blue color to glass.

- (A) Cobalt oxide  
(B) Cupric oxide  
(C) Ferric oxide  
(D) Nickel oxide

105. The Indian Rupee was made fully convertible on current account in—

- (A) 1994 (B) 1995  
(C) 1996 (D) 1997

106. The highest coffee producing country is the World is—

- (A) Bolivia (B) Brazil  
(C) China (D) India

107. Consider the statements :

**Assertion (A) :** The British Government announced the Communal Award in August 1932.

**Reason (R) :** It allowed to each minority a number of seats in the legislature to be elected on the basis of a separate electorate.

Select the correct answer using the codes given below :

**Codes :**

- (A) Both (A) and (R) are true and (R) is the correct explanation of (A)  
(B) Both (A) and (R) are true but (R) is not the correct explanation of (A)  
(C) (A) is true but (R) is false.  
(D) (A) is false but (R) is true.
108. The catchment area of which of the following river is maximum ?  
(A) Mahananda  
(B) Sone  
(C) Ramganga  
(D) Gandak

109. Ramon Magsaysay Award 2018 was conferred on which of the following ?

- (A) Sonam Wangchuk  
(B) Aung San Suu Kyi  
(C) Malala Yousafzai  
(D) None of the above

110. Given below are two statements, one is labelled as Assertion (A) and the other as Reason (R).

**Assertion (A) :** In Satavahana period, Sanskrit along with Prakrit and other folk languages were developed.

**Reason (R) :** Satavahana Kings promoted the use of Sanskrit and other folk languages for literary writings.

Choose the correct answer using the codes given—

- (A) Both (A) and (R) are true and (R) is the correct explanation of (A)  
(B) Both (A) and (R) are true but (R) is not the correct explanation of (A)  
(C) (A) is true but (R) is false  
(D) (A) is false but (R) is true

111. Where was Darashukoh buried ?

- (A) Delhi  
(B) Agra  
(C) Aurangabad  
(D) Lahore

112. Aanchal Thakur won India's first ever International medal in which of these sports ?

- (A) Long Jump  
(B) Wrestling  
(C) Skiing  
(D) Chess

113. What percentage does Uttar Pradesh contribute to the Mentha oil production of India ?

- (A) 60% (B) 85%  
(C) 75% (D) 90%

114. Who among the following were the 'King makers' during Mughal period ?

- (A) Hussain Ali and Abdullah  
(B) Nasir Khan and Jakariya Khan  
(C) Shah Hussain and Abdul Hussain  
(D) Muhammad Zaman and Muhammad Junaidi

115. Match List-I with List-II and select the correct answer using the codes given below :

**List-I**  
(States)

- (a) Nagaland  
(b) Jharkhand  
(c) Telangana  
(d) Sikkim

**List-II**

(Year of coming to existence)

1. 2000      2. 1962  
3. 1975      4. 2014

**Codes :**

- |     | (a) | (b) | (c) | (d) |
|-----|-----|-----|-----|-----|
| (A) | 4   | 1   | 2   | 3   |
| (B) | 2   | 1   | 4   | 3   |
| (C) | 3   | 2   | 1   | 4   |
| (D) | 1   | 3   | 4   | 2   |

116. By which Act, the British Parliament had abolished the monopoly of East India Company's trade in India except Tea and China trade?  
(A) Charter Act of 1813  
(B) Charter Act of 1833  
(C) Charter Act of 1853  
(D) Charter Act of 1873
117. Which country has the lowest density of population?  
(A) Mongolia (B) Saudi Arabia  
(C) Iraq (D) Afghanistan
118. Loudness of sound is measured in terms of following—  
(A) Frequency  
(B) Amplitude  
(C) Velocity  
(D) Wavelength
119. Government of India in collaboration with Norwegian Government has established a centre for Biodiversity Policy and Law at—  
(A) Dehradun (B) Chennai  
(C) Shillong (D) New Delhi
120. Which of the following is not correctly matched?  
(A) Gold - Kolar  
(B) Coal - Jharia  
(C) Iron-ore - Guntur  
(D) Diamonds - Panna

**Answers with Hints**

1. (C) Tertiary is the sector that provides services to end consumer and to the primary and secondary sectors, and is considered the most important sector in the chain. Transportation, trade, communication, healthcare, food,

service, retail sales, advertising, entertainment, tourism, banking, law, etc. are all examples of tertiary activities.

2. (B) Alha is one of the heroes of the Alha-Khand poem, popularly recited in the Bundelkhand region of India. It may be based on a work Mahoba Khand which has been published with the title Parmal Raso.

- | (B) Battle         | Year |
|--------------------|------|
| Battle of Daurah   | 1532 |
| Battle of Chausa   | 1539 |
| Battle of Kannauj  | 1540 |
| Battle of Samugarh | 1658 |

4. (A) V.D. Savarkar—The Indian War of Independence

R.C. Majumdar—The Sepoy Mutiny and the Revolt of 1857

S.B. Chaudhari—Civil Rebellion in the Indian Mutinies (1857-59)

Ashok Mehta—The Great Rebellion

5. (D) Kerala is the major producer of Black Pepper and Cardamom. Kerala is called as the 'Queen of Spices'.

6. (A) Radiation is a method in which the transfer of heat takes place with the speed of light without affecting the intervening medium.

7. (B) Decomposers are the organisms that break down dead or decaying organism. They use organic substrates to get their energy, carbon and nutrients for growth and development.

8. (B) Gupta Gold coin was called as Dinara. The Guptas issued the largest number of gold coins in Ancient India, but in gold content, Gupta coins are not as pure as Kushanas.

9. (B)
- |         |                   |
|---------|-------------------|
| Diamond | → Carbon          |
| Marble  | → Calcium         |
| Sand    | → Silicon         |
| Ruby    | → Aluminium oxide |

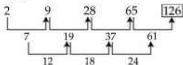
10. (A) Ashtadhyayi → Panini  
Mahabhashya → Patanjali  
Nirukta → Yaska  
Varttika → Katyayan

11. (A) A greenhouse gas is a gas that absorbs and emits radiant energy within the thermal infrared range. Greenhouse gases cause the green house effect.

Carbon dioxide, Chlorofluoro Carbon, Methane Water vapour, Nitrous oxide and Ozone are greenhouse gases.

12. (B) ∴  $7 \times 2 = 14$ ,  
 $14 \times 2 = 28$ ,  
 $28 \times 2 = 56$ ,  
 $1 \times 5 = 5$ ,  
 $5 \times 5 = 25$ ,  
 $25 \times 5 = 125$   
∴  $3 \times 4 = 12$ ,  
 $12 \times 4 = \square$   
 $48 \times 4 = 192$

13. (C) 14. (B) 15. (\*) 16. (A)  
17. (C)



18. (A)
19. (C) Chandigarh—818  
Dadra and Nagar Haveli—774  
Daman and Diu—610  
Lakshadweep—947
20. (C) Chad—Petroleum  
Niger—Uranium  
Rwanda—Coffee  
Benin—Cotton
21. (D) The National Capital Region (NCR) is a Central Planning region centered upon the National Capital Territory of Delhi in India. It encompasses the entire NCT of Delhi and several districts surrounding it from the states of Haryana, Uttar Pradesh and Rajasthan.
22. (A)
23. (D) The founding father of scientific management theory is Frederick W. Taylor (1856-1915). He was an American inventor and engineer. His two most important works were Shop Management (1903) and The Principles of Scientific Management (1911).

24. (C) Hypermetropia is also known as far-sightedness. A person with hypermetropia can see distant objects clearly but cannot see nearby objects distinctly. This is because the light rays from a close by object are focussed at a point behind the retina. A converging lens is used to cure this type of defect in the eye.

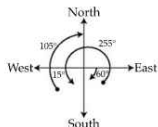


25. (B) Cripps Mission → 1942  
August Offer → 1940  
Nehru Report → 1928  
Wavell Plan → 1945

26. (D) In India, Kerala is the largest state producer of rubber.

27. (D) Mahavira was the 24th (last) Tirthankar of Jainism. At the age of 42, under a sal tree at Jimbhikagrama on the bank of river Rijupalika, Mahavira attained Kaivalya (Supreme Knowledge).

28. (C)



29. (D)

30. (A) According to Newton's third law of motion, 'To every action, there is an equal and opposite reaction.' Recoil of gun, motion of rocket, swimming are some examples of Newton's third law of motion.

31. (A) 'Baburnama' was first translated into English by John Leyden and William Erskine as memoirs of Zahir-Ud-Din Muhammad Babur.

32. (B) Stupa — Sanchi  
Painting — Bagh  
Headless Statue of Kaniska

- Mathura  
Dashavatara Temple — Deogarh

33. (C)

- Ballabhacharya → Pushtimarg  
Ramanuj → Vishishtadwait  
Madhvacharya → Dvaitadvait  
Shankar → Advaitadvait

34. (A) Article 326 of the Indian Constitution provides that the elections to the Lok Sabha (House of the People) and to the Legislative Assembly of every state shall be on the basis of adult suffrage, that is to say, a person should not be less than 21 years of age.

35. (C)

36. (C and D) 1235, 2425, 4235 are odd numbers and also multiples of 5 while 3158 is an even number. And, the sum of the digits of

1235, 2425, 3158 is odd while the sum of the digits of 4235 is even, so it is wrong.

37. (B) Bengalee

— Surendranath Banerjee  
Bangbasi — Jogendra Nath Bose  
Vande Mataram — Arvind Ghosh  
Amrit Bazar Patrika

— Motilal Ghosh

38. (B)

39. (A) When a ray of white light is passed through a prism, it splits into its constituent colours. This phenomenon is called as the dispersion of light. The coloured pattern obtained after dispersion is called spectrum. The different colours appear in the following order, Violet (V), Indigo (I), Blue (B), Green (G), Yellow (Y), Orange (O), Red (R). The deviation is maximum for violet colour and minimum for red colour.

40. (D)

41. (D) A quark is a type of elementary particle and a fundamental constituent of matter. Quarks combine to form composite particles called hadrons, the most stable of which are protons and neutrons, the components of atomic nuclei.

42. (A) 43. (D) 44. (A)

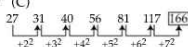
45. (C)

46. (C)  $9 + \boxed{9} + 12 = 30$

$$\boxed{13} + 10 + 7 = 30$$

$$8 + \boxed{11} + 11 = 30$$

47. (C)



48. (C)

49. (C) Chlorofluorocarbons are the green house gases which is responsible for the ozone layer depletion.

50. (B) Vitamin D synthesised by the ultra violet rays present in the sunlight through cholesterol (lrgesterol) of skin. Deficiency of Vitamin D cause Rickets (in children) and Osteomalasia (in adults). Its chemical name is Calciferol.

51. (D) Tuberculosis disease is caused by bacteria. While Measles, Rabies and Polio diseases are caused by Viruses.

52. (A)

53. (B) Goods and Services Tax is an indirect tax imposed in India on the supply of goods and services. In India, the tax came into effect from July 1, 2017. Goods and services are divided into four tax slabs for collection of tax—5%, 12%, 18% and 28%.

54. (B) National Dolphin Research Centre (NDRC) will be set up on the banks of the Ganga river in Patna University Campus in Patna, Capital of Bihar. It will India's and Asia's first Dolphin Research Centre.

55. (D) 56. (A) 57. (D) 58. (C) 59. (A)

60. (B)

61. (B)

- Black Pottery → Nizamabad  
Ceramic Pottery → Khurja  
Brass Artifact → Moradabad  
Glass Artifact → Firozabad

62. (A) 63. (C)

64. (C) The Reserve Bank of India was established under the Reserve Bank of India Act, 1934 on 1st April, 1935. It was nationalized on 1st January, 1949. It is the Central Bank of India. It regulates and controls the money of the country. It is the supreme monetary and banking authority in the country.

65. (C) 66. (B) 67. (B)

68. (A) Actor and former member of Parliament Jaya Prada has been appointed Goodwill Ambassador for tourism and culture by the Nepalese Government. The Ministry of Culture, Tourism and Civil Aviation of Nepal said Jaya Prada will be Goodwill Ambassador for four years.

69. (B)

70. (D) Part-16 of the Indian Constitution establishes that certain castes and tribes shall be represented in the Lok Sabha (the lower house in India's bicameral legislature) in proportion to their population.

71. (C) The balance of trade, commercial balance, or net exports, is the difference between the monetary value of a nation's exports and imports over a certain period.

72. (D) Battle of Chandawar → 1194  
Invasion of Taimur → 1398  
Battle of Talikota → 1565  
Battle of Ghaghra → 1529

73. (B) Chandigarh—86%  
Dadra and Nagar Haveli—76.2%  
Daman and Diu—87.10%  
Lakshadweep—91.80%
74. (B) Lake Malawi, also known as Lake Nyasa in Tanzania and Lago Niassa in Mozambique, is an African Great Lake and the southern most lake in the East African Rift System, located between Malawi, Mozambique and Tanzania.
75. (A) The 2018 Commonwealth Games, commonly known as Gold Coast 2018, were an international multisport event for members of the Commonwealth that were held on the Gold Coast, Queensland, Australia between 4-15 April 2018. Australia topped in the medal tally with 198 (80-Gold, 59 Silver, 59 Bronze) medals. India got third position with 66 (26 Gold, 20 Silver, 20 Bronze) medals.
76. (D) Bareilly in Uttar Pradesh is famous for Surma Industry. It is also famous for matchstick industry.
77. (B) A tariff is a tax on imports or exports between sovereign states. It is a form of regulation of foreign trade. It is a form of regulation of foreign trade. It is a policy that taxes foreign products to encourage or protect domestic industry.
78. (D)
79. (C) Village Rockstars, an Assamese language feature film by National Award-winning filmmakers Rima Das was selected as India's official entry for the best foreign language film category of the 2019 Oscar Awards.
80. (D) 81. (D)
82. (D) The Tharu people are an ethnic group indigenous to the southern foothills of the Himalayas, most of the Tharu people live in the Nepal Terai. Some Tharu groups also live in the Indian Terai, foremost in Uttarakhand, Uttar Pradesh and Bihar. They celebrate Diwali as a sorrow.
83. (B)
84. (C) Demetrius → Indo-Greek  
Rudradaman → Sythean  
Gondaphernes → Parthian  
Vim → Kushana
85. (B) Stainless steel is an alloy made by mixing iron (75%), Chromium (15%), Nickel (10%) and Carbon (05%). It is used for making utensils and surgical cutlery.
86. (C) Bombay Chronicle was an English Newspaper, published in 1913. It was started by Sir Pheroz Shah Mehta, a prominent lawyer, who later became the President of the Indian National Congress in 1890.
87. (A) Indian National Congress —1885  
Bharatiya Jan Sangh —1951  
Communist Party of India —1925  
A.I.A.D.M.K. —1972
88. (C) Harappa —Daya Ram Sahani (1923-24 & 1924-25)  
Hastinapur —B.B. Lal (1950-52)  
Takshashila —John Marshall (1913-34)  
Kaushambi —N.G. Majumdar (1936-37)
89. (C)
90. (A) On 26th September, 2018, Prime Minister Narendra Modi was awarded the United Nation's highest environmental honour 'Champion of the Earth' for his leadership of the International Solar Alliance and Pledge to eliminate single-use Plastic in India by 2022.
91. (C) Muhi-ud-Din Muhammad commonly known as Aurangzeb was the Sixth Mughal Emperor, who reigned for a period of 49 years from 1658 until his death in 1707. He is widely considered to be the last effective Mughal emperor. He was called Zinda Pir, the living saint.
92. (A) Andaman and Nicobar Islands—46  
Lakshadweep—2149  
Daman and Diu—2191  
Dadra and Nagar Haveli—700
93. (A) 94. (D)
95. (D) P.K. Thungan—1988  
Ashok Mehta—1977  
B.R. Mehta—1957  
L.M. Singhvi—1986
96. (C) Project Elephant was launched by the Government of India in the year 1992 as a Centrally Sponsored Scheme with the main objectives as to protect elephants, their habitat and corridors, to address issues of man-animal conflicts, and the welfare of captive elephants.
97. (A) Indian origin economist Gita Gopinath has become the chief economist of the International Monetary Fund and she is the first woman to hold the prestigious post. She was appointed in October 2018. Her research focuses on International Finance and Macroeconomist.
98. (D) 99. (A) 100. (C)
101. (A) Lombok strait is located between Bali and Lombok islands. It connects Java Sea and Indian Ocean.
102. (A) The Cheruthoni Dam, located in Idukki District, Kerala, India is a 138 M. tall concrete gravity dam, is situated on Periyar River. It was constructed as part of the Idukki Hydro-electric Project alongwith two other dams at Idukki and Kulamavu.
103. (B) Brazil current is a warm Current of Atlantic Ocean while Falkland Current, Labrador Current and Canary Current are the cold Currents of Atlantic Ocean.
- (A) 105. (A)
- (B) The highest coffee producing countries in the world are—(i) Brazil, (ii) Vietnam, (iii) Columbia, (iv) Indonesia, (v) Ethiopia, (vi) India.
- (C) The British Government announced the Communal Award on August 16, 1932. Besides containing provisions for representation of Muslims, Sikhs, and European, it envisaged communal representation of Depressed Classes also.
108. (B) Mahananda—20,600  
Sone—71,259  
Ramganga—30,641  
Gandak—46,300
109. (A) Ramon Magsaysay Award 2018 has been given to two Indian, Sonam Wangchuk and Bharat Vatwani. Sonam Wangchuk is an educational reformer from Ladakh. In 1988, he had founded Students Educational and Cultural Movement of Ladakh to Coach Poor Ladakhi Students. And Bharat Vatwani is a Psychiatrist who works for mentally-ill people living on the streets in Mumbai.
110. (C)

Continued on Page 178

(Held on 17-1-2019)









## General Awareness/Teaching & Research Aptitude

1. Knowledge of the teacher that affects teaching pertains to :  
(A) Affective domain  
(B) Cognitive domain  
(C) Connotative domain  
(D) Psychomotor domain
2. The most powerful factor affecting teaching effectiveness is :  
(A) Age  
(B) Gender  
(C) Professional competence  
(D) Use of teaching aids
3. The utilization of smart classroom facility depends upon :  
(A) Computer literacy  
(B) Literacy  
(C) Computer  
(D) Student's age
4. Types of resources available to a teacher for professional development and learning includes :  
1. Professional literature  
2. Colleagues  
3. Professional associations  
4. Professional development activities  
(A) only 1  
(B) only 2  
(C) 1, 2, 3 and 4  
(D) None of these
5. Which one of the following learner's characteristic not affects the efficiency of their learning ?  
(A) Mental maturity  
(B) Interest  
(C) Attitude  
(D) Gender
6. The group in which independent variable is present, is known as :  
(A) Desired group  
(B) Control group  
(C) Experimental group  
(D) Extraneous group
7. Research design is characterised as :  
(A) Exploration  
(B) Diagnosis  
(C) Experimentation  
(D) All of these
8. A researcher examines the relationship between a natural disaster and the behaviours occur in that context. It is an example of which type of research ?  
(A) Descriptive research  
(B) Experimental research  
(C) Simulation research  
(D) Correlational research
9. The operational definition of variable indicates as to how that variable may be :  
(A) Described (B) Measured  
(C) Explained (D) Observed
10. 'Longitudinal Studies' are a type of :  
(A) Historical Studies  
(B) Survey Studies  
(C) Developmental Studies  
(D) Philosophical Studies
11. Which of the following is not a type of research report ?  
(A) Thesis/Dissertation  
(B) Research paper  
(C) Text-Book of a subject  
(D) Conference / seminar research paper
12. Failure to acknowledge the borrowed material in thesis/dissertation/research paper is called :  
(A) Plagiarism  
(B) Foot note  
(C) Index  
(D) Acknowledgement

**Directions—**(Q. 13–15) Answer these questions based on the following passage :

"Social networking or social media has become an integral part of modern life. Social networking website such as facebook, twitter, myspace etc. have created new ways to socialise and interact. Users of these sites are able to add a wide variety of information to pages, to pursue common interests and to connect with others. However, social networking and online profiles contribute to this, but giving potential intruders a plethora of sensitive information. According to a survey more than twenty-five per cent children have online networking profiles, which can be exposed. Many users say that their profile is set to 'public', meaning there by everyone can see it and many of these display their address and/or phone numbers. As increasing amount of personal information are surfacing on the web, it is essential to remain wary of the risks surrounding the ease in which our personal details can be accessed. It is good to be wary about publishing your private information even if other people are happy to post pictures of their house or their contact details, remember what goes online, usually stays online."

Results of studies on the usage of social networking indicate that large number of youth is almost addicted to social media sites. Some even use sites at their workplace, where people who are addicted to social media would log on first thing in the morning. While the students claiming use of social media for the purpose of informal learning activities, only half of them use it to get in touch with their teacher in informal learning contexts. Despite spending more time in socialising with others rather than learning, they do not believe that it is affecting their academic performance."

13. Which of the following is an appropriate title of the passage ?  
 (A) Social media and youth  
 (B) Utility of social media  
 (C) Social media : A Boom  
 (D) Effects of social media
14. Which of the following statement is true ?  
 (A) Most of the people are happy to post pictures on social site  
 (B) Spending time on social media affects the academic performance of students  
 (C) Majority of youth is addicted to social media  
 (D) Only your acquaintances can see the posts on the social media
15. What do you think from the above passage that people other than youth are least likely to get addicted to social media ?  
 (A) Probably true  
 (B) True  
 (C) Probably false  
 (D) Can't say
16. Which one is not the type of communication according to direction of communication ?  
 (A) Downward (B) Upward  
 (C) Horizontal (D) Individual
17. Which of the following initiates the process of communication ?  
 (A) Decoder (B) Receiver  
 (C) Sender (D) Medium
18. Effective communication presupposes :  
 (A) Non-alignment  
 (B) Domination  
 (C) Understanding  
 (D) Passivity
19. If READ = 14 then LEARN = ?  
 (A) 18 (B) 20  
 (C) 25 (D) 27
20. P, Q, R and S are playing carrom. P, R and S, Q are partners. S is right to R and the face of R is towards the west then what will be the direction of the Q's face ?  
 (A) East (B) South  
 (C) North (D) West
21. Fill up the blank :  
 3, 7, 10, 14, ?  
 (A) 16 (B) 17  
 (C) 18 (D) 19
22. Which of the following is different from others ?  
 (A) TUVX (B) OPRS  
 (C) BCDF (D) HIJL
23. J is the mother of K, L is the son of J, M is the brother of N, N is the daughter of K, then who is the grand mother of M ?  
 (A) J (B) K  
 (C) L (D) M
24. If the proposition 'No men are honest' is taken to be false which of the following proposition can be claimed certainly true ?  
 (A) All men are honest  
 (B) Some men are honest  
 (C) Some men are not honest  
 (D) No honest person is man
25. Most of the Guitarists are beard males. If 'a' represents all the males and 'b' represents all guitarists then which is the correct diagram for their relation ?  
 (A)   
 (B)   
 (C)   
 (D) 
26. Which one of the following venn diagrams correctly illustrates the relationship among : carrot, food, vegetable ?  
 (A)   
 (B)   
 (C)   
 (D) 
27. Given below are two statements labelled as assertion A and reason R. In the context of these two, mark the correct answer.

