



SAMIKSHA
इसवीकड़ा
Comprehensive **NEWS** Analysis



ANALOG
IAS ACADEMY

MAY 2021



HIGHLIGHTS

UPSC Prelims GS-1 Practice Paper-2

UPSC Mains GS Practice Paper-39



ANALOG
IAS ACADEMY

PRELIMS TEST C.S.(P)

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T.B.C.: P-PFC-A-BJAK

5

TEST BOOKLET SERIES

Serial No. 135232

TEST BOOKLET

A

GENERAL STUDIES (PAPER – I)

Time Allowed: Two Hours

Maximum Marks: 200

INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET DOES NOT HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. ENCODE CLEARLY THE TEST BOOKLET SERIES A, B, C OR D AS THE CASE MAY BE IN THE APPROPRIATE PLACE IN THE ANSWER SHEET.
3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside. **DO NOT** write anything else on the Test Booklet.
4. This test Booklet contains **100** items (questions). Each item is printed both in Hindi and English. Each item comprises four responses (answers). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response, mark the response which you consider the best. In any case, choose **ONLY ONE** response for each item.
5. You have to mark all your responses **ONLY** on the separate Answer Sheet provided. See directions in the Answer Sheet.
6. All items carry equal marks.
7. Before you proceed to mark in the Answer Sheet the response to various items in the Test Booklet, you have to fill in some particulars in the Answer Sheet as per instructions sent to you will your Admission Certificate.
8. After you have completed filling in all your responses on the Answer Sheet and the examination has concluded, you should handover to the Invigilator only the Answer Sheet. You are permitted to take away with you the Test Booklet.
9. **USE ONLY BALL BLACK OR BLUE PEN TO MARK IN THE ANSWER SHEET.**
10. Sheets for rough work are appended in the Test Booklet at the end.
11. **Penalty for wrong answers:**

THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY A CANDIDATE IN THE OBJECTIVE TYPE QUESTION PAPERS.

 - (i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **one-third (0.333)** of the marks assigned to that question will be deducted as penalty.
 - (ii) If a candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above to that question.
 - (iii) If a question is left blank, i.e., no answer is given by the candidate, there will be **no penalty** for that question.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE ASKED TO DO SO



1. With respect to Arctic Science Ministerial (ASM), consider the following statements:

1. It is a global platform for discussing research and cooperation in the Arctic region.
2. ASM3, jointly organized by Japan and India, is the first Ministerial meeting being held in Asia.
3. The theme for the 3rd Arctic Science Ministerial (ASM3) is 'Knowledge for a Sustainable Arctic'.

Which of the statements given above are incorrect?

- (a) 1 and 2 only (b) 1 and 3 only
(c) 3 only (d) 1, 2 and 3

2. With respect to Arctic Council, consider the following statements:

1. It is an intergovernmental forum promoting cooperation among the Arctic States on common Arctic issues explicitly excludes military security.
2. India is the only country that enjoys Observer status in the Arctic Council since 2013.
3. The Chairmanship of the Arctic Council rotates every two years among the Arctic States only.

Which of the statement(s) given above is/are incorrect?

- (a) 1 only (b) 2 only
(c) 1 and 3 only (d) None of the above

3. With respect to 2-deoxy-D-glucose (2-DG), sometimes seen in the news recently, consider the following statements:

1. It is an anti-COVID drug developed by Central Council for Research in Ayurvedic Sciences (CCRAS).
2. The drug comes in powder form in sachet, which is taken orally by dissolving it in water.