**Assertion (A) :** Some idealists are fanatics.

**Reason (R) :** All reformers are idealist and some reformers are fanatics.

**Code :**

- (A) Both (A) and (R) are true and (R) gives correct explanation of (A)  
 (B) Both (A) and (R) are true but (R) does not give correct explanation of (A)  
 (C) (A) is true but (R) is false  
 (D) Both (A) and (R) are false

**Directions—(Q. 28 and 29)** Four students O, P, Q, R have appeared in the examination. There are four paper I, II, III, IV. The maximum marks of each paper was 100. Following are the marks obtained by students :

Students	I	II	III	IV
O	60	81	45	55
P	59	43	51	A*
Q	74	A*	71	65
R	72	76	A*	68

A\* = Absent

28. Which student has got 60–65% in the total of attempted paper ?  
 (A) O (B) P  
 (C) Q (D) R
29. Which student has got minimum average marks ?  
 (A) O (B) P  
 (C) Q (D) R

**Directions—(Q. 30 and 31)** Monthly expenditure of a family has been shown in the following pie chart :



30. What is the percentage of expenditure on education out of total monthly expenditure ?  
 (A) 70% (B) 90%  
 (C) 25% (D) 40%
31. If expenditure on food is ₹ 1500 then what will be the expenditure on cloth ?  
 (A) ₹ 360  
 (B) ₹ 700  
 (C) ₹ 900  
 (D) None of the above



32. The internet protocol address of each computer is :  
 (A) Unique  
 (B) Same  
 (C) Continuous  
 (D) Structured
33. What is the full form of B.C.R. as used in computer related activities ?  
 (A) Basic Copy Reader  
 (B) Binary Carbon Runtime  
 (C) Bar Code Reader  
 (D) Byte Command Reader
34. Which of the following is not an example of storage device ?  
 (A) C. D.  
 (B) D. V. D.  
 (C) Loop pattern  
 (D) Hard disk
35. What is 'Norton' ?  
 (A) Antivirus (B) Vaccine  
 (C) Program (D) Network
36. How internet banking can be accessed through ?  
 (A) Mobile with internet facility  
 (B) Laptop with internet facility  
 (C) Computer with internet facility  
 (D) All of these
37. Which of the following is not an input device ?  
 (A) Microphone  
 (B) Key board  
 (C) Mozilla fire box  
 (D) Mouse
38. The National Disaster Management authority functions under which union ministry ?  
 (A) Environment  
 (B) Water resources  
 (C) Home affairs  
 (D) Defence
39. At this juncture the development and environment have become :  
 (A) Opposite to each other  
 (B) Balanced to each other  
 (C) Complementary to each other  
 (D) Partner to each other
40. Result of deforestation is :  
 (A) Disturbance of natural balance  
 (B) Extinction of medicinal plants  
 (C) Rain-cycle becomes irregular  
 (D) All of these
41. Environmental management is related with :  
 (A) Preservation only  
 (B) Conservation only  
 (C) Both preservation and conservation  
 (D) Planning only
42. Which one of the following is not a natural hazard ?  
 (A) Earthquake  
 (B) Tsunami  
 (C) Flash flood  
 (D) Nuclear accidents
43. Given below are two sentences :  
 Assertion (A) and Reason (R). In the context of these two mark the correct code :  
**Assertion (A) :** Sustainable development is critical to well-being of human society.  
**Reason (R) :** Environmentally sound policies do not harm the environment or deplete the natural sources.  
**Code :**  
 (A) Both (A) and (R) are true and (R) is the correct explanation of (A)  
 (B) Both (A) and (R) are true but (R) is not a correct explanation of (A)  
 (C) (A) is true and (R) is false  
 (D) Both (A) and (R) are false
44. Which of the following statements are true about eco-system ?  
 1. Eco-system comprises both biotic and abiotic component  
 2. Solar radiation is the main driving force of eco-system  
 3. Eco-system is a closed system  
 4. Eco-system does not have its own productivity  
 (A) 1 and 2  
 (B) 2 and 3  
 (C) 1 and 3  
 (D) 3 and 4
45. Indira Gandhi National Open University was established in :  
 (A) 1980 (B) 1982  
 (C) 1985 (D) 1989
46. Teacher working for the rehabilitation of disabled children must register themselves with :  
 (A) N.C.T.E. (B) R.I.E.  
 (C) N.C.E.R.T. (D) R.C.I.
47. "The Indian Institute of advance studies" is situated in :  
 (A) Shimla (B) New Delhi  
 (C) Lucknow (D) Bhopal
48. According to revised grading pattern of NAAC, the highest grade is :  
 (A) A (B) A+  
 (C) A++ (D) B++
49. The regulatory body for distance education in India is :  
 (A) I.G.N.O.U. (B) C.B.S.E.  
 (C) A.I.C.T.E. (D) U.G.C.
50. Who was the first Chairman of University Grants Commission ?  
 (A) Dr. Manmohan Singh  
 (B) Prof. D. S. Kothari  
 (C) Prof. Yash Pal  
 (D) Prof. S. S. Bhatnagar

### Answers with Hints

1. (B) 2. (C) 3. (A) 4. (C) 5. (D)  
 6. (C) 7. (D) 8. (D) 9. (B) 10. (C)  
 11. (C) 12. (A) 13. (D) 14. (C) 15. (D)  
 16. (D) 17. (C) 18. (C)

19. (C) As,  

$$\begin{array}{ccccc} R & E & A & D \\ \downarrow & \downarrow & \downarrow & \downarrow \\ 18 & + & 5 & + & 1 & + & 4 & = & 28 \end{array}$$

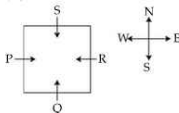
$\Rightarrow 28 - 2 = 14$

Same as,

$$\begin{array}{ccccccc} L & E & A & R & N \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 12 & + & 5 & + & 1 & + & 18 & + & 14 & = & 50 \end{array}$$

$\Rightarrow 50 - 2 = 25$

20. (C)



So, face of is in North direction.

21. (B)  

$$\begin{array}{ccccccc} 3 & 7 & 10 & 14 & 17 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ +4 & +3 & +4 & +3 & \end{array}$$

22. (B)  

$$\begin{array}{ccccccc} T & U & V & X & O & P & R & S \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ +1 & +1 & +2 & & +1 & +2 & +1 & \end{array}$$

$$\begin{array}{ccccccc} B & C & D & F & H & I & J & L \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ +1 & +1 & +2 & & +1 & +1 & +2 & \end{array}$$

So, OP RS is odd.

Continued on Page 150

(Held on 24-12-2017)

## General Studies

## Paper-I

1. Match List-I with List-II and select the correct answer using the code given below the lists—

## List-I

- (a) Al-Hilal  
(b) National Herald  
(c) Bombay Chronicle  
(d) Leader

## List-II

1. Madan Mohan Malviya  
2. Pheroze Shah Mehta  
3. Jawahar Lal Nehru  
4. Abul Kalam Azad

## Codes :

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 2 | 3   | 4   | 1   |
| (B) 3 | 4   | 1   | 2   |
| (C) 1 | 2   | 3   | 4   |
| (D) 4 | 3   | 2   | 1   |

2. Consider the following statements—

**Assertion (A) :** Congress boycotted the Simon Commission.

**Reason (R) :** Not a single member of Simon Commission was an Indian.

Select the correct answer using the code given below—

## Codes :

- (A) Both (A) and (R) are true and (R) is the correct explanation of (A)  
(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)  
(C) (A) is true, but (R) is false  
(D) (A) is false, but (R) is true
3. Which of the following pairs is not correctly matched ?

## Wars

## Treaty

- (A) First Carnatic War  
—Treaty of Aix-la-Chapelle  
(B) Second Carnatic War  
—Treaty of Pondicherry

- (C) First Anglo Mysore War  
—Treaty of Madras  
(D) Second Anglo Mysore War  
—Treaty of Srirangapatnam

4. 'All India Kissan Sabha' was formed at—

- (A) Barabanki (1918 A.D.)  
(B) Allahabad (1928 A.D.)  
(C) Lucknow (1936 A.D.)  
(D) Patna (1937 A.D.)

5. Consider the following events—

1. Guruvayur Satyagraha  
2. Vaikom Satyagraha  
3. Foundation of India's Independent Labour Party

Select the correct chronological order of above events from the code given below—

## Codes :

- (A) 1, 2, 3 (B) 2, 1, 3  
(C) 2, 3, 1 (D) 3, 2, 1

6. The cultivation of which of the following crops is not mentioned in Ain-i-Akbari ?

- (A) Onion (B) Tomato  
(C) Potato (D) Garlic

7. Consider the following events—

1. Gandhi-Irwin Pact  
2. Communal Award  
3. Second Round Table Conference

4. Nehru Report

Arrange the above events in chronological order of their occurrence and select the correct answer from the code given below—

## Codes :

- (A) 3, 2, 1, 4  
(B) 3, 1, 4, 2  
(C) 4, 3, 2, 1  
(D) 4, 1, 3, 2

8. Who among the following started the Public Works Department in India ?

- (A) Lord William Bentinck  
(B) Lord Dalhousie  
(C) Lord Wellesley  
(D) Lord Cornwallis

9. The Governor General who annexed Sindh in British India was—

- (A) Lord Auckland  
(B) Lord Hastings  
(C) Lord Ellenborough  
(D) Lord Dalhousie

10. With reference to the reservation of seats for women in Panchayati Raj Institutions which of the following statements is/are correct ?

1. It is provided for in Art. 243 D(3) of the Constitution.  
2. The reservation shall cease to have effect on the expiration of the period specified in Art. 334.

Select the correct answer using the code given below—

- (A) 1 only  
(B) 2 only  
(C) Both 1 and 2  
(D) Neither 1 nor 2

11. The term of 5 years of a Panchayat commences from—  
(A) the date of election  
(B) the date of declaration of results  
(C) the date appointed for its first meeting  
(D) None of the above

12. Which one of the following pairs is not correctly matched ?

**Organisation**      **Year of Foundation (A.D.)**

- (A) Indian National Association —1936  
(B) Congress Socialist Party —1934

- (C) All India Forward Bloc  
—1939  
(D) All India States People's Conference  
—1927
13. In which of the following States, will Part IX of the Constitution not apply unless extended through a resolution by the State Assembly concerned?
1. Meghalaya
  2. Odisha
  3. Mizoram
  4. Nagaland
- Select the correct answer from the code given below—
- Codes :**
- (A) 1, 2 and 3
  - (B) 1, 3 and 4
  - (C) 2, 3 and 4
  - (D) 1, 2 and 4
14. Match List-I with List-II and select the correct answer using the code given below the lists—
- List-I**
- (a) Right to Education
  - (b) Nagar Panchayat
  - (c) Panchayat Raj Elections
  - (d) Service Tax
- List-II**
1. 73rd Amendment
  2. 74th Amendment
  3. 86th Amendment
  4. 88th Amendment
- Codes :**
- |     | (a) | (b) | (c) | (d) |
|-----|-----|-----|-----|-----|
| (A) | 3   | 1   | 2   | 4   |
| (B) | 4   | 1   | 2   | 3   |
| (C) | 4   | 2   | 1   | 3   |
| (D) | 3   | 2   | 1   | 4   |
15. The final authority to expound the Indian Constitution is—
- (A) Supreme Court
  - (B) Prime Minister
  - (C) President
  - (D) Parliament
16. Under which Article of the Indian Constitution has the Supreme Court the power to review its own judgement and order?
- (A) Article 135
  - (B) Article 136
  - (C) Article 137
  - (D) Article 138
17. Which of the following is not included in the recommendations of the Sarkaria Commission?
- (A) Active politicians should not be appointed as Governor
  - (B) Governor should be selected from a panel of names given by the State Government
  - (C) Retiring Governors should be debarred from accepting any office of profit
  - (D) Any one belonging to the ruling party at the Centre should not be appointed as Governor in an opposition-ruled State
18. Consider the following statements—
1. The Seventh Schedule of the Constitution distributes legislative powers between Union and the States.
  2. The Eleventh Schedule of the Constitution is related to devolution of powers to Panchayats.
- Select the correct statement/s from the code given below—
- Codes :**
- (A) 1 only
  - (B) 2 only
  - (C) Both 1 and 2
  - (D) Neither 1 nor 2
19. Which of the following statements about the Speaker of the Lok Sabha is not correct?
- (A) He has the power to summon the House even after prorogation
  - (B) He has the power to adjourn the House sine die
  - (C) He shall not vacate his office until immediately before the first meeting of the new House after the dissolution
  - (D) He may resign his office by writing to the Deputy Speaker
20. Which of the following pairs is not correctly matched?
- (A) Money Bill—Article 110
  - (B) President's rule in States—Article 356
  - (C) Judicial Review—Article 243
  - (D) Uniform Civil Code—Article 44
21. Who appoints the State Election Commissioner?
- (A) President
  - (B) Governor
  - (C) Chief Election Commissioner
  - (D) Chief Minister
22. Consider the following statements—
- Assertion (A) :** The President is part of the Parliament.  
**Reason (R) :** A Bill passed by the Parliament cannot become law without the assent of the President.
- Select the correct answer using the code given below—
- Codes :**
- (A) Both (A) and (R) are true and (R) is the correct explanation of (A)
  - (B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)
  - (C) (A) is true, but (R) is false
  - (D) (A) is false, but (R) is true
23. Consider the following statements—
- Assertion (A) :** The State of Jammu and Kashmir enjoys a special status under the Constitution.  
**Reason (R) :** It was accorded by the Indian Independence Act of 1947.
- Select the correct answer using the code given below—
- Codes :**
- (A) Both (A) and (R) are true and (R) is the correct explanation of (A)
  - (B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)
  - (C) (A) is true, but (R) is false
  - (D) (A) is false, but (R) is true
24. Which of the following Articles were first inserted and later repealed from the Constitution of India?
1. 32-A
  2. 51-A
  3. 131-A
  4. 257-A
- Select the correct answer using the code given below—
- Code :**
- (A) 1, 2 and 3
  - (B) 1 and 2
  - (C) 2 and 3
  - (D) 1, 3 and 4
25. Match List-I with List-II and select the correct answer using the code given below the lists—

39. A committee of Chief Ministers on digital payments was set up by NITI Aayog in 2016 under the chairmanship of—  
 (A) Devendra Fadnavis  
 (B) N. Chandrababu Naidu  
 (C) Manohar Lal Khattar  
 (D) Shivraj Singh Chauhan
40. 'DIPAM' is a department under the Ministry of—  
 (A) Finance  
 (B) New and Renewable Energy  
 (C) Human Resource Management  
 (D) Skill development and Entrepreneurship
41. As per Census 2011, in which of the following group of states is urbanization level high but the incidence of slums is comparatively low ?  
 (A) Gujarat, Maharashtra and Tamil Nadu  
 (B) Kerala, Tamil Nadu and West Bengal  
 (C) Karnataka, Delhi and Kerala  
 (D) Gujarat, Kerala and Karnataka
42. According to the Global Income Inequality Report 2017 published by Oxfam International, the world's richest 8 persons own the same wealth as world's poorest—  
 (A) 40 per cent  
 (B) 50 per cent  
 (C) 20 per cent  
 (D) 30 per cent
43. Which one of the following statements is not true about 'stand - up India' scheme of the union government ?  
 (A) It facilitates bank loans between ₹ 10 lakh and ₹ 1 crore to beneficiaries  
 (B) It is meant for setting up a greenfield enterprise  
 (C) It was launched on April 5, 2017  
 (D) In case of non-individual enterprises at least 51% of the shareholding and controlling stake should be held either by an SC/ST or a woman entrepreneur
44. The concept of 'sustainable development' was first introduced in the—  
 (A) Report of World Commission on Environment and Development, 1987  
 (B) Report of United Nations' Conference on Environment and Development, 1992  
 (C) Report of World Summit on Sustainable Development, 2002  
 (D) None of the above
45. As per Census 2011 of India, the sex-ratio in Uttar Pradesh is—  
 (A) 912 (B) 925  
 (C) 935 (D) 940
46. Sustainable development emphasizes upon the—  
 (A) humanity to ensure that development must meet the needs of the present at any cost  
 (B) humanity to ensure that development meets primarily the needs of the future  
 (C) humanity to ensure that development meets the needs of the present ignoring the needs of future generations  
 (D) humanity to ensure that development meets the needs of the present without compromising the availability of resources to future generations
47. Which of the following statements is incorrect about 'Global Human Capital Report' ?  
 (A) It is released by World Economic Forum  
 (B) The first report was released in 2013 A.D.  
 (C) In its 2017 report presented in September 2017, 132 countries have been ranked  
 (D) In the 2017 report, India's rank is 103rd
48. In which of the following fields was, the first cooperative movement in India initiated ?  
 (A) Agricultural marketing  
 (B) Agricultural credit  
 (C) Consumer cooperation  
 (D) None of the above
49. Which of the following programmes aims at the promotion of education among women ?  
 (A) Rashtriya Mahila Kosh  
 (B) Indira Mahila Yojana  
 (C) Mahila Samakhyas Programme  
 (D) Mahila Samridhi Programme
50. 'Government e-marketplace' (GEM) has been launched by the Ministry of—  
 (A) Commerce and Industry  
 (B) Micro, Small and Medium Enterprises  
 (C) Communication and Information Technology  
 (D) Environment, Forest and Climate Change
51. As per Census 2011 the urban population of India as a percentage of total population is between—  
 (A) 28-30 per cent  
 (B) 30-32 per cent  
 (C) 32-35 per cent  
 (D) 35-38 per cent
52. Consider the following statements—  
**Assertion (A) :** Without sustainable economic growth, social development is not possible.  
**Reason (R) :** Social development presupposes sound economic growth.  
 Select the correct answer using the codes given below—  
**Code :**  
 (A) Both (A) and (R) are true and (R) is the correct explanation of (A)  
 (B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)  
 (C) (A) is true, but (R) is false  
 (D) (A) is false, but (R) is true
53. In which year was Ministry of Environment was set up in India ?  
 (A) 1970 A.D. (B) 1975 A.D.  
 (C) 1980 A.D. (D) 1985 A.D.
54. A new categorization of industries based on their pollution load, that was released by the Ministry of Environment, Forest and Climate Change in March 2016, does not include which of the following colour categories ?  
 (A) Blue (B) Green  
 (C) Red (D) White
55. In which year was 'Biodiversity Act' passed in India ?  
 (A) 1998 A.D.  
 (B) 2000 A.D.  
 (C) 2002 A.D.  
 (D) 2004 A.D.