Which of the statement(s) given above is/are incorrect?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

4. Which one of the following statements is incorrect regarding Gopal Krishna Gokhale?

- (a) He was a mentor to both Mahatma Gandhi and Mahadev Govind Ranade

- (b) He established the Servants of India Society at Pune, Maharashtra in 1905

- (c) He launched the English weekly newspaper Hitavada in 1911

- (d) He played a leading role in bringing about Morley-Minto Reforms, the beginning of constitutional reforms in India

5. Hakki Pikki is a tribal community inhabited in which of the following states?

- (a) Goa (b) Manipur
(c) Karnataka (d) Lakshadweep Islands

6. Which of the following statement(s) is/ are correct with respect to Long March 5B Rocket

1. It is a heavy weight launch vehicle developed by Roscosmos State Corporation for Space Activities (ROSCOSMOS) by Russia.
2. It is the launch vehicle designed to use exclusively non-hypergolic liquid propellants.

Select the incorrect answer using the codes given below:

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

7. Consider the following statements with respect to Sovereign Credit Rating

1. It shows the level of risk associated with lending to a particular country since it is applied to all bonds issued by the government.
2. It considers various factors such as the political environment, economic status, and its credit-worthiness to assign an appropriate credit rating.

Which of the statement(s) given above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

8. Global Methane Assessment is released by which of the following environmental organisations?

- (a) Green Peace International
(b) Food and Agriculture Organization
(c) United Nations Development Programme
(d) Climate and Clean Air Coalition

9. Which of the following organisations have constituted Regulations Review Authority (RRA 2.0)?
- (a) National Green Tribunal
 - (b) Reserve Bank of India
 - (c) Central Pollution Control Board
 - (d) Central Pollution Control Board

10. Which of the following statement(s) is/ are correct with respect to Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)?

- 1. It is used as a common treatment for acute pain and rheumatological diseases such as rheumatoid arthritis and osteoarthritis.
- 2. It blocks the production of certain body chemicals that cause inflammation.
- 3. It may lead to higher rates of death or severe disease in patients who are hospitalised with Covid-19.

Select the incorrect answer using the codes given below:

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 3 only
- (d) 2 and 3 only

11. Brucellosis, recently seen in news, is caused by:

- (a) Bacteria
- (b) Fungi
- (c) Parasite
- (d) Virus

12. R21/Matrix M was sometimes seen in the news. Which of the following correctly describes it?

- (a) It is a new earth like planet have the potential to support life
- (b) It is a new vaccine showing promising results to contain Malaria
- (c) It is a new robot that can solve all the matrix problems.
- (d) It is a new formula that can be aimed to contain the Covid-19 infections

13. Consider the following statements regarding 5g Technology.

- 1. 5G provide better energy efficiency of devices and stable of network connections compare to 4G
- 2. 5G has higher latency when compared to 4G
- 3. 5G Technology has developed by India to enhance rural coverage.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 1 and 3 only
- (c) 2 only
- (d) 1, 2 and 3

14. Ayush-64 was recently seen in news. In this regard, consider the following statements:

- 1. It is an ayurvedic drug developed for the management of mild cases of COVID infection

- 2. The drug is based on a formulation of multiple herbs
- 3. Ingredients of the drug have anti-pyretic properties

Which of the above statements is/are incorrect?

- (a) 1 only
- (b) 2 and 3 only
- (c) 2 only
- (d) 1 and 3

15. Consider the following statement on Crew Mission

- 1. It is a collaboration of NASA and European Space Agency
- 2. The mission aims to perform the manned mission to Mars in a decade.

Which of the above statements is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) None of the above

16. Mayflower 400 was sometimes seen in the news. Which of the following correctly describes it?

- (a) It is a new type of flowering species that provide more honey.
- (b) It is a new supercomputer that can perform high precision monsoon prediction
- (c) It is the world's first Artificial Intelligence (AI) ship which is completely autonomous
- (d) It is the new giant planet identified in the milky way

17. Indian Navy has recently Launched Operation Samudra Setu-II, with which one of the following aims?

- (a) To protect Indian waters from encroachment of any foreign ship
- (b) To cooperate with US navy to contain Chinese maritime activities
- (c) To protect Indian coastlines in Bay of Bengal from encroachment of Rohingyas
- (d) To bring oxygen-filled cryogenic containers to India from abroad

18. Consider the following statements regarding Large Area Certification Scheme for organic certification

- 1. It is a part of Paramparagat Krishi Vikas Yojana (PKVY)
- 2. The areas having chemical input usage history have to undergo a transition period to qualify as an organic land under this scheme.