56. Which one of the following pairs is not correctly matched ?

(A) Ganga Dolphin Sanctuary  
—Sant Kabir Nagar  
(B) Indian Veterinary Research  
Institute —Bareilly  
(C) Bird Sanctuary —Bharatpur  
(D) National Dairy Research  
Institute —Karnal

57. Which of the following National Parks has started using unmanned aerial vehicle for wildlife management ?

(A) Corbett Tiger Reserve  
(B) Bandipur  
(C) Ranthambore  
(D) Periyar

58. Biodiversity is described as—

(A) the way species differ from one another  
(B) the seasonal and daily changes in the environment  
(C) the influence of physical factors on an environment  
(D) the range of different species in an environment

59. Consider the following statements—

**Assertion (A) :** The loss of forest cover in India has been directly associated with demographic transition in India.

**Reason (R) :** The forest cover is generally negatively related with population growth.

Select the correct answer using the code given below—

**Codes :**

(A) Both (A) and (R) are true and (R) is the correct explanation of (A)

(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)

(C) (A) is true, but (R) is false

(D) (A) is false, but (R) is true

60. An area for a National Park, Sanctuary or Biosphere reserve is decided on the basis of—

(A) forest area and fresh water resources  
(B) ecosystem management perspective  
(C) germplasm bank and zoological significance  
(D) species richness, diversity and species-area relationship

61. Which of the following components of ecosystem acts as intermediary between biotic and abiotic kingdoms ?

(A) Producer  
(B) Consumer  
(C) Decomposer  
(D) The habitat

62. Which of the following is not a cause of climate change ?

(A) Difference in the heating and cooling of continents and oceans  
(B) Variations in the Sun's energy reaching the earth  
(C) Changes in the reflectivity of the earth's atmosphere and surface  
(D) Changes in the greenhouse effect

63. National Biodiversity Authority has its headquarters at—

(A) Bengaluru  
(B) Chennai  
(C) Hyderabad  
(D) New Delhi

64. In the lake ecology, nutrient enrichment process is termed as—

(A) Biological Oxygen Demand (BOD)  
(B) Allelopathy  
(C) Bio-magnification  
(D) Eutrophication

65. Match List-I with List-II and select the correct answer using the code given below the lists—

**List-I**

(a) Delhi  
(b) Mumbai  
(c) Jodhpur  
(d) Shillong

**List-II**

1. Arid  
2. Semi-arid  
3. Warm humid  
4. Humid

**Codes :**

	(a)	(b)	(c)	(d)
(A)	1	3	2	4
(B)	3	4	2	1
(C)	2	3	1	4
(D)	4	3	1	2

66. Consider the following statements—

**Assertion (A) :** Aerosols have potential for modifying the climate.

**Reason (R) :** Aerosols interact with both shortwave and infra-red radiations.

Select the correct answer using the code given below—

**Codes :**

(A) Both (A) and (R) are correct and (R) is the correct explanation of (A)

(B) Both (A) and (R) are correct, but (R) is not the correct explanation of (A)

(C) (A) is true, but (R) is false

(D) (A) is false, but (R) is true

67. Which of the following is not covered in eight missions under the 'Climate Action Plan' of Government of India ?

(A) Solar power  
(B) Waste to energy conversion  
(C) Nuclear power  
(D) Afforestation

68. Consider the following statements—

**Assertion (A) :** Pyramid of energy is always upright.

**Reason (R) :** When energy flows from one trophic level to the next, some energy is always gained at each step.

Select the correct answer using the code given below—

**Codes :**

(A) Both (A) and (R) are true and (R) is the correct explanation of (A)

(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)

(C) (A) is true, but (R) is false

(D) (A) is false, but (R) is true

69. Match List-I with List-II and select the correct answer using the code given below the lists—

**List-I**

(a) Cryopreservation  
(b) Earthquake  
(c) Biosphere reserve  
(d) Red data Book

**List-II**

1. Special category of protected area  
2. Record of threatened species  
3. Storage at extremely low temperature  
4. Epicentre

**Codes :**

	(a)	(b)	(c)	(d)
(A)	1	3	2	4
(B)	3	4	1	2
(C)	2	4	1	3
(D)	4	2	3	1

70. The number of agro-climatic zones in India under National Agricultural Research Project is—  
(A) 100 (B) 110  
(C) 120 (D) 127
71. The United Nations has declared the decade 2011-20 as the UN decade of—  
(A) biodiversity  
(B) eradication of poverty  
(C) water for all  
(D) sustainable energy for all
72. Which one of the following is man-modified ecology?  
(A) Forest  
(B) Desert  
(C) Agricultural land  
(D) Grassland
73. The reason/s for the decrease in biodiversity is/are—  
(A) habitat pollution and destruction only  
(B) introduction of exotic species only  
(C) over exploitation only  
(D) All of the above
74. A communication satellite is launched from the surface of earth along the direction—  
(A) South to North  
(B) North to South  
(C) West to East  
(D) East to West
75. 'Man and Biosphere' programme was started by—  
(A) UNICEF (B) UNESCO  
(C) IMF (D) WHO
76. Which one of the following pairs is not correctly matched?  
(A) Light year—Unit of distance  
(B) Parsec—Unit of time  
(C) Decibel  
—Unit of sound intensity  
(D) Hertz—Unit of frequency
77. Consider earth as a sphere. If it is contracted suddenly to half of its radius without changes in its shape and mass, the day of 24 hours will now be of—

- (A) 24 hours (B) 18 hours  
(C) 12 hours (D) 6 hours

78. Match List-I with List-II and select the correct answer using the code given below the lists—

**List-I**

- (a) Mirage  
(b) Colour of soap water films  
(c) Blue colour of sky  
(d) Spectrum seen through prisms

**List-II**

1. Total internal reflection  
2. Interference  
3. Scattering  
4. Dispersion

**Codes :**

	(a)	(b)	(c)	(d)
(A)	1	2	3	4
(B)	2	3	4	1
(C)	3	4	1	2
(D)	4	1	2	3

79. Which one of the following elements does not occur in a free state in nature?  
(A) Carbon  
(B) Silver  
(C) Silicon  
(D) Sulphur
80. Which one of the following pairs of vitamins act as antioxidants?  
(A) Vitamin A and Vitamin C  
(B) Vitamin C and Vitamin E  
(C) Vitamin B<sub>2</sub> and Vitamin D  
(D) Vitamin E and Vitamin K
81. Which one of the following pairs is not correctly matched?  
(A) Washing soda  
—Sodium carbonate  
(B) Baking soda  
—Sodium hydrogen carbonate  
(C) Blue vitriol  
—Copper sulphate  
(D) Plaster of Paris  
—Calcium carbonate

82. Consider the following statements—  
**Assertion (A) :** The electrical conductivity of semiconductors increases with rise of temperature.

**Reason (R) :** Semiconductors possess a negative temperature coefficient of resistance.  
Select the correct answer using the code given below—

**Codes :**

- (A) Both (A) and (R) are true and (R) is the correct explanation of (A)

- (B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)

- (C) (A) is true, but (R) is false  
(D) (A) is false, but (R) is true

83. Which one of the following pairs is not correctly matched?

- (A) Barbituric acid —Herbicide  
(B) Chloramphenicol

- Antibiotic  
(C) Morphine —Analgesic  
(D) Quinine —Antimalarial

84. Consider the following statements—

**Assertion (A) :** Vitamin B<sub>12</sub> is not found in green leafy vegetables.

**Reason (R) :** Vitamin B<sub>12</sub> is found in foods of animal origin.

Select the correct answer from the code given below—

**Codes :**

- (A) Both (A) and (R) are true and (R) is the correct explanation of (A)

- (B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)

- (C) (A) is true, but (R) is false  
(D) (A) is false, but (R) is true

85. Consider the following statements—

**Assertion (A) :** Mycorrhizal association is an example of parasitism.

**Reason (R) :** It is an association between root of a plant and a fungus.

Select the correct answer from the code given below—

**Codes :**

- (A) Both (A) and (R) are true and (R) is the correct explanation of (A)

- (B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)

- (C) (A) is true, but (R) is false  
(D) (A) is false, but (R) is true

86. Khaira disease of Rice crop is due to the deficiency of—

- (A) Ca (B) Zn  
(C) Fe (D) Cu

87. Match List-I with List-II and select the correct answer using the code given below the lists—

**List-I**

- Prop root
- Stilt root
- Assimilatory root
- Haustoria

**List-II**

- cuscuta
- tinispora
- maize
- banyan

**Codes :**

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 4 | 3   | 2   | 1   |
| (B) 3 | 4   | 2   | 1   |
| (C) 2 | 3   | 1   | 4   |
| (D) 1 | 2   | 3   | 4   |

88. Match List-I with List-II and select the correct answer using the code given below the lists—

**List-I**

- Acetic acid
- Citric acid
- Lactic acid
- Formic acid

**List-II**

- Ant sting
- Sour milk
- Vinegar
- Orange

**Codes :**

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 1 | 2   | 3   | 4   |
| (B) 4 | 3   | 2   | 1   |
| (C) 3 | 4   | 2   | 1   |
| (D) 3 | 4   | 1   | 2   |

89. Match List-I with List-II and select the correct answer using the code given below the lists—

**List-I**

- Fusiform
- Napiform
- Conical
- Tuberosus

**List-II**

- Carrot
- Radish
- Turnip
- Dahlia

**Codes :**

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 1 | 3   | 4   | 2   |
| (B) 2 | 3   | 1   | 4   |
| (C) 3 | 4   | 2   | 1   |
| (D) 4 | 1   | 2   | 3   |

90. Arrange the following species in chronological order of their evolution—

- Amphibia
- Fishes
- Reptiles
- Birds

Select the correct answer from the code given below—

**Codes :**

- 1, 2, 4, 3
- 2, 1, 4, 3
- 2, 1, 3, 4
- 4, 1, 3, 2

91. Formation of RNA from DNA is called—

- Translation
- Translocation
- Transition
- Transcription

92. With reference to haemoglobin, which of the following statements are correct ?

- It carries oxygen in the blood.
- It is an iron containing compound.
- It provides immunity against certain diseases.
- It imparts red colour to the blood.

Select the correct answer from the code given below—

**Codes :**

- 1, 2 and 3
- 1, 2 and 4
- 1, 3 and 4
- 2, 3 and 4

93. Match List-I with List-II and select the correct answer using the code given below the lists—

**List-I**

- Kala-azar
- Sleeping-sickness
- Dengue fever
- Filariasis

**List-II**

- Tsetse fly
- Culex mosquito
- Sand fly
- Aedes mosquito

**Codes :**

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 3 | 1   | 4   | 2   |
| (B) 3 | 1   | 2   | 4   |
| (C) 3 | 4   | 2   | 1   |
| (D) 4 | 3   | 1   | 2   |

94. The pigment that protects plants from damage by UV radiation is—

- Xanthophyll
- Chlorophyll
- Carotenoid
- Phycocyan

95. Match List-I with List-II and select the correct answer using the code given below the lists—

**List-I**

(National Park)

- Manas
- Valmiki
- Salim Ali
- Sultanpur

**List-II**

(State)

- Haryana
- Jammu and Kashmir
- Bihar
- Assam

**Codes :**

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 1 | 2   | 3   | 4   |
| (B) 3 | 4   | 1   | 2   |
| (C) 2 | 1   | 4   | 3   |
| (D) 4 | 3   | 2   | 1   |

96. Which one of the following pairs is not correctly matched ?

**Tribes**

**Places**

- |                      |                  |
|----------------------|------------------|
| (A) Kol              | — Rewa           |
| (B) Madiya and Mudia | — Pauri Garhwal  |
| (C) Kodagu           | — Korba          |
| (D) Uraon            | — Ranchi plateau |

97. Match List-I with List-II and select the correct answer using the code given below the lists—

**List-I**

(Wetland)

- Bhitarkanika
- Sasthamkotta Lake
- Kanjli
- Deepor Beel

**List-II**

(State)

- Punjab
- Assam
- Odisha
- Kerala

**Codes :**

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 3 | 4   | 1   | 2   |
| (B) 3 | 4   | 2   | 1   |
| (C) 4 | 3   | 2   | 1   |
| (D) 4 | 1   | 3   | 2   |

98. Which of the following regions of India lies in the moderate danger risk zone of earthquakes ?

- Kutch Region of Gujarat
- Northern Punjab
- South-eastern Rajasthan
- Western Uttar Pradesh

99. Which one of the following pairs is not correctly matched ?

**Hotspring**

**State**

- |                |                    |
|----------------|--------------------|
| (A) Bakreshwar | — West Bengal      |
| (B) Gauri Kund | — Uttarakhand      |
| (C) Manikaran  | — Himachal Pradesh |
| (D) Deulajhari | — Sikkim           |

100. Which one of the following parts of human brain plays a role in the regulation of body temperature?

(A) Cerebellum  
(B) Hippocampus  
(C) Hypothalamus  
(D) Medulla Oblongata

101. Consider the following statements—

- In Russia, density of population is low and most of it is concentrated in the east part of Ural.
- Most big cities of Russia are located in European Russia.
- Russia is the most populous nation of the northern hemisphere.
- Russia is a multicultural state.

Of the above, the correct statements are—

- (A) Only 1, 2 and 3  
(B) Only 2 and 4  
(C) Only 2, 3 and 4  
(D) All the statements are correct

102. Which among the following statements is not correct?

- (A) Bass strait lies between Australia and Tasmania  
(B) Torres strait lies between Australia and New Guinea  
(C) Cook strait separates the two major islands of New Zealand  
(D) Great Australian Bight lies in the east of Australia

103. Match List-I with List-II and select the correct answer using the code given below the lists—

**List-I**  
(River)

- (a) Yarra  
(b) Seine  
(c) Sumida  
(d) Pearl

**List-II**  
(City)

1. Tokyo  
2. Hong Kong  
3. Melbourne  
4. Paris

**Codes :**

- |     | (a) | (b) | (c) | (d) |
|-----|-----|-----|-----|-----|
| (A) | 1   | 2   | 4   | 3   |
| (B) | 3   | 4   | 1   | 2   |
| (C) | 3   | 4   | 2   | 1   |
| (D) | 4   | 1   | 3   | 2   |

104. Which of the following are neighbouring countries of Slovakia?

- Serbia
- Czech Republic
- Hungary
- Austria

Select the correct answer using the code given below—

**Codes :**

- (A) 1, 2 and 4  
(B) 1, 2 and 3  
(C) 2, 3 and 4  
(D) 1, 3 and 4

105. Arrange the following four states of India in descending order of the level of their urbanization (as per Census 2011)—

- Goa
- Mizoram
- Tamil Nadu
- Kerala

Select the correct answer using the code given below—

**Codes :**

- (A) 1, 2, 3, 4 (B) 1, 2, 4, 3  
(C) 2, 1, 3, 4 (D) 2, 4, 1, 3

106. Consider the following statements—

**Assertion (A) :** India is one of the fastest growing pharmaceutical markets in the world.

**Reason (R) :** India has largest number of manufacturing facilities approved by FDA of USA.

Select the correct answer using the code given below—

**Codes :**

- (A) Both (A) and (R) are true and (R) is the correct explanation of (A)  
(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)  
(C) (A) is true, but (R) is false  
(D) (A) is false, but (R) is true

107. According to AISTA report for the year 2015-16, which of the following states was the largest producer of sugar in India?

- (A) Uttar Pradesh  
(B) Karnataka  
(C) Tamil Nadu  
(D) Maharashtra

108. Which one of the following pairs is not correctly matched?

**Energy Type**

**Power Station**

- (A) Solar — Mount Abu  
(B) Wind — Muppandal  
(C) Hydroel — Kundakulam etric  
(D) Thermal — Patratu

109. Match List-I with List-II and select the correct answer using the code given below the lists—

**List-I**  
(Mineral)

- (a) Granite  
(b) Dolomite  
(c) Silica Sand  
(d) Bauxite

**List-II**

(Major Area of Occurrence)

- Son Bhadra
- Chitrakut
- Banda
- Allahabad

**Codes :**

- |     | (a) | (b) | (c) | (d) |
|-----|-----|-----|-----|-----|
| (A) | 1   | 2   | 3   | 4   |
| (B) | 3   | 1   | 4   | 2   |
| (C) | 2   | 3   | 1   | 4   |
| (D) | 4   | 2   | 3   | 1   |

110. Consider the following statements—

**Assertion (A) :** The circum-Pacific belt is the most vulnerable zone of a tsunami.

**Reason (R) :** This belt is most active tectonically and generates world's major earthquakes.

Select the correct answer using the code given below—

**Codes :**

- (A) Both (A) and (R) are correct and (R) is the correct explanation of (A)  
(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)  
(C) (A) is true, but (R) is false  
(D) (A) is false, but (R) is true



111. In 2016, which of the following countries was the largest producer of coffee in the world ?  
(A) Brazil (B) Colombia  
(C) India (D) Vietnam

112. Which of the following is the correct sequence in descending order of the three coal producing countries in 2016 ?  
(A) China, Australia, United States  
(B) United States, China, Australia  
(C) Australia, China, United States  
(D) China, United States, Australia

113. Match List-I with List-II and select the correct answer using the code given below the lists—

**List-I**

(Place)

- (a) Los Angeles  
(b) Boston  
(c) Philadelphia  
(d) San Diego

**List-II**

(Industry)

1. Film industry  
2. Cotton Textiles  
3. Ship building  
4. Printing and Publishing

**Codes :**

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 1 | 2   | 3   | 4   |
| (B) 1 | 2   | 4   | 3   |
| (C) 2 | 3   | 1   | 4   |
| (D) 4 | 2   | 3   | 1   |

114. In 2015-16, which of the following countries was the largest producer of wheat in the world ?  
(A) India (B) Russia  
(C) China (D) U.S.A.

115. Match List-I with List-II and select the correct answer using the code given below the lists—

**List-I**

(Mineral)

- (a) Tin (b) Manganese  
(c) Copper (d) Bauxite

**List-II**

(Producer)

1. Australia  
2. Chile  
3. South Africa  
4. China

**Codes :**

- |       |     |     |     |
|-------|-----|-----|-----|
| (a)   | (b) | (c) | (d) |
| (A) 4 | 3   | 2   | 1   |
| (B) 1 | 2   | 3   | 4   |
| (C) 2 | 1   | 4   | 3   |
| (D) 3 | 4   | 1   | 2   |

116. Consider the following statements about agriculture and food industry in India—

1. India is the largest producer of fruits in the world.
2. It is the largest producer of milk in the world.
3. India has the largest population of Buffalo.
4. India ranks second in vegetable production in the world.

Of the above, the correct statements are—

- (A) Only 1, 2 and 3  
(B) Only 1, 2 and 4  
(C) Only 2, 3 and 4  
(D) All the above statements are correct

117. The 9th annual BRICS Summit was held in—  
(A) Beijing (B) Chongqing  
(C) Tianjin (D) Xiamen

118. Which of the following has, as per announcement made in August 2017, passport-applicants to choose gender-neutral 'X' option ?  
(A) USA (B) Sweden  
(C) Canada (D) UK

119. Which one of the following hurricanes hit USA in August 2017 ?  
(A) Amelia  
(B) Allison  
(C) Claudette  
(D) Harvey

120. The Citizens Foundation, which has been awarded the UNESCO Confucius Prize for Literacy, 2017, is from—  
(A) Pakistan  
(B) Colombia  
(C) China  
(D) South Africa

121. Which of the following are included in the new UN sanctions against North Korea as approved in September 2017 ?

1. Ban on import of crude oil from North Korea.

2. Ban on export of textiles from North Korea.
3. Ban on joint ventures with North Korea.

Of the above, the correct statements are—

- (A) 1 and 2 only  
(B) 2 and 3 only  
(C) 1 and 3 only  
(D) 1, 2 and 3

122. Who among the following has been placed on the top of 2017 list of Fortune's '40-under-40' ?  
(A) Leo Varadkar  
(B) Mark Zuckerberg  
(C) Emmanuel Macron  
(D) Serena Williams

123. Which of the following has been declared by UNESCO to be 'India's First World Heritage City' ?  
(A) Ahmedabad  
(B) Mathura  
(C) Udaipur  
(D) Ujjain

124. Which of the following states launched 'Indira Canteen' for urban poor on August 16, 2017 ?  
(A) Punjab  
(B) Himachal Pradesh  
(C) Karnataka  
(D) Kerala

125. Blue Whale challenge is—  
(A) Chinese challenge to Philippine's fishermen in South China Sea  
(B) internet based social network game  
(C) conserving blue whales in Indian Ocean  
(D) saving ships in the Atlantic Ocean from huge blue whales

126. Who among the following launched the 'National Sports Talent Search Portal' on August 28, 2017 ?  
(A) Narendra Modi  
(B) Ram Nath Kovind  
(C) Venkaiah Naidu  
(D) Vijay Goel

127. Who took over the charge as Vice-Chairman of NTTI Aayog on September 1, 2017 ?  
(A) Arvind Subramaniam  
(B) Rajiv Kumar  
(C) Bibek Debroy  
(D) Surjit Bhalla

128. The venue of the formal launching of GST in India on July 1, 2017 was—  
 (A) Parliament House  
 (B) India Gate  
 (C) Prime Minister's Office  
 (D) Rashtrapati Bhawan
129. Who amongst the following received 'Rajiv Gandhi Khel Ratna' award in 2017?  
 (A) Devendra Jhajharia  
 (B) L. Devendro Singh  
 (C) Cheteshwar Pujara  
 (D) Deepa Karmakar
130. What is the name of the off-shore patrol vessel, handed over to Sri Lanak by India in September 2017?  
 (A) Vighraha (B) Vikram  
 (C) Varaha (D) Varuna
131. Who won the Women's Singles gold medal in the 2017 BWF World Badminton Championship?  
 (A) Chen Yufei  
 (B) P.V. Sindhu  
 (C) Nozomi Okuhara  
 (D) Saina Nehwal
132. Who won the Men's Singles title in Australian Open Tennis Tournament 2017?  
 (A) Andy Murray  
 (B) Novok Djokovic  
 (C) Rafael Nadal  
 (D) Roger Federer
133. Who won Women's Singles title in the U.S. Open Tennis Tournament 2017?  
 (A) Serena Williams  
 (B) Sloane Stephens  
 (C) Angelique Kerber  
 (D) Madison Keys
134. Against which of the following countries did India's men's cricket team clinch a 'white wash' victory for the first time in an overseas tour in all the three formats (Test, ODI and T-20)?  
 (A) New Zealand  
 (B) South Africa  
 (C) Sri Lanka  
 (D) West Indies
135. Who has won the '2017 Kalpana Chawla Award' of Tamil Nadu Government for courage and daring enterprise?  
 (A) K. Satyagopal  
 (B) Preethi Srinivasan  
 (C) S.P. Thyagarajan  
 (D) V.P. Elayapari
136. Who is the first Indian to qualify for the final of the javelin throw event at the Athletics World Championship?  
 (A) Narender Ranbir  
 (B) Davinder Singh Kang  
 (C) Neeraj Chopra  
 (D) Rinku
137. Who amongst the following won the U.S. Open Grand Prix Badminton Men's Singles title in 2017?  
 (A) H.S. Prannoy  
 (B) Lu Ching Yao  
 (C) P. Kashyap  
 (D) Kwang Hee Heo
138. Which among the following Rock Edicts of Ashoka refers to the role of Dhamma-Mahamatras?  
 (A) Rock Edict IX  
 (B) Rock Edict X  
 (C) Rock Edict V  
 (D) Rock Edict VI
139. Bones of camel are reported from which of the following sites?  
 (A) Mohanjodaro  
 (B) Harappa  
 (C) Lothal  
 (D) Kalibangan
140. Arrange the following sites in ascending order of their areas of expansion and select the correct answer from the code given below—  
 1. Mohanjodaro  
 2. Harappa  
 3. Ganweriwala  
 4. Dholavira  
**Codes :**  
 (A) 4, 2, 3, 1  
 (B) 4, 1, 3, 2  
 (C) 1, 2, 4, 3  
 (D) 3, 2, 4, 1
141. The term 'India' for 'Bharatavarsha' was used for the first time by whom?  
 (A) Herodotus  
 (B) Megasthenes  
 (C) Strabo  
 (D) Arrian
142. Which of the following pairs is/are correctly matched?  
**Institution Founder**  
 1. Adi Brahmo Samaj —Debendra Nath Tagore  
 2. Bharatiya Brahmo Samaj —Atmaram Pandurang  
 3. Sadharan Brahmo Samaj —Anand Mohan Bose  
 Select the correct answer from the code given below—  
**Codes :**  
 (A) Only 1  
 (B) Only 1 and 2  
 (C) Only 2 and 3  
 (D) Only 1 and 3
143. Who among the following women of Buddha's time was unanimously declared to be the 'Stri-ratna'?  
 (A) Amrapali  
 (B) Mahaprajapati Gautami  
 (C) Mayadevi  
 (D) Yashodhara
144. In ODI cricket, who created the world record for highest number of stumpings as in September 2017?  
 (A) K. Sangakkara  
 (B) M.S. Dhoni  
 (C) Moin Khan  
 (D) R.S. Kaluwitharna
145. Which of the following rights did a cultivator enjoy on his own land during the Mughal period?  
 (A) Right to mortgage only  
 (B) Right to sell only  
 (C) Right to gift only  
 (D) All of the above rights
146. Consider the following statements about Kabir—  
 1. Kabir believed in unity and formlessness of God.  
 2. Kabir suggested asceticism to find true knowledge and salvation.  
 Select the correct statement/s from the code given below—  
**Codes :**  
 (A) 1 only  
 (B) 2 only  
 (C) 1 and 2 both  
 (D) Neither 1 nor 2

147. In the context of the Treaty of Purandar (1665 A.D.), which of the following statements is/are correct?

- None of the forts of Shivaji was annexed to the Mughal Empire.
- It was conducted between Mirza Raja Jai Singh and Shivaji.