Which of the above statements is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) None of the above

19. **SUTRA model, recently seen in news, is used for which of the following?**
- Screening of early-stage genetic diseases in plants
 - Advanced cryptography employed in blockchain
 - Research programmes for indigenous cattle
 - Prediction of the trajectory of COVID cases in India
20. **UDID portal was sometimes seen in news. Which of the following correctly describes it?**
- It is a new portal for registering medical oxygen demand by people
 - It is an online portal for registering complaints against government officials
 - It is an online portal to provide training for newly recruited public servants
 - It is the portal that aims to create a National Database for Person with Disabilities
21. **“Connected Commerce: Creating a Roadmap for a Digitally Inclusive Bharat” is a report that identifies challenges in accelerating digital financial inclusion in India and provides recommendations for making digital services accessible to all its citizens. The report was released recently by which of the following organizations?**
- NITI Aayog
 - Reserve Bank of India
 - 15th Finance Commission
 - Department for Promotion of Industry and Internal Trade
22. **Consider the following statements with respect to Tarang Sanchar Portal**
- It is a portal for information sharing on emf signals to public and to allay the misconceptions and fear of health issues due to emf emissions from mobile towers.
 - It has been developed in Public Private Partnership (PPP) mode by the Department of Telecommunications with Industry.
- Which of the statement(s) given above is/are correct?**
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
23. **Consider the following statements with respect to Jal Jeevan Mission (JJM)**
- It is a flagship programme of the Union Government, which aims to provide tap water connection to every rural household of the country by 2024.
 - Puducherry is the first State/UT to provide assured tap water supply to every rural home under Jal Jeevan Mission.
- Which of the statement(s) given above is/are correct?**
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
24. **Consider the following statements with respect to International Commission on Non-Ionizing Radiation Protection (ICNIRP)**
- It aims to protect people and the environment against adverse effects of Non-Ionizing Radiation (NIR) by developing science based exposure guidelines.
 - ICNIRP is an independent non-profit organization registered in Munich, Germany.
 - It is recognized as an official collaborating non-state actor by the World Health Organization (WHO) and the International Labour Organization (ILO).
- Which of the statements given above are correct?**
- 1 and 2 only
 - 1 and 3 only
 - 2 and 3 only
 - 1, 2 and 3
25. **Consider the following statements with respect to National Horticulture Board (NHB)**
- It was established on the basis of recommendations of the Group on Perishable Agricultural Commodities, headed by Dr M. S. Swaminathan.
 - It is an autonomous organization under the administrative control of Ministry of Agriculture and Farmers Welfare.
 - The main objective of the NHB is to improve integrated development of Horticulture industry and to help in sustaining the production and processing of fruits and vegetables.
- Which of the statement(s) given above is/are correct?**
- 2 only
 - 1 and 2 only
 - 2 and 3 only
 - 1, 2 and 3
26. **Which of the following statement(s) is/ are incorrect with respect to C - reactive protein (CRP) Test**
- It is a blood test and it tells about inflammation level in the body during any ailment and indicates about the infection level.
 - It is a type of diagnostic test which helps to detect the presence of SARS-CoV 2 in humans.
- Select the correct answer using the codes given below:**
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2

27. Consider the following statements with respect to Post Devolution Revenue Deficit (PDRD) Grants

1. It is provided by the Union government to the States under Article 275 of the Constitution.
2. The eligibility of States to receive this grant will be decided by Finance Commission.
3. The grant will be calculated based on the gap between assessment of revenue and expenditure of the State.

Which of the statement(s) given above is/are correct?