Select the correct answer from the code given below—

**Codes :**

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

148. Arrange the following events (1526 to 1556 A.D.) in chronological order—

- Birth of Akbar
- Battle of Ghaghra
- Battle of Chausa
- Humayun's Kalinjar expedition

Select the correct answer from the code given below—

**Codes :**

- 2, 4, 1, 3
- 4, 3, 1, 2
- 2, 4, 3, 1
- 3, 1, 4, 2

149. Consider the following statements—

**Assertion (A) :** Dara Sikoh could not become emperor.

**Reason (R) :** Dara Sikoh was reluctant to become emperor.

Select the correct answer using the code given below—

**Codes :**

- (A) and (R) both are true and (R) is the correct explanation of (A)
- (A) and (R) both are true, but (R) is not the correct explanation of (A)
- (A) is true, but (R) is false
- (A) is false, but (R) is true

150. Which of the following sites have yielded the evidence of bead making factories?

- Chanhudaro
- Mohanjodaro
- Kot diji
- Lothal

Select the correct answer from the code given below—

**Codes :**

- 1 and 2
- 3 and 4
- 1 and 4
- 2 and 3

### Answers with Hints

- (D) 2. (A) 3. (D) 4. (C) 5. (B)
- (B) Tomatoes reached India via Europe in 1850.
- (D) 8. (B) 9. (C) 10. (A) 11. (C)
- (A) 13. (B)
- (D) As per Indian Constitution, 73rd Amendment in Constitution Act (1992) is related to Panchayati Raj; 74th—Amendment (1992) for Nagar Panchayat; 86th—Amendment (2002) for Right to Education and 88th—Amendment (2003) for Service Tax, respectively.
- (A) 16. (C) 17. (B) 18. (C)
- (A) The President has the power to summon or prorogue a session of Parliament.
- (C) 21. (B) 22. (A) 23. (C) 24. (D)
- (B) 26. (A) 27. (B)
- (D) It is Appropriation Bill that authorizes the Govt. to raise or spend money.
- (C) 30. (A) 31. (D) 32. (C) 33. (B)
- (D)
- (B) Range of urbanization varies in BRICS countries e.g., 84% in Brazil, 93% in Russia, 64% in South Africa, 57% in China and 32% in India.
- (D)
- (C) 'Ru Pay' has been launched by National Payments corporation of India Ltd. on 26th March, 2012.
- (B) 39. (B) 40. (A) 41. (D) 42. (B)
- (C) The Union/Central Government Scheme 'Stand-up India' was launched on 5th April, 2016. P.M. Shri Narendra Modi started the 'Stand-up India' campaign on April 5, 2016 in Noida of Uttar Pradesh 'Stand-up India' is a scheme of Central Govt., in which facilities bank loans between ₹ 10 lakh and ₹ 1 crore (say-100 lakh) to beneficiaries for S.C./S.T. or women entrepreneur as well as with aim/target to

benefit entrepreneurs on large numbers so as to set up a green-field enterprise.

- (A) The modern development of sustainable is derived from 1987 Brundtland Report.
- (A) As per census 2011 of India, the sex ratio in Uttar Pradesh 912 women/females (per 1000 person/male) v/s 943 women (per 1000 person) of India.
- (B)
- (C) Though the Human Development Capital Report was published in September 2017, but 130 countries have been ranked rather than 132.
- (B)
- (C) 'Mahila Samakhya Programme' (MSP) was started in the year 1988 for promotion of education among women.
- (A) Government e-Marketplace Programme has been launched by the Ministry of Commerce & Industry (GOI), in the year 2016 (January).
- (B) As per census 2011, the urban total population was 377 million with 31.14% of urban of total country's population.
- (A) 53. (D) 54. (A) 55. (C) 56. (A)
- (B) 58. (D)
- (D) The loss of forest cover is not directly associated with demographic transition in India, but it is associated with the crop production for increasing population embankment etc.
- (D) 61. (C) 62. (B) 63. (B) 64. (D)
- (C) 66. (A) 67. (C) 68. (C) 69. (B)
- (D) 71. (A) 72. (C) 73. (D) 74. (C)
- (B) 'Man and Biosphere Programme' was started by UNESCO Paris (France) in the year 1971.
- (B) 77. (D) 78. (A) 79. (A) 80. (B)
- (D) The formula of 'Plaster of Paris' is Calcium Sulphate  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ , but not calcium carbonate. **Washing Soda**—Sodium Carbonate ( $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$ ); **Baking Soda**—Sodium hydro-carbonate/sodium bicarbonate and **Blue Vitriol** (Neela Thotha), Copper Sulphate ( $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ ) are correct.

82. (A) 83. (A) 84. (B) 85. (D)  
 86. (B) In rice/paddy crop, 'Khaira' disease is caused due to the deficiency of Zinc (Zn), resulting thereby light yellow coloured spots are formed on leaves, there after—such spots become brownish and plants remain dwarf with less yield spray of 5kg Zinc Sulphate (21%) with 2% urea per hectare crop is the best solution to control this Khaira disease.  
 87. (A) **Prop roots** are found in Banyan tree; **stilt roots**—in maize, Bajara, Sugarcane; **Assimilatory roots**—in *Tinospora*/Amrta and **Haustoria/Host roots** in *Cuscuta* (Amarbel) say-parasitic plant.  
 88. (C)  
 89. (B) Under Root System various types of roots—use are to plants i.e. **Fusiform root** of radish; **Napiform root** of Turnip; **conical root** of carrot and Tuberous root of Dahlia.  
 90. (C) 91. (D) 92. (B) 93. (A) 94. (C)  
 95. (D) 'Manas National Park' (1990), Assam is famous tourist place for Single Horn Genda, Wild Soar and male buffaloes (Bhensa)—a wildlife park, while **Sultanpur-Bird Vihar** for Water birds National Park of Wildlife animals is located in Gurugram (Haryana).  
 96. (B) Madiya and Mudia tribe are not found in Pauri-Garhwal, but are found in Bastar region of Chhattisgarh State.  
 97. (A) 98. (C) 99. (D) 100. (C) 101. (A)  
 102. (D) The great Australian Bight is a large oceanic bight or open way off the central and western portion of the south coastline of mainland Australia.  
 103. (B)  
 104. (C) **Czech - Republic - Capital-Prague; Hungary - Capital - Budapest and Austria - Capital - Vienna**—these three are neighbouring countries of Slovakia-capital-Bratislava, while Serbia is not attached with Slovakia country.  
 105. (A) Correct level of urbanization given in the question State is as follows (2011) Goa—65%, Mizoram—51%, Tamil Nadu 48%, Kerala—47%,  
 106. (A) 107. (A) 108. (C) 109. (D) 110. (A)  
 111. (A) In 2016, Brazil country was the largest producer of coffee in the world, followed by Vietnam, Columbia, Indonesia, Ethiopia and **India** (with sixth ranks) in the world.  
 112. (D) As per Statistical Review of World Energy, main coal producing countries in the world are : China 7460.4 MMT, USA 660.6 MMT, Australia 492.8 MMT.  
 113. (B) 114. (C) 115. (A)  
 116. (C) India is the second largest producer of fruits in the world.  
 117. (D) The **9th Annual 'BRICS' Summit** was held in Xiamen of China in the year 2017.  
 118. (C) Canada will soon begin offering a third gender option X on its passports and immigration documents.  
 119. (D)  
 120. (A) The citizen foundation, created in 1995 by a group of citizens concerned about poor state education in Pakistan.  
 121. (D) 122. (C) 123. (A) 124. (C) 125. (B)  
 126. (C) 127. (B) 128. (A)  
 129. (A) '**Rajiv Gandhi Khel Ratna**' award in 2017 was received by Devendra Jhajarhia in '**Para-Athlete**' and of '**Hockey**' Award was given to Sardar Singh in 2017.  
 130. (D) 131. (D) 132. (D) 133. (A) 134. (C)  
 135. (B) 136. (B) 137. (A) 138. (C) 139. (D)  
 140. (C)  
 141. (A) The term 'India' for 'Bharatavarsha' was used for the **First** time by **Herodotus** of Greek country in 516 B.C. (i.e. 5th B.C.).  
 142. (D) 143. (A) 144. (B)  
 145. (\*) All options are not correct.  
 146. (A) 147. (B) 148. (C) 149. (C) 150. (C)
- Continued from Page 138*
23. (A)
- 
- So, J is the grandmother of M.
24. (B)  
 25. (D)  

 26. (A)  

 27. (A)  
 28. (A) percentage marks of student O  

$$= \frac{(60 + 81 + 45 + 55) \times 100}{400}$$

$$= 60.25\%$$
 29. (B) Average marks of O  

$$= \frac{60 + 81 + 45 + 55}{4}$$

$$= \frac{241}{4} = 60.25$$
 Average marks of P  

$$= \frac{59 + 43 + 51}{3}$$

$$= \frac{153}{3} = 51$$
 Average marks of Q  

$$= \frac{74 + 71 + 65}{3}$$

$$= \frac{210}{3} = 70$$
 Average marks of R  

$$= \frac{72 + 76 + 68}{3}$$

$$= \frac{216}{3} = 72$$
 So, P has lowest average marks.  
 30. (C) Required percentage  

$$= \frac{90 \times 100}{360} = 25\%$$
 31. (D) Expenditure of cloth  

$$= \frac{1500 \times 70}{170}$$

$$= 617.65$$
 32. (A) 33. (C) 34. (C) 35. (A) 36. (D)  
 37. (C) 38. (C) 39. (A) 40. (D) 41. (C)  
 42. (D) 43. (B) 44. (A) 45. (C) 46. (D)  
 47. (A) 48. (C) 49. (D) 50. (D)



## I.B.P.S. PROBATIONARY OFFICERS (Pre.) EXAM., 2018

(Held on 14-10-2018)

## Reasoning

(Based on Memory)

1. If it is possible to make only one meaningful English word with the first, the sixth, the ninth and the tenth letters. (When counted from left to right) of the word—'JUNCTIONAL', using each letter only once, which would be the third letter of that word from the left end? If more than one such word can be formed, give 'X' as the answer. If no such word can be formed, give Z as your answer.

(A) Z (B) I  
(C) X (D) L  
(E) A

**Directions**—(Q. 2 to 6) Study the given information carefully to answer the given question—

Ten boxes are kept in a stack one above the other but not necessarily in the same order. Only five boxes are kept between M and N. Only three boxes are kept between N and Q. As many boxes are kept between M and Q as between M and S. W is kept immediately above S. The number of boxes kept above W is one less than the number of boxes kept below T. T is not kept at the top of the stack. V is kept immediately above P. Only two boxes are kept between P and O. R is kept at one of the positions above O.

2. Which of the following boxes is kept immediately above and immediately below box O respectively?  
(A) P and Q (B) M and W  
(C) M and Q (D) W and N  
(E) N and P
3. Which of the following statements is not true as per the given arrangement?  
(A) All the given statements are true  
(B) Only two boxes are kept between V and N  
(C) R is kept immediately above M  
(D) Only one box is kept above S  
(E) P is kept at the third position from the bottom of the stack
4. Which is the position of O in the given stack of boxes?  
(A) Fourth from the top  
(B) Second from the bottom  
(C) Fifth from the top  
(D) Fifth from the bottom  
(E) Fourth from the bottom
5. T is related to V and O is related to R following a certain pattern based on the given arrangement. To which of the following is Q related to following the same pattern?  
(A) N (B) M  
(C) W (D) T  
(E) P
6. How many boxes are kept between R and S?  
(A) Four (B) One  
(C) Three (D) Two  
(E) None

**Directions**—(Q. 7 to 11) Study the given information carefully and answer the given question—

Each of eight people A, B, C, D, E, F, G and H visit Mumbai in one of the given months—January, February, March, April, May, June, July and August of the same year.

**Note**: Only one person visits Mumbai in each month. No other person visits Mumbai in any other month of the same year.

Only three people visit Mumbai before A. Only two people visit Mumbai between A and B. C visits Mumbai immediately after B. More than four people visit Mumbai between C and D. Only two people visit Mumbai between D and E. F visits Mumbai is one of the months before

E but not in January. H visits Mumbai immediately after G.

7. Which of the following statements is **True** as per the given information?  
(A) Only two people visit Mumbai between D and G  
(B) No one visits Mumbai after E  
(C) None of the given statements is true  
(D) A visits Mumbai in one of the months after F  
(E) C visits Mumbai in April
8. As per the given information, who amongst the following visits Mumbai in July?  
(A) E (B) C  
(C) G (D) D  
(E) H
9. As per the given information, how many people visit Mumbai between C and G?  
(A) Two (B) Three  
(C) One (D) None  
(E) More than three
10. In which month does D visit Mumbai?  
(A) May (B) June  
(C) February (D) August  
(E) January
11. Four of the following five are alike in a certain way based on the given information and thus form a group. Identify the one which does not belong to the group?  
(A) June-E (B) May-A  
(C) April-C (D) February-B  
(E) August-H

**Directions**—(Q. 12 to 14) Study the given information carefully to answer the given question—

Point J is 13 m to the west of Point K. Point K is 7 m to the south of Point L. Point M is 4 m to east of

Point L. Point N is 20 m to the south of Point M.

Sudha starts walking from Point B towards south. She walks for a distance of 9 m, takes a right turn and walks for a distance of 8 m to reach point N.

12. In which direction is Point L with respect to Point B ?

- (A) West
- (B) North
- (C) South-east
- (D) North-west
- (E) North-east

13. Point W is to the west of Point N and also to the south of Point K, what is the difference between the distance of WN and WK ?

- (A) 9 m (B) 11 m
- (C) 7 m (D) 13 m
- (E) 4 m

14. Point Z is 8m to the west of Point B, how far and in which direction is Point M with respect to Point Z ?

- (A) 7m towards North
- (B) 13m towards East
- (C) 13m towards South
- (D) 11m towards South
- (E) 11m towards North

15. Six people S, T, U, V, W and X were born on six different days of the same week starting from Tuesday and ending on Sunday. V was born on Thursday. Only one person born between V and X. S was born immediately after X. As many people were born after S as before T. Only two people were born between T and U. How many people were born after U ?

- (A) More than three
- (B) One (C) Three
- (D) None (E) Two

16. Four of the following five are alike in a certain way based on the English alphabetical order and so form a group. Which is the one that does not belong to that group ?

- (A) HFBD (B) PNJL
- (C) XWTV (D) OMIK
- (E) YWSU

**Directions**—(Q. 17 to 21) Study the given information carefully and answer the given questions below—

Twelve people are sitting in two parallel rows containing six people each, in such a way that there is equal distance between adjacent persons. In row-1 T, U, V, W, X and Y are seated (not necessarily in the same order) and all of them are facing south. In row-2 A, B, C, D, E and F are seated (not necessarily in same order) and all of them are facing north. Therefore in the given seating arrangement each member seated in a row faces another member of the other row.

V sits second from one of the extreme ends of the row. Only three people sit between the one who faces V and E. As many people sit to the left of E as to the right of B. T sits second to the right of X. Neither X nor T is an immediate neighbour of V. The one who faces A sits to the immediate right of T. Only one person sits between A and F. Neither U nor Y faces F. W faces an immediate neighbour of D. Y does not sit at any of the extreme ends of the row.

17. How many people sit between C and the one who faces Y ?

- (A) Three (B) None
- (C) Four (D) One
- (E) Two

18. Who amongst the following faces U ?

- (A) E (B) C
- (C) F (D) A
- (E) B

19. Who amongst the following sits third to the left of Y ?

- (A) U
- (B) V
- (C) The one who faces E
- (D) W
- (E) The one who faces B

20. Four of the following five are alike in a certain way based on the given arrangement and so form a group. Which is the one that does not belong to that group ?

- (A) X (B) U
- (C) T (D) B
- (E) E

21. Which of the given statements is true with respect to the given information ?

- (i) Only one person sits between W and Y.
- (ii) A is an immediate neighbour of C.

(iii) D faces an immediate neighbour of U.

- (A) Both (i) and (ii)
- (B) Both (i) and (iii)
- (C) Only (ii)
- (D) Only (iii)
- (E) None of the given statements is true

**Directions**—(Q. 22 to 24) Study the given information carefully and answer the given questions—

Each of six friends—P, Q, R, S, T and U is of a different age. P is elder than Q but younger than T. Q is elder than U. U is not the youngest. R is elder than Q but not the eldest. The one who is second eldest is 42 years old and the one who is second youngest is 24 years old.

**(Note :** All ages are in whole numbers only.)

22. If the sum of the ages of U and P is 52 years then what will be the sum of the ages of R and P ? (in years)

- (A) 64 (B) 60
- (C) 66 (D) 70
- (E) 72

23. As per the given information, what may be the probable age of T ? (in years)

- (A) 40 (B) 28
- (C) 30 (D) 44
- (E) 36

24. Who amongst the following is the third youngest ?

- (A) Q (B) U
- (C) S (D) T
- (E) P

**Directions**—(Q. 25 to 27) Study the given information carefully and answer the given questions—

J is the father of S. J has only one child. D is sister-in-law of S. K is the only sibling of D. D is unmarried. M is mother of K. H is grandson of M. L is sister of H.

25. How is L related to D ?

- (A) Mother
- (B) Sister-in-law
- (C) Daughter
- (D) Niece
- (E) Aunt

26. If T is grandfather of L then how is K related to T ?

- (A) Son-in-law
- (B) Niece

- (C) Nephew  
(D) Daughter-in-law  
(E) Cannot be determined

27. How is J related to H ?

- (A) Father  
(B) Father-in-law  
(C) Brother  
(D) Grandfather  
(E) Uncle

**Directions**—(Q. 28 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 seem to be at variance from commonly known facts and then decide which of the given conclusions logically follows from the given statements and answer as—

- (A) If only conclusion I follows  
(B) If only conclusion II follows  
(C) If either conclusion I or II follows  
(D) If neither conclusion I nor II follows  
(E) If Both conclusion I and II follow

28. **Statements** : All ratios are norms. Some norms are tables.

**Conclusions** :

- I. No table is ratio.  
II. All tables are norms.

29. **Statements** : No deer is lion. Some lions are tigers. All lions are horses.

**Conclusions** :

- I. All tigers being deers is a possibility.  
II. Atleast some tigers are horses.

30. **Statements** : No deer is lion. Some lions are tigers. All lions are horses.

**Conclusions** :

- I. All deers being horses is a possibility.  
II. All horses are lions.

31. Six people A, B, C, D, E and F are sitting around a circular table facing the centre. Only two people sit between B and E. C is an immediate neighbour of E. D sits second to the right of C. What is the position of A with respect to D ?

- (A) Cannot be determined  
(B) Immediate left

- (C) Second to the right  
(D) Fourth to the left  
(E) Second to the left

**Directions**—(Q. 32 to 35) Study the given information carefully to answer the given questions—

A certain number of people are sitting in a straight line facing north with equal distance between each other. Only five people sit between A and B. B sits fifth to the right of C. D sits fourth to the right of C. D sits third from one of the extreme ends of the line. The one who likes Red colour sits seventh to the left of D. Only eight people sit between the one who likes Red colour and the one who likes Blue colour. The one who likes Blue colour sits at the extreme left end of the line. The one who likes Yellow colour sits to the immediate right of the one who likes Blue colour. Only seven people sit between the one who likes Yellow colour and E. The one who likes Orange colour sits sixth to the right of E. Only seven people sit between E and F.

32. How many people sit between A and the one who likes yellow colour ?

- (A) Six (B) Five  
(C) Seven (D) Nine  
(E) Three

33. As per the given arrangement, F is related to the one who likes Blue colour in the same way as B is related to D following a certain pattern. Following the same pattern who is C related to ?

- (A) The one who likes Orange colour  
(B) A  
(C) F  
(D) The one who likes Red colour  
(E) B

34. What is the position of B with respect to the one who likes Orange colour ?

- (A) Fifth to the left  
(B) Third to the left  
(C) Second to the right  
(D) Seventh to the left  
(E) Ninth to the right

35. How many people are sitting in the given line ?

- (A) 23 (B) 18  
(C) 19 (D) 21  
(E) 15

## Answers with Hints

1. (B) JA 

I
L

**For Q. 2 to 6 :**

W
S
R
M
O
Q
V
P
T
N

2. (C) Box M is immediately above box O and Box Q is immediately below box O.

3. (A) 4. (C)

5. (B)  $T + 2 = V$

$$O + 2 = R$$

$$Q + 2 = M$$

6. (E) Box R is immediately below box S.

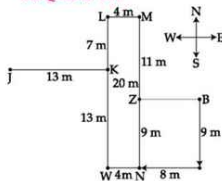
**For Q. 7 to 11 :**

Month	Person
January	B
February	C
March	F
April	A
May	E
June	G
July	H
August	D

7. (D) 8. (E) 9. (B) 10. (D)

11. (C) June - 1 = E  
May - 1 = A  
April - 2 = C  
February - 1 = B  
August - 1 = H

**For Q. 12 to 14 :**



12. (D)

13. (A) Required Difference  
 $= 13 - 4 = 9$

14. (E)

15. (E)

Day	Person
Tuesday	T
Wednesday	W
Thursday	V
Friday	U
Saturday	X
Sunday	S

So two persons born after U.