- (a) 1 and 2 only (b) 1 and 3 only
(c) 2 and 3 only (d) 1, 2 and 3

28. Which of the following organizations have released Conflict and Conservation Report?

- (a) UN- Environment Program (UNEP)
(b) World Wide Fund for Nature (WWF)
(c) International Union for Conservation of Nature (IUCN)
(d) Wild Life Conservation Society (WCS)

29. Paediatric Task Force is constituted by which one of the following states?

- (a) Tamil Nadu (b) Gujarat
(c) Kerala (d) Maharashtra

30. Which of the following statement(s) is/ are correct with respect to NASA's Artemis mission?

1. It aims to send humans to Mars for exploring "Life on Mars".
2. It will deploy the Star ship lander and launch vehicle for this mission built by Space X organization.

Select the correct answer using the codes given below:

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

31. With respect to Oxycare System, sometimes seen in the news recently, consider the following statements:

1. It is a SpO₂ based Oxygen Supply System which regulates the oxygen being administered to patients based on the sensed SpO₂ levels.
2. The system was developed by the Defence Research and Development Organization (DRDO).

Which of the statement(s) given above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

32. With respect to Mucormycosis, consider the following statements:

1. It is a serious but rare bacterial infection caused by a group of molds called mucormycetes.
2. The bacteria that causes mucormycosis are present throughout the environment and are more common in soil than in air.

Which of the statement(s) given above is/are incorrect?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

33. Which of the following are the benefits/outcomes of National Programme on Advanced Chemistry Cell Battery Storage?

- (a) Facilitates demand creation for battery storage in India
(b) Greater emphasis upon domestic value-capture and therefore reduce import dependence
(c) Impetus to Research & Development to achieve higher specific energy density and cycles in Advanced Chemistry Cell (ACC) battery
(d) All of the above

34. Consider the following statements with respect to World Food Prize, 2021

1. It is a biennial annual award created in 1986 with sponsorship by General Foods Corporation.
2. It aims to recognize the achievements of individuals who have advanced human development by improving the quality, quantity or availability of food in the world.
3. It is open for any individual without regard to race, religion, nationality or political beliefs.

Which of the statement(s) given above is/are incorrect?

- (a) 1 only (b) 1 and 2 only
(c) 2 and 3 only (d) 1, 2 and 3

35. Consider the following statements with respect to Shuvuuia deserti

1. It is a large wading bird common near the wetlands of Galapagos Islands.
2. It is a nocturnal animal having excellent night vision and superb hearing.

Which of the statement(s) given above is/are incorrect?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

36. Which of the following statement(s) is/ are correct with respect to Foreign Contribution (Regulation) Amendment Act (FCRA)
1. It seeks to prohibit public servants from receiving any foreign funding.
 2. Under the act NGO's can open bank accounts in any nationalised bank anywhere in India for receiving foreign funds.
- Select the incorrect answer using the codes given below:
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
37. Consider the following statements with respect to High Resolution Computed Tomography (HRCT) Scan
1. Unlike normal X-rays it can show the soft tissues, blood vessels, and bones in various parts of the body.
 2. It can even show possible blood clots in the lungs and provide information about the heart.
- Which of the statement(s) given above is/ are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
38. What is the conservation status of Western Hoolock Gibbon under IUCN Red list?
- (a) Near threatened
(b) Endangered
(c) Critically Endangered
(d) Extinct In the Wild
39. Which of the following statement(s) is/ are correct with respect to Asteroid Bennu
1. It is a B-type asteroid, implying that it contains significant amounts of carbon and various other minerals.
 2. OSIRIS REX Mission is NASA's first mission meant to return a sample from Asteroid Bennu.
- Select the correct answer using the codes given below:
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
40. Which of the following statement(s) is/ are incorrect with respect to Millisecond Pulsar
1. These have very low energy radiation and has a rotational period smaller than about 0.5 milliseconds.
 2. These have been detected in radio, X-ray, and gamma ray parts of the electromagnetic spectrum.
- Select the correct answer using the codes given below:
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
41. Rule of speciality or Principle of Specialty was some time seen in news. Which of the following correctly explains it?
- (a) It is one of the principle that governs the extradition of persons
 - (b) It is a rule that allows certain persons to have special rights in the management of company shares
 - (c) It is a rule of biology that governs the mutation of genes
 - (d) It is a rule in international relations that govern special relations with close allies
42. Consider the following statements regarding the principle of non-refoulement:
1. This principle applies to all migrants at all times, irrespective of migration status.
 2. It is a part of customary international law and hence, absolute.
 3. The prohibition of refoulement is explicitly included in the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (CAT).
- Which of the above statements is/are correct?
- (a) 1 only (b) 1 and 3
(c) 2 only (d) 1, 2 and 3
43. Consider the following statement on Real Estate (Regulation and Development) Act.
1. The Real Estate (Regulation and Development) Act was enacted on the State list.
 2. State legislatures can enact a law on the left-over matters of RERA.
- Which of the above statements is/are correct?
- (a) Only 1 (b) Only 2
(c) Both 1 and 2 (d) None of the above
44. Consider the following statements about Reservation in India
1. At present the maximum reservation provided by central government is within 50%
 2. Centre alone has the powers to notify backward classes
- Which of the above statements is/are correct?
- (a) Only 1 (b) Only 2
(c) Both 1 and 2 (d) None of the above
45. Justice M.G. Gaikwad committee was sometimes seen in the news. Which of the following is correctly describes the committee?
- (a) It is a committee that recommended reservation for Maratha community

- (b) It is a committee that recommended the Covid-19 containment plan to contain second wave
- (c) It is a committee that recommended reforms to resolve pending cases in Judiciary
- (d) It is a committee that recommended steps towards gender equity in judiciary

46. Patent is a powerful Intellectual Property Right. In this respect, consider the following statements:

- 1. A process patent allows for manufacturing of a patented product by modification of the process.
- 2. India's Intellectual Property regime has moved from process patenting to product patenting in pharma sector

Which of the above statements is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) None of the above

47. Consider the following statements regarding federalism in India

- 1. India is considered as a federal state with subsidiary unitary features
- 2. The term 'Federal' does not figure anywhere in the constitution

Which of the above statements is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) None of the above

48. Product and Process are types of which Intellectual Property?

- (a) Patents
- (b) Copyrights
- (c) Industrial Design
- (d) Geographical Indication Tag

49. Consider the following statements regarding the Model Code of Conduct (MCC) in India.

- 1. In the Lok Sabha election, the MCC applies to both the Union and the State Governments.
- 2. During the Assembly elections for a state, the Union government cannot introduce new schemes specific to that state

Which of the above statements is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) None of the above

50. Consider the following statements regarding Repo Rate (RR):

- 1. A cut in Repo rate supports economic growth
- 2. Reverse Repo Rate is generally lower than repo rate

Which of the above statements is/are incorrect?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) None of the above

51. Consider the following statements with respect to Overseas Citizens of India (OCI)

- 1. They are people of Indian origin but hold foreign passports.
- 2. They are treated at par with NRIs in financial, economic and educational fields including acquisition of agricultural properties.
- 3. Foreign nationals can also apply for OCI in India while on Tourist and Missionary Visa.

Which of the statement(s) given above is/are incorrect?

- (a) 1 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) None of the above

52. Consider the following statements with respect to SAMVEDNA

- 1. It is a toll-free helpline to provide psychosocial mental support for Children affected during COVID 19 Pandemic.
- 2. It was launched by the National Commission for Protection of Child Rights (NCPCR), Ministry of Women and Child Development.