16. (C)

H	F	B	D	P	N	I	L	X	W	T	V
-2	-4	+2		-2	-4	+2		-1	-3	+2	
O	M	I	K	Y	W	S	U				
-2	-4	+2		-2	-4	+2					

So XWTV is different from the group.

For Q. 17 to 21:

U	V	Y	T	W	X
↓	↓	↓	↓	↓	↓
B	C	A	D	F	E

17. (B) A is facing Y. A and C are immediate neighbours.

18. (E)

19. (C) X sits third to the left of Y and X faces E.

20. (C) Except 'T' all others are sitting on extreme ends of lines.

21. (A)

For Q. 22 to 24:

$$T > R > P > Q > U > S$$

42 years      24 years

22. (D)  $U + P = 52$  years

$$P = 52 - U$$

$$= 52 - 24$$

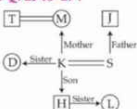
$$= 28 \text{ years}$$

$$\therefore R + P = 42 + 28$$

$$= 70 \text{ years}$$

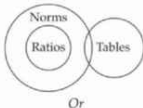
23. (D) 24. (A)

For Q. 25 to 27:

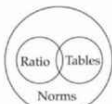


25. (D) 26. (E) 27. (D)

28. (D)

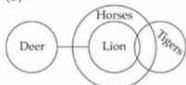


Or



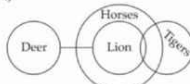
So, neither conclusion I nor conclusion II follows.

29. (B)



So, only conclusion II follows.

30. (A)

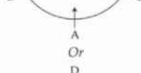
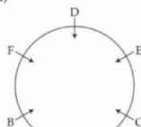


Or

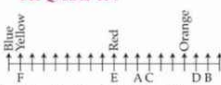


So, only conclusion I follows.

31. (A)



For Q. 32 to 35:



32. (D) 33. (B) 34. (C) 35. (C)

Plus



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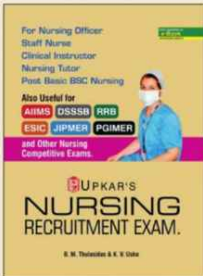
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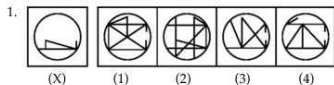
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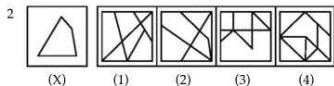


## Psychological/Aptitude Test

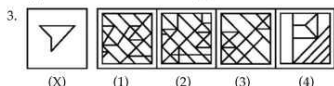
**Directions—(Q. 1 to 5)** Find out the alternative figure which contains figure (X) as its part.



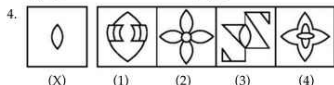
- (X) (1) (2) (3) (4)  
(A) 1 (B) 2  
(C) 3 (D) 4



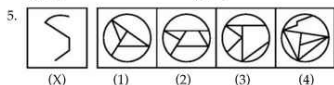
- (X) (1) (2) (3) (4)  
(A) 1 (B) 2  
(C) 3 (D) 4



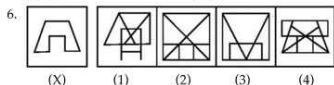
- (X) (1) (2) (3) (4)  
(A) 1 (B) 2  
(C) 3 (D) 4



- (X) (1) (2) (3) (4)  
(A) 1 (B) 2  
(C) 3 (D) 4



- (X) (1) (2) (3) (4)  
(A) 1 (B) 2  
(C) 3 (D) 4



- (X) (1) (2) (3) (4)  
(A) 1 (B) 2  
(C) 3 (D) 4

**Directions—(Q. 6 to 27)** Look at the figure and Memorise to answers 21 questions related to this figure. In next page figure will not be displayed.

	20		92		87
	81		57		13
	60		31		14
	94		85		33
	35		28		67
	56		46		29
	10		77		90

Ready

Not Ready



- (A) 69  
(B) 79  
(C) 31  
(D) 76



- (A) 83  
(B) 33  
(C) 47  
(D) 99



- (A) 66  
(B) 23  
(C) 13  
(D) 63



- (A) 90  
(B) 17  
(C) 57  
(D) 55



- (A) 43  
(B) 10  
(C) 28  
(D) 66



- (A) 45  
(B) 67  
(C) 68  
(D) 21



- (A) 64  
(B) 16  
(C) 97  
(D) 60



- (A) 44  
(B) 76  
(C) 56  
(D) 65



- (A) 92  
(B) 84  
(C) 82  
(D) 22



- (A) 22  
(B) 95  
(C) 85  
(D) 49



- (A) 27  
(B) 57  
(C) 29  
(D) 92



- (A) 45  
(B) 20  
(C) 36  
(D) 72



- (A) 21  
(B) 66  
(C) 46  
(D) 82



- (A) 99  
(B) 35  
(C) 78  
(D) 61



- (A) 57  
(B) 92  
(C) 53  
(D) 95



- (A) 24  
(B) 65  
(C) 87  
(D) 39



- (A) 96  
(B) 77  
(C) 35  
(D) 37



- (A) 55  
(B) 14  
(C) 35  
(D) 43



- (A) 94  
(B) 51  
(C) 79  
(D) 49



- (A) 42  
(B) 69  
(C) 22  
(D) 81



- (A) 92  
(B) 33  
(C) 28  
(D) 97

**Directions—**(Q. 28 to 41) Look at the four pairs of numerical digits. The pair which does not match is your answer.

28. (A) 4 g f 8      4 g f 8      (B) d a 0 c      d a 0 c  
(C) c w 3 o      c u 3 o      (D) s a 0 k      s a 0 k
29. (A) d 3 h 8      d 3 h 8      (B) 3 9 r j      3 9 r l  
(C) 3 0 d e      3 0 d e      (D) g 3 0 w      g 3 0 w
30. (A) t 3 u 9      t 3 u 9      (B) t i 3 0      t i 3 0  
(C) d a u 8      d u a 8      (D) d a 9 f      d a 9 f
31. (A) f 3 9 m      a 3 9 m      (B) 4 t 9 j      4 t 9 j  
(C) f 3 q p      f 3 q p      (D) 3 r 9 i      3 r 9 i
32. (A) g 4 0 y      g 4 0 y      (B) 4 9 j f      4 9 j f  
(C) y 0 m a      y 0 m a      (D) a 8 9 t      a 8 9 t
33. (A) a 5 c 8 m      a 5 c 8 m  
(B) 4 9 g f 6      4 9 g f 6  
(C) d 9 m a 0      9 d m a 0  
(D) s 9 d u 3      s 9 d u 3
34. (A) 7 8 y t 4      7 8 y t 4  
(B) 1 7 e w a      1 7 e w a  
(C) 0 o a m 4      o o a m 4  
(D) t 3 4 8 a      t 3 4 8 a
35. (A) v b 4 7 e      v b 4 7 e  
(B) d f 9 3 k      d f 9 3 k  
(C) 0 1 k q 7      0 1 k q 7  
(D) a 9 u h 0      a 9 u h 0
36. (A) 0 o t 4 8      0 o t 4 8  
(B) e 5 m i 5      e 5 m i 5  
(C) 5 9 4 k a      5 9 4 a k  
(D) 9 o b m 5      9 o b m 5

37. (A) q4r7y q4r7y  
(B) y9n3d y9n3d  
(C) cv4ma cv4am  
(D) b8amf b8amf
38. (A) h57yq h57yq  
(B) q87ek q87ek  
(C) e7rol e7rol  
(D) g89j4 g89j4
39. (A) u8e3i u8e3i  
(B) s9ai2 s9ai2  
(C) 29iam 29iam  
(D) e9am2 e9am2
40. (A) h7k9d5 h7k9d5  
(B) cm39ha cm39ha  
(C) f39ajr f39arj  
(D) 349aj4 349aj4
41. (A) 4t90i 4t90i  
(B) f48ua f48ua  
(C) 648aj 648aj  
(D) 54ma7 54ma7
42. There is better chance of improving law and order situation under the President rule.  
(A) Always (B) Sometimes  
(C) Cannot say
43. It is natural to increase the prices of imported consumer goods due to increase in the rate of import duty.  
(A) Probably (B) Yes  
(C) In between the two
44. The President rule should be imposed in the state owing to massacre.  
(A) Yes (B) Sometimes  
(C) Never
45. Cyclone and heavy rains disrupt railway traffic.  
(A) Yes (B) Sometimes  
(C) Never
46. Generally I would prefer to read rather than experience about any social event or adventurous event.  
(A) Yes (B) Possibly  
(C) No
47. I have made such commitments which I could not fulfill.  
(A) Yes (B) No  
(C) Possibly

**Directions—**(Q. 48 to 62) If left-hand side is equal to right hand side then 'True' else 'False'.

48. 2682008 2682008  
(A) true (B) false
49. 2471715 2471715  
(A) true (B) false
50. 3007832 3007832  
(A) true (B) false

51. 9380765 9380765  
(A) true (B) false
52. 6481407 6481407  
(A) true (B) false
53. 2678618 2678618  
(A) true (B) false
54. 1279162 1279162  
(A) true (B) false
55. 1224458 1224458  
(A) true (B) false
56. 251170 251170  
(A) true (B) false
57. 4981306 4981306  
(A) true (B) false
58. 2652040 2652040  
(A) true (B) false
59. 5745123 5745123  
(A) true (B) false
60. 2062978 2062978  
(A) true (B) false
61. 9514756 9514756  
(A) true (B) false
62. 47135256 47135256  
(A) true (B) false

**Directions—**(Q. 63 to 77) Focus on the word on the screen. Does it match its colour ?

63. **GREY**  
(A) true (B) false
64. **BLUE**  
(A) true (B) false
65. **GREEN**  
(A) true (B) false
66. **BLUE**  
(A) true (B) false
67. **BLACK**  
(A) true (B) false
68. **YELLOW**  
(A) true (B) false

69. **PINK**  
(A) true (B) false

70. **PINK**  
(A) true (B) false

71. **YELLOW**  
(A) true (B) false

72. **BLACK**  
(A) true (B) false

73. **PINK**  
(A) true (B) false

74. **BLUE**  
(A) true (B) false

75. **PURPLE**  
(A) true (B) false

76. **BLACK**  
(A) true (B) false

77. **PINK**  
(A) true (B) false

**Directions**—(Q. 78 to 89) How many letters/digits are different ?

78. **WHAT IS THE MISSING NUMBER ?**
- |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |    |    |    |
| 22 | 23 | 24 | 25 | 26 | 28 | 29 | 30 | 31 |    |    |    |
| 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |    |    |    |
- (A) 41 (B) 27  
(C) 39 (D) 40

79. **CAN YOU PLEASE FIND THE MISTAKE ?**
- YOU YOU YOU YOU YOU YOU YOU YOU YOU YOU  
YOU YOU YOU YOU YOU YOU YOU YOU YOU YOU  
YOU YOU YOU YOU YOU YOU YOU YOU YOU YOU  
YOU YOU YOU YOU YOU YOU YOU YOU YOU YOU  
YOU YOU YOU YOU YOU YOU YOU YOU YOU YOU  
YOU YOU YOU YOU YOU YOU YOU YOU YOU YOU  
YOU YOU YOU YOU YOU YOU YOU YOU YOU YOU  
YOU YOU YOU YOU YOU YOU YOU YOU YOU YOU  
YOU YOU YOU YOU YOU YOU YOU YOU YOU YOU

- (A) 1<sup>st</sup> row (B) 5<sup>th</sup> row  
(C) 6<sup>th</sup> row (D) 8<sup>th</sup> row

80. Read the text in red Colour

**You Are So Genial**  
**This is Right or Wrong**

1- Smart	2- Genial	3- Genius	4- Genial
----------	-----------	-----------	-----------

(A) 1 (B) 2  
(C) 3 (D) 4

81. **CAN YOU FIND 'O' IN 15 SECONDS**
- Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q  
Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q  
Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q  
Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q  
Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q  
Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q

- (A) 1<sup>st</sup> row (B) 2<sup>nd</sup> row  
(C) 5<sup>th</sup> row (D) 6<sup>th</sup> row

82.  $2 + 3 = 10$   
 $8 + 4 = 96$   
 $7 + 2 = 63$   
 $6 + 5 = 66$   
 $9 + 5 = ???$

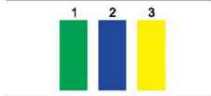
- (A) 125 (B) 126  
(C) 132 (D) 142

83.  $8 = 56$   
 $7 = 42$   
 $6 = 30$   
 $5 = 20$   
 $3 = ?$

- (A) 9 (B) 10  
(C) 20 (D) 30



84. The mix of blue and yellow is...



- (A) 0 (B) 1  
(C) 2 (D) 3

- 85.

[illegible]

- [illegible]

- 86.

## FIND THE ODD COLOR



- (A) 1                  (B) 2  
(C) 3                  (D) 5

- 87.

## How many b's can you spot ?

[illegible]

- (A) 0                  (B) 1  
(C) 2                  (D) 4

- 88

HOW MANY CIRCLES  
DO YOU SEE ?



- (A) 3                  (B) 4  
 (C) 5                  (D) 6

- 89.











How many circles can you see?

- (A) 1 (B) 2  
(C) 3 (D) 4

**Directions**—(Q. 90 to 95) In each of the following questions the figure given at the left position moves to the right according to a certain rule. The figures A, B and C are between the left and the right figures indicate the type of change. Select that option to obtain the figure at the right side after effecting certain changes. Rules for change.

Shape :  $\square \rightarrow \bigcirc, \bigcirc \rightarrow \square$

Size :  $\square \rightarrow \square, \square \rightarrow \square \quad \bigcirc \rightarrow \bigcirc, \bigcirc \rightarrow \bigcirc$

Colour :  → ,  →     → ,  → 

The change in **Shape** will follow the rule : Quadrilateral to Circle and Circle to Quadrilateral.

The change in **Size** will follow the rule : Big to Small or Small to Big

The change in **Colour** will follow the rule : Shaded to White and White to Shaded

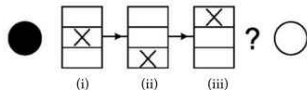


➤ If cross sign (x) is in the upper box then Shape will be changed

► If cross sign (x) is in the middle box then Size will be changed.

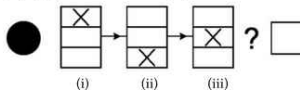
► If cross sign (x) is in the lower box then Colour will be changed.

- 90.



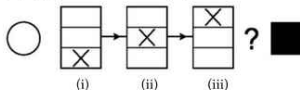
- (A) (i) (B) (ii)  
(C) (iii) (D) None of these

- 91

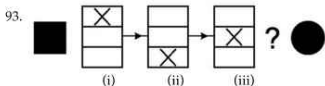


- (A) (i) (B) (ii)  
(C) (iii) (D) None of these

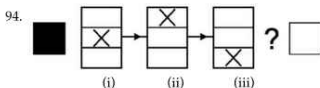
- 92



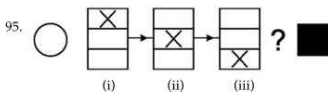
- (A) (i) (B) (ii)  
(C) (iii) (D) None of these



- (A) (i) (B) (ii)  
(C) (iii) (D) None of these



- (A) (i) (B) (ii)  
(C) (iii) (D) None of these



- (A) (i) (B) (ii)  
(C) (iii) (D) None of these

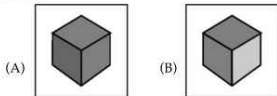
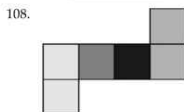
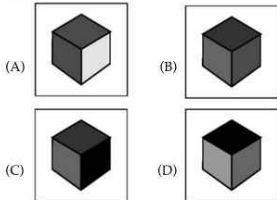
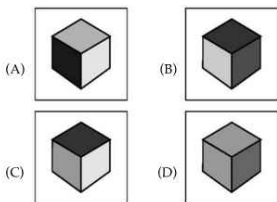
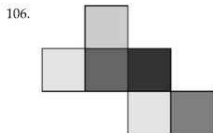
**Directions—**(Q. 96 to 105) In each of the following questions a sequence of odd and even digits are given. What will be sum of all the odd digits in each question?

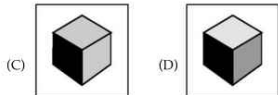
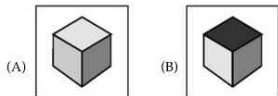
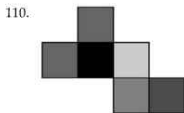
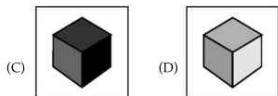
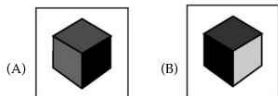
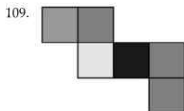
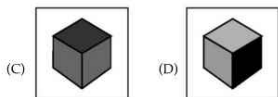
Select the correct answer from the given alternatives.

96. 4 4 5 2 2 3 1 5 4 5 3 8 4 3 2 1 8 7 5 6 7 3 5 8 5 7 1 6 5  
(A) 70 (B) 71  
(C) 74 (D) None of these
97. 5 4 3 6 2 3 1 5 5 7 3 4 5 2 1 3 5 4 5 6 5 2 3 1 5 5 4 3 7 2 5  
(A) 85 (B) 87  
(C) 86 (D) None of these
98. 4 2 3 5 5 4 3 1 2 5 8 7 3 2 1 6 5 4 3 7 8 1 5 2 5 8 7 6 2  
(A) 66 (B) 67  
(C) 65 (D) None of these
99. 1 3 2 5 8 7 5 4 5 4 3 2 5 4 5 6 8 6 5 1 2 3 5 8 7 2 1 6  
(A) 60 (B) 61  
(C) 63 (D) None of these
100. 5 2 1 4 7 8 6 5 4 5 3 5 6 5 4 2 6 7 8 6 7 8 1 5 3 2 1  
(A) 62 (B) 60  
(C) 64 (D) None of these
101. 4 3 8 7 6 5 4 2 6 8 3 5 5 4 2 3 8 7 1 5 5 4 3 2 1 6 5 5  
(A) 69 (B) 75  
(C) 63 (D) None of these
102. 5 5 4 3 2 8 6 5 4 3 1 2 7 5 5 6 3 5 4 8 7 1 2 5 6 5 4 3 2 1 7  
(A) 72 (B) 76  
(C) 86 (D) None of these
103. 5 4 3 2 1 8 7 6 5 4 3 2 5 4 5 6 2 3 1 7 8 5 5 4 3 1 7 6 5 4 8  
(A) 81 (B) 76  
(C) 71 (D) None of these

104. 6 5 4 3 2 1 7 8 5 4 6 5 4 3 2 1 8 7 5 5 4 3 7 8 5 5 4 3 3  
(A) 72 (B) 78  
(C) 73 (D) None of these
105. 3 2 1 7 6 5 4 3 2 1 7 3 8 5 5 4 3 6 5 8 7 5 5 4 3 2 1 4  
(A) 59 (B) 69  
(C) 72 (D) None of these

**Directions—**(Q. 106 to 110) Which 'Cube' can be made by folding the given shape?

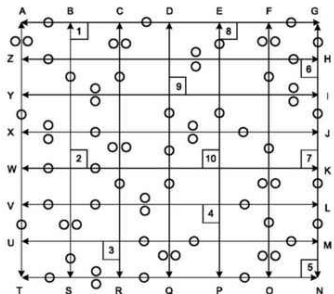




**Directions**—(Q. 111 to 115) Study carefully each of the diagrams given below. You are required to select the shortest route from one place to the other in each diagram.

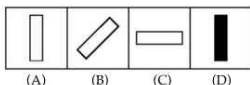
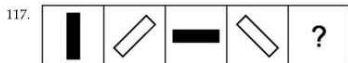
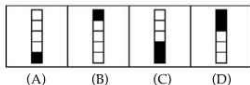
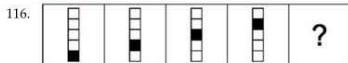
- In each diagram vertical (↑↓) and horizontal (↔) lines indicate routes. There are some barriers (←O→) in almost every route which cannot be traversed.
- In each diagram there are some boxes (▢) containing numbers. Each box is a house of our walls. Two of which are attached to the routes.
- The route selected by you to travel from one position to another must touch one or two walls of a box and the number of that box is the route number.

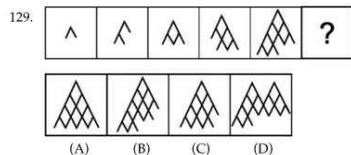
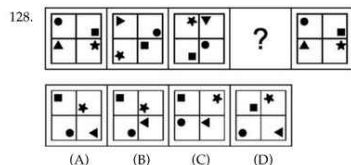
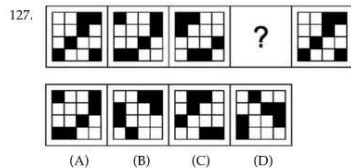
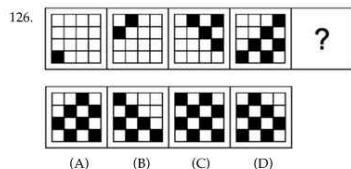
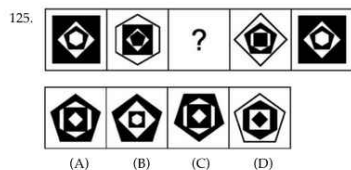
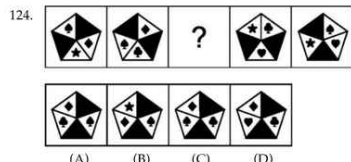
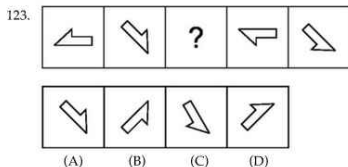
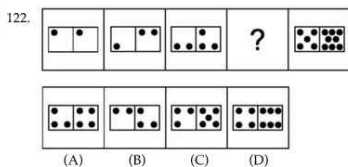
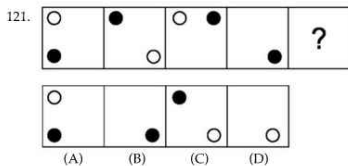
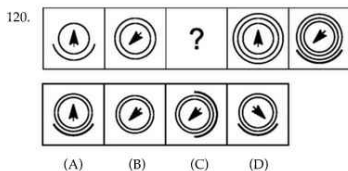
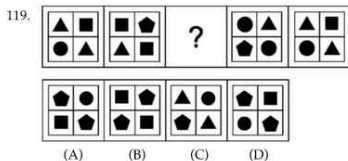
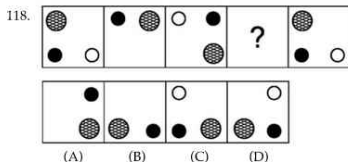
- In each diagram the boxes are marked with numbers 1 to 10. In the Answersheet also there would be ten boxes or ovals. Blacken the oval as per the number of the route selected by you which is your answer.



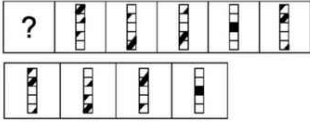
111. The Shortest Route from U to Q  
(A) 3 (B) 4  
(C) 2 (D) 10
112. The Shortest Route from F to K  
(A) 8 (B) 7  
(C) 4 (D) 10
113. The Shortest Route from A to T  
(A) 1 (B) 2  
(C) 3 (D) 9
114. The Shortest Route from E to B  
(A) 8 (B) 9  
(C) 10 (D) 1
115. The Shortest Route from O to F  
(A) 4 (B) 5  
(C) 7 (D) 9

**Directions**—(Q. 116 to 130) What will be in ?

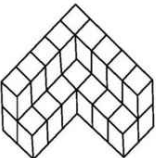


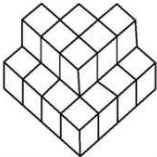


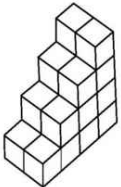


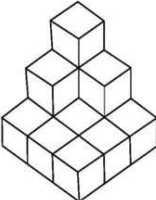
130. 
- (A) (B) (C) (D)

**Directions**—(Q. 131 to 142) Find the Hidden Cube.

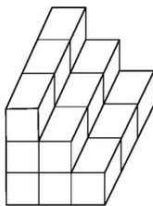
131. 
- (A) 6 (B) 7  
(C) 8 (D) 9

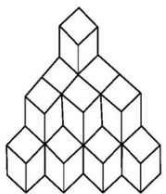
132. 
- (A) 3 (B) 4  
(C) 5 (D) 6

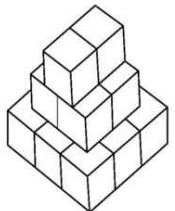
133. 
- (A) 4 (B) 5  
(C) 6 (D) 7

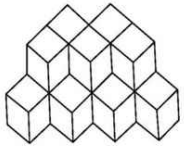
134. 

- (A) 4 (B) 7  
(C) 8 (D) 9

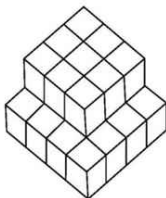
135. 
- (A) 5 (B) 6  
(C) 4 (D) 3

136. 
- (A) 9 (B) 7  
(C) 8 (D) 10

137. 
- (A) 6 (B) 7  
(C) 5 (D) 10

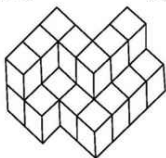
138. 
- (A) 5 (B) 4  
(C) 3 (D) 6

139.



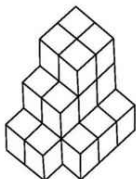
- (A) 6 (B) 7  
(C) 8 (D) 9

140.



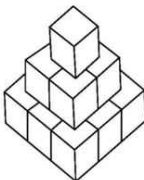
- (A) 5 (B) 6  
(C) 7 (D) 8

141.



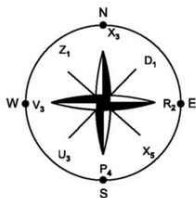
- (A) 5 (B) 6  
(C) 7 (D) 8

142.



- (A) 3 (B) 4  
(C) 5 (D) 6

**Directions**—(Q. 143 and 144) In each of the following questions, the characters in the clock format are represented with letters and digits N, S, E, W to the north, south, east and west direction; Answer the questions given on the given clock format and the direction shown in it.



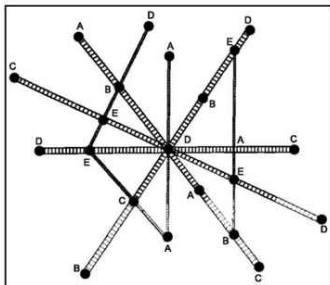
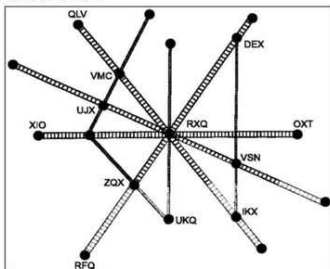
143. The number situated between  $Z_1$  and  $D_1$ , from this towards west the second letters, which number is just opposite to that letter?

- (A) 1 (B) 2  
(C) 3 (D) 4

144. Which number would be opposite to the second letter right handedly from just opposite to  $U_3$ .

- (A) 1 (B) 2  
(C) 3 (D) 4

**Directions**—(Q. 145–148) In the given memory page, study the following questions carefully the coded names of 12 stations in 2-minutes. Thereafter turning the memory page and you have to identify the correct letter A, B, C or D in another 2-minute and then blacken the answer sheet at correct number.



*Continued on Page 172*

(Held on 7-7-2018)

## Quantitative Aptitude

(Based on Memory)

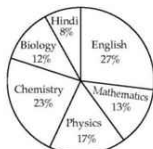
**Directions**—(Q. 1 to 5) What should come in place of question mark (?) in the following question ?

1. 10 11 15 24 40 ?  
(A) 90 (B) 87  
(C) 114 (D) 95  
(E) 65
2. 25 35 49 67 89 ?  
(A) 24 (B) 81  
(C) 115 (D) 107  
(E) 93
3. 11 9 15 41 159 ?  
(A) 740 (B) 607  
(C) 751 (D) 709  
(E) 789
4. 8.5 10.5 16.5 28.5 48.5 ?  
(A) 57.5 (B) 78.5  
(C) 93.5 (D) 64.5  
(E) 85.5
5. 18 9 9 18 72 ?  
(A) 460 (B) 372  
(C) 576 (D) 484  
(E) 380

**Directions**—(Q. 6 to 10) Refer to the pie chart and answer the given questions.

**Percentage distribution of teachers who teach six different subjects**

Total number of teachers = 1800



6. If two-ninths of the teachers who teach Physics are females, then the number of male Physics teachers is approximately what per cent of the total number of teachers who teach Chemistry ?

- (A) 57% (B) 42%  
(C) 63% (D) 59%  
(E) 62%

7. What is the total numbers of teachers who teach Chemistry, English and Biology ?  
(A) 1226 (B) 1116  
(C) 1176 (D) 998  
(E) 1206
8. What is difference between the total number of teacher who teach English and Physics together and total number of teacher who teach Mathematics and Biology together ?  
(A) 352 (B) 342  
(C) 643 (D) 653  
(E) 465
9. What is the ratio of the teachers who teach mathematics to the number of teachers who teach Hindi ?  
(A) 13 : 7 (B) 14 : 5  
(C) 7 : 26 (D) 7 : 13  
(E) 13 : 8
10. If the percentage of Mathematics teachers is increased by 50% and percentage of Hindi teachers is decreased by 25%, what will be the total number of Mathematics and Hindi teachers together ?  
(A) 390 (B) 405  
(C) 379 (D) 459  
(E) 480

**Directions**—(Q. 11 to 15) What should come in place of question mark (?) in the following question ?

11.  $(0.125)^2 \div (0.25)^2 \times (0.5)^2 = (0.5)^{1-3}$   
(A) 15 (B) 10  
(C) 18 (D) 38  
(E) 8
12.  $2\frac{1}{9} \times 1\frac{2}{19} \div 2\frac{1}{3} = ? - 1\frac{1}{2}$   
(A)  $3\frac{1}{2}$  (B)  $1\frac{1}{4}$

- (C)  $2\frac{1}{2}$  (D)  $2\frac{1}{4}$

- (E)  $3\frac{3}{4}$

13.  $? = 6 - [9 - (18 - (15 - 12 + 9))]$

- (A) 5 (B) 7  
(C) 4 (D) 2  
(E) 3

14. 48% of 840 = 36% of ?

- (A) 1080 (B) 1320  
(C) 1240 (D) 720  
(E) 1120

15.  $[(3 \times 18\% \text{ of } 3700) - (27^2 - 40)] = ?$

- (A) 470 (B) 1309  
(C) 52 (D) 2080  
(E) 612

16. Present average age of A, B and C is 22 years. Three years ago, Average age of B and C is 18 years, then find A's age 9 years hence ?

- (A) 24 years (B) 27 years  
(C) 30 years (D) 33 years  
(E) 36 years

17. Ratio between speed of boat in still water to speed of stream is 8 : 1. If 67.5 km is travelled downstream in 2.5 hours then find the difference between speed of boat in still water to speed of stream (in kmph) ?

- (A) 15 (B) 3  
(C) 24 (D) 21  
(E) 17.5

18. The perimeter of a rectangle whose length is 6 m more than its breadth is 84 m. What will be the area of the rectangle ? (in  $\text{m}^2$ )

- (A) 446 (B) 340  
(C) 432 (D) 468  
(E) 348

19. Interest earned on an amount after 2 years at 20% p.a. compounded yearly is ₹ 1,716. Find the interest earned on same

amount after 3 years at 15% p.a. at Simple interest ?

- (A) ₹ 1,620 (B) ₹ 1,755  
(C) ₹ 1,665 (D) ₹ 1,710  
(E) ₹ 1,750

20. In place of 18% profit an article is sold at 42% profit and seller gets ₹ 110-40 more. Find the selling price of article if it were sold at 25% profit ?

- (A) ₹ 440 (B) ₹ 460  
(C) ₹ 575 (D) ₹ 550  
(E) ₹ 525

21. A and B working alone can do a work in 20 days and 15 days respectively. They started the work together but B left after sometime and A finished remaining work in 6 days. Find after how many days from start B left the work ?

- (A) 5 days (B) 4 days  
(C) 6 days (D) 3 days  
(E) 7 days

**Directions**—(Q. 22 to 26) In the following question two equations numbered I and II are given. You have to solve both the equations and give answer if—

- (A)  $x > y$  (B)  $x \geq y$   
(C)  $x < y$  (D)  $x \leq y$   
(E)  $x = y$  or the relationship cannot be established

22. I.  $2x^2 + 7x + 5 = 0$

II.  $3y^2 + 5y + 2 = 0$

23. I.  $2x^2 - 13x + 21 = 0$

II.  $3y^2 - 14y + 5 = 0$

24. I.  $2x^2 - 13x + 18 = 0$

II.  $y^2 - 7y + 12 = 0$

25. I.  $x^2 + 6x + 9 = 0$

II.  $y^2 - y - 20 = 0$

26. I.  $3x^2 + 10x + 8 = 0$

II.  $2y^2 - 19y + 35 = 0$

**Directions**—(Q. 27 to 31) What approximate value will come in place of question mark (?) in the given question ?

(You are not expected to calculate the exact value)

27.  $\sqrt{227} \times 11.98 \div 19.94 = ?$

- (A) 15 (B) 18  
(C) 9 (D) 35  
(E) 27

28.  $130-32 + 241 \div 6 - 165-11 = \sqrt[3]{?}$

- (A) 27 (B) 125  
(C) 1000 (D) 64  
(E) 216

29.  $40-09\%$  of  $80-15 + 60-04$  of  $160-12 = ?$

- (A) 80 (B) 160  
(C) 180 (D) 140  
(E) 128

30.  $14-08^2 - 3-01 \times 104-11 \div 4-02 = ?$

- (A) 280 (B) 200  
(C) 160 (D) 120  
(E) 180

31.  $\frac{1}{4} \times 117 + \frac{1}{3} \times 16 \div ? = 40$

- (A) 35 (B) 20  
(C) 6 (D) 15  
(E) 10

**Directions**—(Q. 32 to 35) In each of given questions two quantities numbered I and II are given. You have to solve both the quantities and mark the appropriate answer.

- (A) Quantity I > Quantity II  
(B) Quantity I < Quantity II  
(C) Quantity I  $\geq$  Quantity II  
(D) Quantity I  $\leq$  Quantity II  
(E) Quantity I = Quantity II or No relation

32. **Quantity I :**

'X' : Train 'A' running at a speed of 25 m/sec crosses Train 'B' coming from opposite direction running at a speed of 15 m/sec in 12 seconds. Length of train 'A' is twice of train 'B'. Length of train 'A' is 'X'.

**Quantity II :** 160 metres

33. Average of three numbers  $b$ ,  $c$  and  $d$  is 1 more than average of  $a$ ,  $b$  and  $c$ . Average of  $a$  and  $d$  is 19-5

**Quantity I :** Value of 'a'.

**Quantity II :** 21

34. **Quantity I :** 'X' : A pipe alone can fill a cistern in 60 minutes. But due to leakage pipe filled only 80% of the cistern in 1 hour. 'X' is the capacity of cistern in litres if due to leakage 60 liter water can be leak out in 1 hour.

**Quantity II :** 250 litres

35. **Quantity I :** 'X' : Ratio between speed of boat in still water to speed of stream is 2 : 1. Total time taken by a man to cover 72 km in upstream and come back is 32 hours. 'X' is the downstream speed in kmph.

**Quantity II :** 9 kmph

## Answers with Hints

1. (E)  $\begin{array}{ccccccc} 10 & 11 & 15 & 24 & 40 & ? & 65 \\ +1^2 & +2^2 & +3^2 & +4^2 & +5^2 & & \end{array}$

$\therefore ? = 40 + 5^2$   
 $= 40 + 25$   
 $= 65$

2. (C)  $\begin{array}{ccccccc} 25 & 35 & 49 & 67 & 89 & ? & 115 \\ +10 & +14 & +18 & +22 & +26 & & \\ +4 & +4 & +4 & +4 & & & \end{array}$

$? = 89 + 26$   
 $= 115$

3. (E)  $\begin{array}{ccccccc} 11 & 9 & 15 & 41 & 159 & ? & 789 \\ \times 1-2 & \times 2-3 & \times 3-4 & \times 4-5 & \times 5-6 & & \end{array}$

$\therefore ? = 159 \times 5 - 6$   
 $= 795 - 6$   
 $= 789$

4. (B)  $\begin{array}{ccccccc} 8.5 & 10.5 & 16.5 & 28.5 & 48.5 & ? & 78.5 \\ +2 & +6 & +12 & +20 & +30 & & \\ +4 & +6 & +8 & +10 & & & \\ +2 & +2 & +2 & & & & \end{array}$

$\therefore ? = 48.5 + 30$   
 $= 78.5$

5. (C)  $\begin{array}{ccccccc} 18 & 9 & 9 & 18 & 72 & ? & 576 \\ \times \frac{1}{2} & \times 1 & \times 2 & \times 4 & \times 8 & & \end{array}$

$\therefore ? = 72 \times 8$   
 $= 576$

6. (A) Total teachers who teach Physics

$= 1800 \times \frac{17}{100}$   
 $= 306$

Number of male

$= 306 - 306 \times \frac{2}{9}$   
 $= 306 - 68$   
 $= 238$

Total number of teachers who teach Chemistry

$= 1800 \times \frac{23}{100}$   
 $= 414$

Required % =  $\frac{238}{414} \times 100\%$

$= 57.48\%$   
 $= 57\%$  (Approx)



$$\begin{aligned}
 7. \text{ (B) Required number of teachers} \\
 &= 18 \times (23 + 27 + 12) \\
 &= 18 \times 62 \\
 &= 1116
 \end{aligned}$$

$$\begin{aligned}
 8. \text{ (B) Required difference} \\
 &= 18[(27 + 17) - (13 + 12)] \\
 &= 18 \times (44 - 25) \\
 &= 18 \times 19 = 342
 \end{aligned}$$

$$9. \text{ (E) Required ratio} = 13 : 8$$

$$\begin{aligned}
 10. \text{ (D) Required total number} \\
 &= 18 \times 13 \times \frac{3}{2} + 8 \times 18 \times \frac{3}{4} \\
 &= 351 + 108 = 459
 \end{aligned}$$

$$\begin{aligned}
 11. \text{ (B) } (0.125)^3 \div (0.25)^2 \times (0.5)^2 \\
 &= (0.5)^{3-2-3} \\
 &= (0.5)^{-2} \times (0.5)^2 \\
 &= (0.5)^{2-2} \\
 &= (0.5)^0 = 1 \\
 &= 1
 \end{aligned}$$

$$\begin{aligned}
 12. \text{ (C) } 2\frac{1}{9} \times 1\frac{2}{19} \div 2\frac{1}{3} \\
 &= ? - 1\frac{1}{2} \\
 &= \frac{19}{9} \times \frac{21}{19} \div \frac{7}{3} = ? - \frac{3}{2} \\
 &1 = ? - \frac{3}{2} \\
 &? = 1 + \frac{3}{2} \\
 &? = \frac{5}{2} = 2\frac{1}{2}
 \end{aligned}$$

$$\begin{aligned}
 13. \text{ (E) } ? = 6 - [9 - \{(18 - (15 - 12 + 9))\}] \\
 &= 6 - [9 - \{18 - (12)\}] \\
 &= 6 - (9 - 6) \\
 &= 6 - 3 \\
 &= 3
 \end{aligned}$$

$$\begin{aligned}
 14. \text{ (E) } 48\% \text{ of } 840 = 36\% \text{ of } ? \\
 840 \times \frac{48}{100} = ? \times \frac{36}{100} \\
 ? = \frac{840 \times 48}{36} \\
 = 1120
 \end{aligned}$$

$$\begin{aligned}
 15. \text{ (B) } ? \\
 &= \left[ 3 \times 3700 \times \frac{18}{100} - (27^2 - 40) \right] \\
 &= 1998 - 689 \\
 &= 1308
 \end{aligned}$$

$$\begin{aligned}
 16. \text{ (D) } A + B + C &= 22 \times 3 \\
 &= 66 \quad \dots(1) \\
 B + C &= 18 \times 2 + 6 \\
 &= 42 \quad \dots(2)
 \end{aligned}$$

On solving equation (1) and (2), we get  
Present age of A = 24 years  
9 years hence

$$\begin{aligned}
 A's \text{ age} &= 24 + 9 \\
 &= 33 \text{ years}
 \end{aligned}$$

$$\begin{aligned}
 17. \text{ (D) Let the speed of boat in still water and speed of stream are } 8x \text{ and } x \text{ km/hr. respectively.} \\
 \text{Then, Downstream speed} \\
 &= 8x + x = 9x \text{ km/hr.}
 \end{aligned}$$

As per question,

$$\begin{aligned}
 \frac{67.5}{2.5} &= 9x \\
 27 &= 9x \\
 x &= 3
 \end{aligned}$$

Required difference

$$\begin{aligned}
 &= (8 \times 3) - 3 \\
 &= 24 - 3 \\
 &= 21 \text{ km/hr.}
 \end{aligned}$$

$$\begin{aligned}
 18. \text{ (C) Let the breadth of rectangle} \\
 &= x \\
 \text{Then length of rectangle} \\
 &= (x + 6) \text{ m}
 \end{aligned}$$

As per question

$$\begin{aligned}
 2(x + x + 6) &= 84 \\
 2x + 6 &= 42 \\
 2x &= 36 \\
 x &= 18
 \end{aligned}$$

Required area of rectangle

$$\begin{aligned}
 &= 24 \times 18 \\
 &= 432 \text{ m}^2
 \end{aligned}$$

$$\begin{aligned}
 19. \text{ (B) C.I.} &= P \left[ \left( 1 + \frac{R}{100} \right)^2 - 1 \right] \\
 1716 &= P \left[ \left( 1 + \frac{20}{100} \right)^2 - 1 \right] \\
 1716 &= P \left[ \frac{36 - 25}{25} \right]
 \end{aligned}$$

$$P = \frac{1716 \times 25}{11}$$

$$P = \frac{1716 \times 25}{11} = ₹ 3,900$$

$$\text{Now S.I.} = \frac{3900 \times 15 \times 3}{100}$$

$$= ₹ 1755$$

$$\begin{aligned}
 20. \text{ (C) Let the cost price of the article is } x \text{ rupees,} \\
 \text{Then as per question—} \\
 x \times (42\% - 18\%) &= 110 - 40 \\
 x \times \frac{24}{100} &= 110 - 40
 \end{aligned}$$

$$x = \frac{11040}{24}$$

$$x = 460$$

$$\begin{aligned}
 \therefore \text{ Selling price} &= 460 \times \frac{125}{100} \\
 &= ₹ 575
 \end{aligned}$$

$$\begin{aligned}
 21. \text{ (C) A's six days work} \\
 &= \frac{6}{20} = \frac{3}{10}
 \end{aligned}$$

$$\text{Remaining work} = 1 - \frac{3}{10} = \frac{7}{10}$$

$$\begin{aligned}
 (A + B)'s \text{ work} &= \frac{1}{20} + \frac{1}{15} \\
 &= \frac{7}{60}
 \end{aligned}$$

$$\therefore \text{ Remaining work } \left( \frac{7}{10} \right) \text{ will}$$

complete

$$\begin{aligned}
 &= \frac{7}{10} \times \frac{60}{7} \\
 &= 6 \text{ days}
 \end{aligned}$$

So, B left the work after 6 days.

$$\begin{aligned}
 22. \text{ (D) I. } 2x^2 + 7x + 5 &= 0 \\
 2x^2 + 5x + 2x + 5 &= 0 \\
 x(2x + 5) + 1(2x + 5) &= 0 \\
 (2x + 5)(x + 1) &= 0
 \end{aligned}$$

$$\therefore x = -1, -\frac{5}{2}$$

$$\begin{aligned}
 \text{II. } 3y^2 + 5y + 2 &= 0 \\
 3y^2 + 3y + 2y + 2 &= 0 \\
 3y(y + 1) + 2(y + 1) &= 0 \\
 (y + 1)(3y + 2) &= 0
 \end{aligned}$$

$$y = -1, -\frac{2}{3}$$

$\therefore x \leq y$

$$\begin{aligned}
 23. \text{ (B) I. } 2x^2 - 13x + 21 &= 0 \\
 2x^2 - 7x - 6x + 21 &= 0 \\
 x(2x - 7) - 3(2x - 7) &= 0 \\
 (2x - 7)(x - 3) &= 0 \\
 x &= 3, \frac{7}{2}
 \end{aligned}$$

$$\begin{aligned}
 \text{II. } 3y^2 - 14y + 15 &= 0 \\
 3y^2 - 9y - 5y + 15 &= 0 \\
 3y(y - 3) - 5(y - 3) &= 0 \\
 (y - 3)(3y - 5) &= 0 \\
 y &= 3, \frac{5}{3}
 \end{aligned}$$