Which of the statement(s) given above is/are incorrect?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

53. Taiwan Strait, which separates the coast of China from Island of Taiwan, connects which of the following?

- (a) South China Sea and East Sea
- (b) Yellow Sea and East China Sea
- (c) Sea of Japan and East China Sea
- (d) East China Sea and South China Sea

54. With respect to India's relationship with Arctic Region, which of the following statements is correct?

- (a) India's engagement with the Arctic dates back to 1920 with the signing of the Marseille Treaty in France
- (b) India has a permanent research station in the Arctic called "Maitri" in Norway since 2008
- (c) India has also deployed a multi-sensor moored observatory called "Bharti" in the Kongsfjorden fjord since 2014
- (d) The research in the Arctic region is being coordinated by the National Centre for Polar and Ocean Research (NCPOR) under the Ministry of Earth Sciences

55. With respect to Skinks, consider the following statements:

1. Skinks are non-venomous and resemble snakes because of the often-inconspicuous limbs and the way they move on land.
2. Subdoluseps Nilgiriensis is a new species of skink found in Western Ghats, Kerala.
3. Most skinks are diurnal and are usually secretive in their habits.

Which of the statements given above are incorrect?

- (a) 1 and 2 only (b) 1 and 3 only
(c) 2 only (d) 1, 2 and 3

56. Consider the following statements with respect to Deep Shake Earthquake Prediction

1. It is intended to provide a few seconds warning of imminent shaking once an earthquake has started.
2. It uses a deep neural network, a type of AI learning, to identify patterns from past earthquakes to make predictions.

Which of the statement(s) given above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

57. Consider the following statements with respect to Dengue

1. It is caused by Flavivirus which is transmitted principally by Aedes Aegypti mosquito.
2. World Mosquito Program have used mosquitoes infected with Wolbachia bacteria to successfully control dengue.

Which of the statement(s) given above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

58. Consider the following statements with respect to Article 311

1. It puts certain restrictions on the absolute power of the President or Governor for dismissal, removal or reduction in rank of an officer.
2. The protective safeguards given under Article 311 are applicable to both civil servants and defence personnel.

Which of the statement(s) given above is/are incorrect?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

59. Which of the following rovers have been deployed in the Tianwen-1 Mission to explore Mars?

- (a) Hope Rover (b) Zhurong Rover
(c) Viking Rover (d) Yinghuo Rover

60. Sulawesi Caves recently found in news is known for which of the following?

- (a) Active Volcanoes (b) Sumatran Orangutan
(c) Oldest cave art (d) Ancient rock edicts

61. Consider the following statements with respect to SWAMIH Investment Fund

1. It is an alternative investment fund to provide priority debt financing for the completion of stalled housing projects.
2. SBICAP Ventures, an arm of SBI Capital Markets, is entrusted by the government to manage this fund.

Which of the statement(s) given above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

62. With respect to Community Transmission, sometimes seen in the news recently, consider the following statements:

1. Community Transmission is said to be happened when new cases of COVID-19 in the last 14 days can't be traced to those who have an international travel history or when cases can't be linked to specific cluster.
2. The community transmission tag will be designated to a country by the World Health Organization (WHO).

Which of the statement(s) given above is/are incorrect?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

63. With respect to State Legislative Councils (SLCs), consider the following statements:

1. The members of the SLCs are elected in accordance with the system of proportional representation by means of a single transferable vote.
2. The bonafides or propriety of the governor's nomination to the SLCs are in any case cannot be challenged in the courts.
3. The scheme of composition of a legislative council as laid down in the Constitution is final and the Parliament is not authorised to modify or replace the same.