$\therefore x \geq y$

$$\begin{aligned}
 24. \text{ (E) I. } 2x^2 - 13x + 18 &= 0 \\
 2x^2 - 9x - 4x + 18 &= 0 \\
 x(2x - 9) - 2(2x - 9) &= 0 \\
 (2x - 9)(x - 2) &= 0 \\
 x &= 2, \frac{9}{2}
 \end{aligned}$$

$$\begin{aligned}
 \text{II. } y^2 - 7y + 12 &= 0 \\
 y^2 - 4y - 3y + 12 &= 0 \\
 y(y - 4) - 3(y - 4) &= 0 \\
 (y - 4)(y - 3) &= 0 \\
 y &= 3, 4
 \end{aligned}$$

$$\begin{aligned}
 25. \text{ (E) I. } x^2 + 6x + 9 &= 0 \\
 (x + 3)^2 &= 0 \\
 x &= -3, -3
 \end{aligned}$$

$$\begin{aligned} \text{II. } y^2 - y - 20 &= 0 \\ y^2 - 5y + 4y - 20 &= 0 \\ y(y-5) + 4(y-5) &= 0 \\ (y-5)(y+4) &= 0 \end{aligned}$$

$$\begin{aligned} y &= -4, 5 \\ 26. \text{ (C) I. } 3x^2 + 10x + 8 &= 0 \\ 3x^2 + 6x + 4x + 8 &= 0 \\ 3x(x+2) + 4(x+2) &= 0 \\ (x+2)(3x+4) &= 0 \end{aligned}$$

$$\begin{aligned} x &= -2, -\frac{4}{3} \\ \text{II. } 2y^2 - 19y + 35 &= 0 \\ 2y^2 - 14y - 5y + 35 &= 0 \\ 2y(y-7) - 5(y-7) &= 0 \\ (y-7)(2y-5) &= 0 \end{aligned}$$

$$y = 7, \frac{5}{2}$$

$$\therefore x < y$$

$$\begin{aligned} 27. \text{ (C) } ? &= \sqrt{225} \times 12 \div 20 \\ &= \frac{15 \times 12}{20} = 9 \end{aligned}$$

$$\begin{aligned} 28. \text{ (B) } \sqrt[3]{?} &= 130 + 40 - 165 \\ &= 170 - 165 = 5 \\ \therefore ? &= 5^3 = 125 \end{aligned}$$

$$\begin{aligned} 29. \text{ (E) } ? &= 80 \times \frac{40}{100} + 160 \times \frac{60}{100} \\ &= 32 + 96 = 128 \end{aligned}$$

$$\begin{aligned} 30. \text{ (D) } ? &= (14)^2 - \frac{3 \times 104}{8} \\ &= 196 - 78 = 118 = 120 \end{aligned}$$

$$\begin{aligned} 31. \text{ (A) } \frac{1}{4} \times 117 \times 3 \times 16 \div ? &= 40 \\ 1404 \div ? &= 40 \\ ? &= \frac{1404}{40} \\ &= 35.1 \\ &= 35 \end{aligned}$$

$$32. \text{ (A) Quantity I : Given that length of train 'A' = } x \text{ m.}$$

$$\text{Then, length of train 'B' = } \frac{x}{2} \text{ m}$$

As per question,

$$x + \frac{x}{2} = (25 + 15) \times 12$$

$$\frac{3x}{2} = 40 \times 12$$

$$x = \frac{480 \times 2}{3} = 320 \text{ m}$$

$$\text{Quantity II : } 160 \text{ m}$$

So, Quantity I > Quantity II.

$$33. \text{ (B)}$$

$$34. \text{ (A) Quantity I : Given that capacity of Cistern = } x \text{ litres.}$$

As per question,

$$x \times \frac{20}{100} = 60$$

$$x = 300 \text{ litres}$$

Quantity II : 250 litres

So, Quantity I > Quantity II.

$$35. \text{ (E) Quantity I : Let the speed of boat in still water and speed of stream are } 2y \text{ and } y \text{ km/hr, respectively.}$$

Then, Downstream speed ( $x$ ) =  $3y$  km/hr.

As per question,

$$\frac{72}{(2y-y)} + \frac{72}{3y} = 32$$

$$\frac{216+72}{3y} = 32$$

$$96y = 288$$

$$y = \frac{288}{96}$$

$$= 3 \text{ km/hr.}$$

Then,  $x = 3 \times 3$

$$= 9 \text{ km/hr.}$$

Quantity II = 9 km/hr.

So, Quantity I = Quantity II.

Chapter

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## Essay Contest

# Culture is the Mainstay of a Civilized Society

—Neha Sharma

"Culture is the widening of the mind and of the Spirit."

—Jawahar Lal Nehru

The word 'culture' is derived from the Latin term 'cult' or 'cultus' meaning tilling, or cultivating, or refining. This is practically the same as 'Sanskriti' of the Sanskrit language.

The term 'Sanskriti' has been derived from the root 'kri' (to do) of Sanskrit language. Three words came from this root 'kri' Prakriti (basic matter or condition), Sanskriti (refined matter or condition) and Vikriti (modified or decayed matter or condition). When 'Prakriti' or raw material is refined, it becomes 'Sanskriti' and when broken or damaged, it becomes 'Vikriti'.



Neha Sharma

Culture is a way of life. The food you eat, the clothes you wear, the language you speak in are all aspects of culture. It is the embodiment of the way in which we think and do things. It is also the things that we have inherited as members of society. Art, music, literature, architecture, sculpture, philosophy, religion and science can be seen as aspects of culture. However, culture also includes customs, traditions, festivals, ways of living and one's outlook on various issues of life.

The words 'culture' and 'civilisation' are often used synonymously. However, they have clearly defined meanings differentiating them. 'Civilization' means having better ways of living and sometimes making nature bend to fulfil their needs. It also includes organising societies into politically well defined groups working collectively for improved conditions of life in matters of food, dress, communication and so on. On the other hand, 'culture' includes arts, sciences, music and dance and various higher pursuits of human life which are also classified as cultural activities.

Cultural development is a historical process. Our ancestors learned many things from their predecessors. With the passage of time, they also added to it from their own experience. The culture we inherit from our predecessors is called our cultural heritage. This heritage exists at various levels. Humanity, as a whole has inherited a culture which may be called human heritage. A nation also inherits a culture which may be termed as national cultural heritage.

Culture is learned and acquired. It is shared by a group of people. It is cumulative. It changes. It is dynamic. It gives us a range of permissible behaviour patterns. It is diverse. It is ideological; meaning it lays down ideal patterns of behaviour that are expected to be followed by individuals so as to gain social acceptance from the people with the same culture.

Culture is closely linked to life. It is made up of traditions, beliefs, ways of life, from the most material to the most spiritual. It gives us meaning, a way of leading our lives. Human beings are creators of culture, and at the same time, culture is what makes us human.

Spengler described world history as a necessary development from culture to civilisation. Within this system, civilisation is seen as decadent and as representing the last phase of culture. According to him, "civilisations are the most external and artificial states of which a species of developed humanity is capable. They are the conclusion, they are the inevitable destiny of culture."

The idea of culture derives from scholars working in the shadow of the pioneering ethnologist E.B. Taylor, who called culture "that complex whole which includes knowledge, belief, arts, morals, law, custom and any other capabilities and habits acquired by man as a member of society. In 1952, anthropologists A.L. Kroeber and Clyde Kluckhohn compiled 164 different definitions of 'culture'. "The essential core of

culture consists of traditional (*i.e.*, historically derived and selected) ideas and especially their attached values." Subsequent definitions have included the idea that we are 'programmed' into our various cultures and crucially, that while a culture is shared among like-minded people, it also has different meanings for each individual. In Taylor's day, 'culture' differed from 'civilisation' in the supposed primitive nature of the one and the supposed advanced nature of the other. Civilisation, in this view, is less a body of beliefs than a political abstraction. A civilisation can embrace many cultures; its heart is a city-state or a world city, its rules are written and explicit rather than informally handed down from generation to generation, as those of a culture generally are.

The German historian Oswald Spengler considered civilisation the teleological "inevitable destiny of culture". And Samuel Huntington's famous book 'The Clash of Civilisations', largely about the differences between the Euro-American and Arab worlds, protests that efforts to distinguish culture from civilisation "have not caught on", and the 'civilisation' of which he writes is really 'culture' a set of beliefs rather than a system of rules. Emile Durkheim argued that as society evolved from agriculture to industry, so did the culture of the pre-industrial era give way to civilisation associated with the conditions of progress in human societies. Durkheim extended the division of Labour from economics to organisms and society, from which its association with culture was derived, arguing that the more specialised an organism's functions were, the more exalted a place it occupied in the animal hierarchy. For Durkheim, the extent of division of labour in society influenced the direction of the development of evolution of mankind from culture to civilisation. Durkheim used division of labour to make the distinction

between culture as a presence of the pre-modern medieval society and civilisation as belonging to the modern industrial society.

Durkheim argued that division of labour influenced the moral constitution of societies by creating moral rules for human conduct that influenced social order in ways that made industrial societies distinct from the pre-industrial ones. It created a civilised, individual man, capable of being interested in everything but attaching himself exclusively to nothing, able to savour everything and understand everything, found the means to combine and epitomise within himself the finest aspects of civilisation. Durkheim advanced an essentially Darwinian argument. In the biological determinism of Durkheim, it is argued that the shift from mechanical to organic solidarity was comparable to the changes that appeared on the evolutionary scale. Relatively simple organisms showing only minimal degrees of internal differentiation ceded place to more highly differentiated organisms whose functional specialisation allowed them to exploit more efficiently the resources of the ecological niche in which they happened to be placed. The more specialised the functions of an organism, the higher its level on the evolutionary scale, and the higher its survival value. In similar ways, the more differentiated a society, the higher its chances to exploit the maximum of available resources, and hence the higher its efficiency in procuring indispensable means of subsistence in a given territory.

In German, civilisation was confined to the material conditions, while the English expression sometimes included psychic, moral and spiritual phenomenon. The German Kultur also referred to material civilisation, while culture in English over time came to mean something entirely different, which corresponded to humanities. The German Kultur also related to the arts of savages and barbaric peoples, which were not included in any use of civilisation since the term civilisation denoted a stage of advancement higher than savagery or barbarism. These stages in advancement of civilisation were even popularly known as stages of

culture; implying that the word culture was used synonymously with the German Kultur. In English, 'culture' was a condition or achievement possessed by society. It was not individual. The English phrase "a cultured person" did not employ the term in the German sense. There was a sense of non-specificity in the way in which the concept 'culture' was deployed in the German sense.

From its etymological roots in rural labour, the word culture was first deployed with reference to 'civility'; then in 18th Century, it became more or less synonymous with 'civilisation', in the sense of a general process of intellectual, spiritual and material progress. In Europe, civilisation as an idea was equated with manners and morals. As a synonym of 'civilisation', 'culture' belonged to the general spirit of Enlightenment, with its cult of secular, progressive self-development. Both the words—'culture' and 'civilisation'—have shared a transcendental association with the notion of cultivation. For Eagleton, it was a view of culture as a component of civilisation which was neither dissociated from society nor wholly at one with it.

Culture and civilisation cannot be looked at as antonyms or binary opposites, in the sense in which evolution theorists would want us to view the relationship between these two concepts. Both the concepts tend to depict not only elements of normality in advance in life forms, but also constantly improving internal conditions of the internal elements of these concepts that define humanity which they embody.

Culture can exist in itself whereas civilisation cannot be called a civilisation if it does not possess a certain culture. It is just like asking how a nation can exist on its own without the use of a medium of communication. Culture can be something that is tangible and it can also be something that is not. Culture can become a physical material if it is a product of beliefs, customs and practices of a certain people with a definite culture. But a civilisation is something that can be seen as a

whole; it is more or less tangible although its basic components, like culture, can be immaterial.

Culture can be learned and in the same manner, it can also be transmitted from one generation to the next. Using a medium of speech and communication, it is possible for a certain type of culture to evolve and even be inherited by another group of culture. On the other hand, civilisation cannot be transferred by mere language alone. Because of its complexity and magnitude, you need to transfer all of the raw aggregates of a civilisation for it to be entirely passed on.

19 april

## Test Your Knowledge

### Answers with Hints

- (C) 2. (A) 3. (A)
- (B) It is a popular defence mechanism wherein the target company issues 'right shares' as a tactic to make a hostile acquisition more expensive (or less attractive) to the potential acquirer. There are a dozen or so variants of a poison pill.
- (C)
- (A) Here an investor buys the property from a homeowner facing foreclosure and agrees to lease the home to the homeowner who may remain in it as a tenant.
- (D) 8. (B)
- (A) He served as one, while he was the Secretary of State in the 1790s. He became President of USA in 1801.
- (C) PNB was founded by Lala Lajpat Rai in 1894 in Lahore.
- (A) UPS, in collaboration with the drone technology company Matternet, began daily delivery of medical supplies in Wake-Med's campus in North Carolina, in March 2019.
- (A) 13. (D) 14. (C) 15. (D) 16. (D) 17. (B) 18. (C) 19. (A) 20. (B) 21. (C) 22. (A) 23. (C) 24. (D) 25. (A) 26. (C) 27. (A) 28. (B) 29. (B) 30. (A) 31. (B) 32. (A) 33. (A) 34. (D) 35. (C) 36. (C) 37. (D) 38. (D) 39. (A) 40. (D)

19 april



## Debate Contest

## Sweet are the Uses of Adversity

### In Favour

—Ananya Roy

"Fire is the test of gold; adversity, of strong men." —Martha Graham

Adversity forces man to confront with his biggest fears and negatives transforming them into his strength as he pushes beyond the mark which he had previously marked as his limitation.

Just as the purity and strength of actual gold can be measured and weighed difficult situations act as the indicator of the strongest and the best. Adversities are difficulties or obstacles which hinder one's progress and force them to realize their hidden latent strength, be it mental or physical.

Adversities or impediments might be viewed in a negative light but they are indeed necessary for building the character of a man properly. When one is subjected to hardships, perceiving and thinking beyond the comfort zone and stepping into it prepares the man for many such barriers to come. Adversity forces man to reflect upon himself and gradually crafts an outstanding human out of him who gains many an experience from tackling and battling those adversities. These very experiences help the person to taking lessons as a result of which the same mistake is not committed twice.

Just as a butterfly has to bear hardships and struggle before transforming into its majestic form from that of a caterpillar and chrysalis, man too has to face obstacles which craft a fine figure out of him in the process. There lies no trace of impurity or foul play in such a person. Adversity not only gives us lessons but also prepares us for many storms to come our way in future.

Adversity provides people with the opportunity to discern the friends and the foes as real friends stick to us no matter what, while enemies in the

disguise of friends flee the scene leaving us in misery. But it is this very moment of hardship that waxes in the sheep-skin show and reveal their true colours.

Just as the malleability and ductility of a metal is tested under extreme heat and temperature conditions, the potential and capability of a person is similarly tested under such conditions. Difficulties are a definite aspect in life without which life will be like 'food without salt'. Adversities compel people to perform beyond their level of familiarity to an unfamiliar one. When faced with such circumstances the stronger ones persevere with determination pushing beyond their limits thus acquiring success.

Similarly, when a student is faced with the difficulty of acing a particular subject he or she begins rigorously practising finally reaching the determined mark. The story of the crow and the pitcher is a symbolic one where the thirsty crow comes across the idea of dropping stones in the pitcher for the water level to rise and similarly quenches its thirst by drinking it. Adversity had graced itself in the form of poverty in the lives of personalities like Kalam and Vidyasagar who had torn through the hurdles of financial scarcity to win over them finally. Adversity had indeed crafted greatness out of them.

Adversity hence plays a positive role in the life of man reducing fear and infirmities to strength and success. It enables one to outperform and shine as the ordeal indeed brings out the best out of one. Instead of being bitter and vile they indeed prove to be sweet that remain as blessing in the long run.

It is only one thought that keeps us going in heavys now and bright sun alike.

### Against

—Pooja Kaphalia

The famous poet-dramatist 'William Shakespeare' quotes in his work 'As you like it'.

"Sweet are the uses of Adversity, which, like the toad, ugly and venomous,

wears yet a precious jewel in his head;

And this our life, exempt from public haunt,

find tongues in trees, books in the running brooks,

Sermans in stones, so good in everything."

He says through these lines that sweet are the uses of adversity; although adversities are ugly, poisonous or like a snake that can bite you any time. But in its head adversity wears a jewel of great value that is in the form of sweets or success.

Our elders and well-wishers too often utter this whenever they find us, collapsed in any difficult situation to pull us out of that debris, with a new lease of hope. But how far does this optimistic Shakespearean maxim go relevant to today's pragmatic world, ridden with violence and tensions? Is there any opposite side of the coin, full of gay and glee? Some people will definitely twitch their eyebrows against my apprehension, but it has been rightly said, "Sweet are the uses of adversity to the party it doesn't happen to." —Anonymous Author

Adversity may be defined as affliction, misfortune, or any circumstance that is injurious to us and opposed to our interests and welfare.

Before we come to any conclusion, think of those people who are fighting every hour against some odds only to survive where adversities are the source of great trouble and where one has to lead a life of privation. Such people have to go through bad patches of life almost everyday. Challenges come to them in many forms like hunger, disease, frustration, unfulfilled dreams and aspirations, ambitions yet to be realized, expectations to be



Ananya Roy



Pooja Kaphalia

matched up to, poverty, exploitation, loss of hearth & home and many more. Many people are prone to lose heart at the time of adversity. Such people have to retire in their own shell. They have no individual achievements and the society closes its door on them. The poor fellows even have to suffer disrepute and ignominy for no fault of theirs most often. They must feel depressed & some of them are forced to run away from home or commit suicide.

There are many who have lost their permanent abode or all other resources due to some climatic disaster; some may have lost their friends and families in some political riots or terrorist attacks; some may have lost themselves in this puzzle of 'corrupt society'. They all are the victim of some adversities, which came in their way of living, but they will not definitely get any better reward out of their miseries. They might use all their efforts to begin a new life keeping away the past, but what has been lost once, can never be recuperated, because to survive is much different from to live.

The daily newspaper flooded with such incidents like farmers suicide, acid attack, soldier's death-how can one say that pain is gain? This is indeed flattering. No doubt the government will provide them with some compensation, but does compensation ever compensate the mental scar?

There are many points which have been made in favour of the topic, over the years. I want to argue against them to testify the truth, the reality.

It is often said that adversity increases the level of our patience and endurance, so that we can hold all the broken pieces of our mind to start afresh. But, we forget that the marks of a broken heart can never be hidden. The fear will never fade away.

Some say that adversity or difficulty brings the best in man as he learns to cope with his trials. It develops fortitude and courage in him. Now, go to a survivor of a plane crash or natural calamities or any other debacles and ask him how much paradoxical statement is valid to him, does the worst he suffered wash away his worst fear? Doesn't it come to him as a nightmare to haunt him again?

It is also argued that giving up simple pleasures during the time of difficulty brings abundant happiness later. Then, what about those soldiers, standing day and night in LOC, defeating all the extremities? In return for this sacrifice what result are they getting? Lying in a pool of blood or being entitled as a martyr, or something which gives our director & producers an another storyline to make a blockbuster, a high rated movie. Is it the only reward best suited to them? Definitely not.

Now there is another point relevant here. Throughout the history, we see that a group of powerful persons have created their life better at the cost of others' existence. The first group contained upper-class aristocrats while the proletariat or working class people belonged to the other. They are always misused as slaves by masters, as warriors by warmongers or as vulnerable masses by the powerful authorities, while, at the end of the day, there is only disappointment and delusion reserved for them. Patrick Henry, an American politician once said, "Is life so dear, or peace so sweet as to be purchased at the price of chains or slavery?"

The truth lies in the fact that far from refining and improving human beings, adversity and suffering lead to coarsening of the moral fibre and make people centred, narrow, envious, unjust and uncharitable. More often than not adversities and suffering lead to resignation, which far from resolving the perplexities of life, are tantamount to surrendering, to the hostile whims of chance; in other words, to find good in suffering is the virtue of the vanquished.

## Conclusion

The truth is our life on this planet is an uncertain one, always at a risk against the difficult disastrous-chaotic conditions which can fall upon us anytime. It can make our life bullish. Surely, nobody wants their destiny be faced with any kind of adversity. There is hardly any person who takes delight in gloom and doom. Whenever we get entrapped in some adversity, we search the way to escape it anyway. We hardly think that if we use our adversity to our favour, this will bear sweet results in future. Of course, it is a matter of chance if

mirage is turned to be an oasis. "But a matter of chance should not be taken as a matter of fact."

Continued from Page 164

145. Find DEX ?  
(A) A (B) B  
(C) E (D) D
146. Find RFQ ?  
(A) A (B) B  
(C) C (D) D
147. Find RXQ ?  
(A) B (B) A  
(C) C (D) D
148. Find XIO ?  
(A) A (B) B  
(C) C (D) D
149. Find 6 ?  
(A) 759845612  
(B) 14039807  
(C) 14587352  
(D) 4598321
150. Find 9 ?  
(A) 18585050785  
(B) 2845753450  
(C) 8058935878  
(D) 2454581050

## Answers

1. (B) 2. (B) 3. (A) 4. (C) 5. (B)  
6. (D) 7. (C) 8. (B) 9. (C) 10. (A)  
11. (B) 12. (B) 13. (A) 14. (C) 15. (C)  
16. (B) 17. (C) 18. (B) 19. (B) 20. (A)  
21. (D) 22. (C) 23. (D) 24. (C) 25. (C)  
26. (B) 27. (A) 28. (A) 29. (B) 30. (C)  
31. (A) 32. (D) 33. (C) 34. (C) 35. (D)  
36. (C) 37. (C) 38. (D) 39. (C) 40. (C)  
41. (B) 42. (A) 43. (B) 44. (A) 45. (A)  
46. (C) 47. (B) 48. (A) 49. (A) 50. (B)  
51. (A) 52. (A) 53. (A) 54. (A) 55. (B)  
56. (A) 57. (B) 58. (A) 59. (A) 60. (B)  
61. (A) 62. (A) 63. (B) 64. (B) 65. (A)  
66. (B) 67. (B) 68. (B) 69. (B) 70. (A)  
71. (A) 72. (B) 73. (B) 74. (B) 75. (B)  
76. (B) 77. (B) 78. (B) 79. (C) 80. (C)  
81. (C) 82. (B) 83. (A) 84. (A) 85. (A)  
86. (C) 87. (D) 88. (B) 89. (D) 90. (C)  
91. (C) 92. (B) 93. (B) 94. (B) 95. (B)  
96. (B) 97. (A) 98. (A) 99. (B) 100. (B)  
101. (C) 102. (B) 103. (C) 104. (C) 105. (B)  
106. (B) 107. (A) 108. (D) 109. (C) 110. (C)  
111. (B) 112. (B) 113. (B) 114. (D) 115. (A)  
116. (B) 117. (D) 118. (B) 119. (A) 120. (D)  
121. (A) 122. (C) 123. (B) 124. (D) 125. (A)  
126. (D) 127. (C) 128. (B) 129. (D) 130. (A)  
131. (B) 132. (D) 133. (C) 134. (A) 135. (B)  
136. (B) 137. (C) 138. (A) 139. (D) 140. (B)  
141. (D) 142. (C) 143. (B) 144. (A) 145. (C)  
146. (B) 147. (D) 148. (D) 149. (A) 150. (C)

- Workers in the organised sector consist of—  
(A) Casual and contract workers  
(B) Workers in cottage and village industries  
(C) Self-employed  
(D) All of the above
- Unorganised sector within the organised sector comprises—  
(A) Permanent workers  
(B) Contract and casual labourers  
(C) Both (A) and (B)  
(D) None of the above
- Trade unions help to channelise the grievances of the workers—  
(A) In an institutional matter  
(B) In an institutional matter  
(C) Both are correct  
(D) None of the above
- Who said, "Population when unchecked increases in geometric ratio, subsistence increases in arithmetic ratio"?  
(A) T.R. Malthus  
(B) Adam Smith  
(C) E. Durkheim  
(D) J.M. Keynes
- Labour laws in India are contained in the—  
(A) Union list  
(B) State list  
(C) Concurrent list  
(D) None of the above
- Which of the following is expected to play a crucial role in reducing the child labour participation rate?  
(A) Universalisation of elementary education  
(B) Good working conditions  
(C) High wage rate  
(D) None of the above
- Which among the following belongs to tertiary sector?  
(A) Agriculture  
(B) Construction  
(C) Industry  
(D) Transport
- The committee on the status of women recognises that—  
(A) Poor women are homogeneous groups  
(B) Poor women are not homogeneous groups  
(C) Poor men bear more burden of poverty than women  
(D) None of the above
- In British period the colonisers introduced—  
(A) Only subsistence crop cultivation  
(B) Private ownership in land  
(C) Community ownership in land  
(D) None of the above
- Which among the following countries leads in child labour work-force?  
(A) India  
(B) Bangladesh  
(C) Namibia  
(D) Nepal
- Who among the following differentiated classes into rentiers, wage earners and the capitalists?  
(A) Adam Smith  
(B) Robert Redfield  
(C) McLennan  
(D) K. Marx
- According to whom, the existence of class implies that there is an idea of social distance—  
(A) Lenin  
(B) K. Marx  
(C) Bergel  
(D) Weber
- According to Ram Krishna Mukherjee, the nuclear family is over represented in—  
(A) Rural area  
(B) Urban area  
(C) Both (A) and (B)  
(D) None of the above
- Trade unions help—  
(A) The labourers to express their dissatisfaction  
(B) The managers to be aware of workers' problems  
(C) Both are correct  
(D) None of the above
- The only weapon the workers have in combating against the might of the employer in an organised way is—  
(A) Withdrawal from the work  
(B) Attacking the employer  
(C) Breaking office automation equipments  
(D) None of the above
- According to whom there are three classes: the upper class, the middle class and the poor class—  
(A) Lenin  
(B) Marx  
(C) Aristotle  
(D) None of the above
- The concepts of positive and preventive checks were elaborated by—  
(A) T.R. Malthus  
(B) E. Durkheim  
(C) H. Spencer  
(D) C. Darwin
- Who said, "Population is one of the greatest problems generated by modern industrial-urban civilisation"?  
(A) G.H. Mead  
(B) Margaret Mead  
(C) E. Durkheim  
(D) R.K. Merton
- Seasonal employment is—  
(A) Found only in agriculture  
(B) Found only in industry  
(C) Found in industry as well as in agriculture  
(D) None of the above
- Who among the following termed 'slums' as 'Culture of Poverty'?  
(A) M. Clinard  
(B) M.N. Srinivas  
(C) Lewis  
(D) M. Harington

# CONCENTRIC QUIZ

(Special on Industry & Society)

## ENTRY FORM

### Pratiyogita Darpan

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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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	19.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 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.
- 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.
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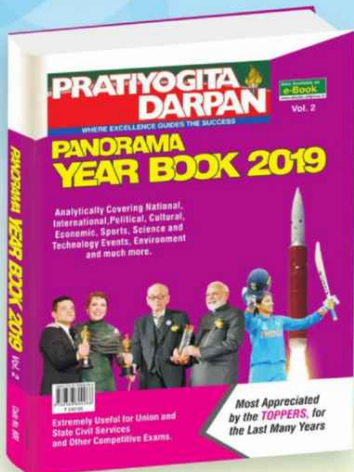
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1. Which of the following statements is incorrect about election bond ?

- I. Anybody can donate, through these bonds, to political parties without disclosing his identity.
- II. The Election Commission fears that the foreign companies having majority stake in an Indian company would allow unchecked foreign funding of political parties in India, which could lead to Indian policies being influenced by foreign companies.

Correct code is—

- (A) Only I is correct
  - (B) Only II is correct
  - (C) Both I and II are correct
  - (D) Neither I nor II is correct
2. 'Mission Shakti' is related to—
- (A) Successful testing of anti-satellite missiles
  - (B) Power projects development on PPP mode
  - (C) Empowerment of tribal adolescent girls
  - (D) Protecting the transgenders' rights
3. The Zayed Medal, the United Arab Emirates' highest civil honour, 2019 has been conferred upon—
- (A) Narendra Modi, Prime Minister of India
  - (B) Sheikh Hasina Wazed, Prime Minister of Bangladesh
  - (C) Imran Ahmed Khan Niazi, Prime Minister of Pakistan
  - (D) Donald Trump, President of USA
4. A 'Poison Pill' is a term used in—
- (A) Industrial Action
  - (B) Takeover defence
  - (C) Buyback scheme
  - (D) Insider Trading
5. India's first credit card was launched by—
- (A) State Bank of India
  - (B) Bank of Baroda
  - (C) Andhra Bank
  - (D) ICICI Bank
6. Equity stripping is used in terms of a commodity with respect to—
- (A) Mortgages
  - (B) Dividends
  - (C) Buyback
  - (D) Private Placements
7. In mutual fund parlance, alpha refers to a situation where the risk-adjusted return of a scheme exceeds—
- (A) The risk-free return
  - (B) The peer-set return
  - (C) Its historical return
  - (D) Benchmark return
8. Prime Minister Narendra Modi has been honoured with ..... highest state decoration, "The Order of St. Andrew the Apostle".
- (A) France's
  - (B) Russia's
  - (C) Italy's
  - (D) Germany's
9. ...., US President worked as a patent examiner before becoming the President.
- (A) Thomas Jefferson
  - (B) Theodore Roosevelt
  - (C) Ronald Reagan
  - (D) Jimmy Carter
10. Punjab National Bank was established by ....., a freedom fighter.
- (A) Madan Lal Dhingra
  - (B) Sukhdev
  - (C) Lala Lajpat Rai
  - (D) Raj Kumari Amrit Kaur
11. Which company facilitated the US' first revenue earning drone delivery in 2019 ?
- (A) Blue Dart
  - (B) Amazon
  - (C) UPS
  - (D) FedEx
12. .... is the first Indian businessman to sign the Giving Pledge.
- (A) Azim Premji
  - (B) Kiran Mazumdar Shaw
  - (C) Nandan Nilekani
  - (D) PNC Menon
13. Which of the following agencies of Counter Terrorism Infrastructure in India is chaired by the Prime Minister ?
- I. National Security Council
  - II. Strategic Policy Group
  - III. National Security Advisory Board
- Correct code is—
- (A) Only I
  - (B) Only I and II
  - (C) Only II and III
  - (D) I, II and III all
14. Consider the following statements and choose the correct code given below :
- I. The phrase 'Basic Structure of the Constitution' is no where in the Constitution of India'.
  - II. Supreme Court of India, through its key judgements, made it clear that the Parliament cannot amend any part of the Constitution, that degenerates or damages the basic structure of the Constitution.
- Correct code is—
- (A) Only I is correct
  - (B) Only II is correct
  - (C) Both I and II are correct
  - (D) Neither I nor II is correct
15. Which of the following statements is incorrect about 'Dard Aryan Tribe' ?
- (A) They are mainly Buddhists
  - (B) They are the natives of Laddakh
  - (C) They predominantly worship trees, rivers and mountains
  - (D) Dards social structure is matriarchal
16. The President of India has the power to remove—
- I. His Ministers, individually
  - II. The Attorney-General of India

- III. The Chairman or a member of the Public Service Commission of the Union or of a state, on the report of the Supreme Court
- IV. A Judge of the Supreme Court or the High Court or the Election Commissioner, on an address of the Parliament
- (A) Only II  
(B) Only I and II  
(C) Only I, II and III  
(D) I, II, III and IV all
17. India has adopted a federation of the—  
(A) US type  
(B) Canadian type  
(C) Australian type  
(D) Russian type
18. As per the provisions of Article 75 (1A) the total number of ministers, including the Prime Minister shall not exceed ..... per cent of the total number of the members of the House of People (Effective from 1.1.2004).  
(A) 8% (B) 10%  
(C) 15% (D) 20%
19. Simultaneous elections to the state legislatures of ..... were held with the general election to the seventeenth Lok Sabha in 2019.  
I. Andhra Pradesh  
II. Telangana  
III. Odisha  
IV. Arunachal Pradesh  
V. Sikkim  
Correct code is—  
(A) Only I, III, IV and V  
(B) I, II, III, IV and V all  
(C) Only I and III  
(D) Only I
20. If a Bill is passed in State Legislative Assembly, but is not passed in State Legislative Council, what will be the next course of action of the state government?  
(A) The Bill will be referred to the joint sitting of both the houses and if the Bill is passed, it will be deemed as passed  
(B) The Legislative Council will refer back the Bill to the Legislative Assembly, and if the Legislative Assembly again passes the Bill, the Bill will be deemed as passed  
(C) The Bill shall be referred to the President of India  
(D) The Bill shall be lapsed
21. Which of the following is not a Buddhist pilgrimage site in India?  
(A) Sirpur in Chhattisgarh  
(B) Amravati in Andhra Pradesh  
(C) Shravana-Belgola in Karnataka  
(D) Naganipattam in Tamil Nadu
22. Match the List-I and List-II and choose the correct code given below:
- |  |                                       |
|--|---------------------------------------|
| <b>List-I</b><br>(Pilgrimage Site)         |                                       |
| (a) Udaigiri Caves in Odisha               | (b) Akota in Gujarat                  |
| (c) Sri Kalahasti temple in Andhra Pradesh | (d) Chennakeshava temple in Karnataka |
| <b>List-II</b><br>(Religion/Sect)          |                                       |
| 1. Jain                                    | 2. Saivaite                           |
| 3. Buddhism                                | 4. Vaisnavaites                       |
- Correct code is—  
(a) (b) (c) (d)  
(A) 3 1 2 4  
(B) 3 2 1 4  
(C) 4 3 2 1  
(D) 1 2 3 4
23. Which of the following is regarded as the 'Architect of the Poor'?  
(A) Edwin Lutyens  
(B) Le Corbusier  
(C) Laurie Baker  
(D) Herbert Baker
24. Which of the following pairs is not matched correctly?  
(A) Hawa Mahal—Jaipur (Rajasthan)  
(B) Church of Sacred Heart—Puducherry  
(C) St. Paul's Cathedral—Kolkata  
(D) Buland Darwaza—Golkunda fort near Hyderabad
25. Etawah Gharana is associated with—  
(A) Sitar Vaadan  
(B) Tabla Vaadan  
(C) Sarod Vaadan  
(D) Kathak dance
26. Kishanganga river is flowing in the state of—  
(A) Uttar Pradesh  
(B) Bihar  
(C) Jammu & Kashmir  
(D) Andhra Pradesh
27. The term 'Himadri' is associated with—  
(A) Greater Himalaya  
(B) Himachal  
(C) Lesser Himalaya  
(D) Western Ghat
28. Which of the following towns is termed as the automobile hub in India?  
(A) Tirupur (Tamil Nadu)  
(B) Sanand (Gujarat)  
(C) Vadodra (Gujarat)  
(D) Indore (Madhya Pradesh)
29. In which type of forests are chestnut and olive common trees?  
(A) Coniferous Forests  
(B) Mediterranean Forests  
(C) Tropical deciduous Forests  
(D) Tropical Evergreen Forests
30. The correct sequence in descending order of the given soils with respect to area coverage of India is—  
(A) Alluvial, black, red, laterite  
(B) Alluvial, red, black, laterite  
(C) Alluvial, red, laterite, black  
(D) Red, alluvial, black, laterite
31. Rinderpest, a common disease of animals, is caused by—  
(A) Bacteria  
(B) Virus  
(C) Protozoa  
(D) Helminthes
32. Largest Blood cells are—  
(A) Monocytes  
(B) Neutrophils  
(C) Lymphocytes  
(D) Basophiles
33. Which of the following is not a characteristic of Fungi?  
(A) The cell wall is made of cellulose  
(B) Fungi are heterotrophic  
(C) Most of the fungi are terrestrial in habitat  
(D) Fungi contains glycogen and oil as the stored food material
34. Starfish belongs to phylum—  
(A) Mollusca  
(B) Coelenterata

- (C) Arthropoda  
(D) Echinodermata
35. Which of the following is an insecticide ?  
(A) Potassium Permanganate  
(B) Bleaching Powder  
(C) Dichloro Diphenyl Trichloroethane (DDT)  
(D) Magnesium Chloride
36. Which of the following is not an acid ?  
(A)  $H_2SO_4$   
(B)  $HCl$   
(C)  $Al_2(SO_4)_3$   
(D)  $HNO_3$
37. Elements having valency 'one' are—  
(A) Always metals  
(B) Always non-metals  
(C) Always metalloids  
(D) Either metals or non-metals
38. Which of the following diseases are being researched in Gene therapy ?  
I. Cystic Fibrosis  
II. Sickle Cell Anemia  
III. Muscular Dystrophy  
IV. Carcinoma
- Correct code is—  
(A) Only I, II and III  
(B) Only II, III and IV  
(C) Only I, III and IV  
(D) I, II, III and IV
39. Which of the following is a bio-fertilizer ?  
I. Azotobacter  
II. Pseudomonas  
III. Arbuscular Mycorrhiza  
IV. Rhizobacteria  
Correct code is—  
(A) I, II, III and IV  
(B) Only IV  
(C) Only I, II and III  
(D) Only II, III and IV
40. Which of the following is a genetic disease ?  
I. XXX Syndrome  
II. Hemophilia  
III. Cystic Fibrosis  
IV. XXX syndrome  
Correct code is—  
(A) Only I and IV  
(B) Only II and III  
(C) Only I, III and IV  
(D) I, II, III and IV

[See Answer See Page 170]

Continued from Page 135

111. (A) Darashukoh was the eldest son and heir-apparent of the Mughal emperor Shah Jahan. Dara was designated with the title Padshahzade-i-Buzurg Martaba and was favoured as a successor by his father and his older sister, Princess Jahanara Begum. He was buried in Humayun's tomb in Delhi.  
(C) 113. (B) 114. (A)
115. (B) Nagaland — 1962  
Jharkhand — 2000  
Telangana — 2014  
Sikkim — 1975
116. (A) By the Charter Act of 1813, the British Parliament had abolished the monopoly of East India Company's trade in India except Tea and China trade.  
(B) 119. (B) 120. (C)
117. (A) Mongolia — 2  
Saudi Arabia — 15-3  
Iraq — 83  
Afghanistan — 49

Platinum

RESULTS		
<h3>Essay Competition</h3> <p><b>Topic : Culture is the Mainstay of a Civilized Society</b></p> <p><b>Winners</b></p> <p><b>First Prize Winner</b></p>  <p>Neha Sharma Uttam Nagar New Delhi-110 059</p> <p><b>Second Prize Winner</b></p>  <p>Ananya Roy Burdwan West Bengal-713 01</p> <p><b>Third Prize Winner</b></p>  <p>Shadma Rizvi Prayagraj Uttar Pradesh-211 016</p>	<h3>Debate Competition</h3> <p><b>Topic : Sweet are the Uses of Adversity</b></p> <p><b>Winners</b></p> <p><b>In Favour</b></p>  <p>Ananya Roy Burdwan West Bengal-713 01</p> <p><b>Against the Topic</b></p>  <p>Pooja Kaphalia Almora Uttarakhand-263 601</p>	<h3>Quiz Contest</h3> <p><b>CONCENTRIC QUIZ</b> (Special on Communication)</p> <p><b>First Prize Winner</b></p> <p>Alok Pratyush C/o Sri Ajay Kumar Account Section, Room No.32, All India Radio, Fraser Road, Patna, Bihar-800 001</p> <p><b>Second Prize Winner</b></p> <p>Khushboo Gupta Ghaziabad Uttar Pradesh-201 014</p> <p><b>Third Prize Winner</b></p> <p>Bhavishya Dahiya H.No.22/225, Kailashi Sandeep Dahiya, Nehru Park, Gali No.5, Bahadurgarh Haryana-124 507</p> <p><b>Answers</b></p> <p>1. (A) 2. (D) 3. (D) 4. (A) 5. (D) 6. (C) 7. (D) 8. (D) 9. (D) 10. (D) 11. (C) 12. (B) 13. (A) 14. (D) 15. (D) 16. (C) 17. (D) 18. (D) 19. (A) 20. (D)</p>





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JHARKHAND HJS 2018-19	UPSC IAS 2019-20	GUJARAT JUDICIAL SERVICES RESULTS, 2019	DELHI JUDICIAL SERVICES RESULTS, 2019 - 27 Selections out of 32	UPSC JUDICIAL SERVICES RESULTS, 2019
				
				
				
				

**M.P. JUDICIAL SERVICES RESULTS, 2019 - 22 Selections.**

KERALA JUDICIAL SERVICES RESULTS, 2019	M.P. JUDICIAL SERVICES RESULTS, 2019	GUJARAT HJS RESULTS, 2019	PUNJAB JUDICIAL SERVICES RESULTS, 2019 - 14 Selections.	UPSC JUDICIAL SERVICES RESULTS, 2019	DELHI JUDICIAL SERVICES RESULTS, 2019	GUJARAT JUDICIAL SERVICES RESULTS, 2019
						
						
						
						

**M.P. JUDICIAL SERVICES RESULTS, 2018 - 15 Selections.**

GUJARAT JUDICIAL SERVICES RESULTS, 2018	GUJARAT JUDICIAL SERVICES RESULTS, 2018	GUJARAT JUDICIAL SERVICES RESULTS, 2018	GUJARAT JUDICIAL SERVICES RESULTS, 2018	GUJARAT JUDICIAL SERVICES RESULTS, 2018	GUJARAT JUDICIAL SERVICES RESULTS, 2018	GUJARAT JUDICIAL SERVICES RESULTS, 2018
						
						
						
						

**BIHAR JUDICIAL SERVICES RESULTS, 2017 - 42 Selections.**

BIHAR JUDICIAL SERVICES RESULTS, 2017	BIHAR JUDICIAL SERVICES RESULTS, 2017	BIHAR JUDICIAL SERVICES RESULTS, 2017	BIHAR JUDICIAL SERVICES RESULTS, 2017	BIHAR JUDICIAL SERVICES RESULTS, 2017	BIHAR JUDICIAL SERVICES RESULTS, 2017	BIHAR JUDICIAL SERVICES RESULTS, 2017
						
						
						
						

**UTTAR PRADESH JUDICIAL SERVICES RESULTS, 2017 - 75 Selections.**

UTTAR PRADESH JUDICIAL SERVICES RESULTS, 2017	UTTAR PRADESH JUDICIAL SERVICES RESULTS, 2017	UTTAR PRADESH JUDICIAL SERVICES RESULTS, 2017	UTTAR PRADESH JUDICIAL SERVICES RESULTS, 2017	UTTAR PRADESH JUDICIAL SERVICES RESULTS, 2017	UTTAR PRADESH JUDICIAL SERVICES RESULTS, 2017	UTTAR PRADESH JUDICIAL SERVICES RESULTS, 2017
						
						
						
						

**DELHI JUDICIAL SERVICES RESULTS, 2017 - 46 Selections.**

DELHI JUDICIAL SERVICES RESULTS, 2017	DELHI JUDICIAL SERVICES RESULTS, 2017	DELHI JUDICIAL SERVICES RESULTS, 2017	DELHI JUDICIAL SERVICES RESULTS, 2017	DELHI JUDICIAL SERVICES RESULTS, 2017	DELHI JUDICIAL SERVICES RESULTS, 2017	DELHI JUDICIAL SERVICES RESULTS, 2017
						
						
						
						

\* TS & HSP - Attended Mains, Answer Writing Skills & Feedback Special Sessions - P.T. & Mains Full Test Series & Interview Guidance Programme.  
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