- Which of the statement(s) given above is/are incorrect?
- (a) 1 only (b) 3 only
(c) 1 and 2 only (d) 1 and 3 only
64. Crystals have their atoms arranged in strictly periodic order. In Quasicrystals even though the constituents are ordered, they are not arranged in periodic order. Which of the following is an application of quasicrystals?
- (a) Lasers (b) Watches
(c) Atomic clocks (d) Non-stick frying pans
65. Consider the following statements with respect to Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) Scheme
1. It is a central sector scheme, launched by the Ministry of Agriculture, for small and marginal farmers who owns less than 2 hectares of land.
 2. The scheme guarantees direct income support of Rs.6,000 for farmers to help them meet farm inputs and other costs during the crop season.
- Which of the statement(s) given above is/are incorrect?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
66. Which of the following statement(s) is/ are incorrect with respect to Liquid Medical Oxygen
1. It restores tissue oxygen tension by increasing the oxygen availability.
 2. Drug Prices Control Order, 2013 has placed LMO under the National List of Essential Medicines (NLEM).
- Select the incorrect answer using the codes given below:
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
67. Consider the following statements with respect to Commodity Super Cycle
1. It is a sustained period of abnormally strong demand growth that producers struggle to match, sparking an increase in prices.
 2. They usually occur for a very brief amount of time due to market uncertainties.
- Which of the statement(s) given above is/are incorrect?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
68. Global Variant of Concern is declared by which of the following Organizations?
- (a) US Centres for Disease Control and Prevention (CDC)
(b) Oxford Vaccine Group (OCG)
(c) Indian Council of Medical Research (ICMR)
(d) World Health Organization (WHO)
69. Tocilizumab is used effectively to treat which of the following human ailment?
- (a) Malaria & Dengue
(b) Bile stone formation
(c) Rheumatoid arthritis
(d) Cardio vascular Inflammation
70. Which of the following statement(s) is/ are correct with respect to Socially and Educationally Backward Classes (SEBC)
1. Centre alone is empowered to identify SEBC for claiming reservation benefits.
 2. States could only make suggestions to the President for inclusion, exclusion or modification of castes and communities to be included in the List.
- Select the correct answer using the codes given below:
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
71. Consider the following statements with respect to Red-eared Slider Turtle
1. It is an invasive species native to the United States of America (USA) and Northern Mexico.
 2. Due to its small size, easy maintenance, and relatively low cost, they are widely kept as pets.
- Which of the statement(s) given above is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
72. Of the species given below, which of the following are protected under Schedule I of the Wildlife (Protection) Act, 1972?
1. Green Turtle
 2. Hawksbill Turtle
 3. Olive ridley Turtle
 4. Leatherback Turtle
 5. Loggerhead Turtle
- Select the correct answer using the codes given below:
- (a) 2 and 3 only (b) 3, 4 and 5 only
(c) 2, 3, 4 and 5 only (d) 1, 2, 3, 4 and 5
73. Consider the following statements with respect to SATHI Scheme
1. The Scheme establishes science and technology infrastructure facility, which can be readily accessible, to serve the demands of industry, start-ups and academia.

2. The scheme was launched by the Department of Science and Technology.

Which of the statement(s) given above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

74. Consider the following statements:

1. According to the 2011 Census, Odisha's tribal population comprises 23% of total tribal population in India.
2. Of the 62 tribal groups residing in Odisha, 13 are recognised as PVTGs.
3. Saharia, Maram Naga and Raing are the well-known Particularly Vulnerable Tribal Groups (PVTGs) of Odisha

Which of the statement(s) given above is/are incorrect?

- (a) 2 only (b) 1 and 3 only
(c) 2 and 3 only (d) 1, 2 and 3

75. With respect to Elephants in India, consider the following statements:

1. According to the Elephant Census, 2017, Karnataka has the highest number of elephants, followed by Assam and Kerala.
2. Accident due to trains claims the highest number of elephant deaths during 2012-13.

Which of the statement(s) given above is/are correct?

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

76. Which of the following statement(s) is/ are correct with respect to Sovereign Gold Bond (SGB) Scheme

1. It is issued as Government of India Stock under the Government Securities (GS) Act, 2006 by the Reserve Bank of India.
2. A fixed rate of 2.5% per annum is applicable on the scheme, payable semi-annually.

Select the correct answer using the codes given below:

- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

77. Oxygen Park using Beema Bamboo has been established in which of the following states?

- (a) West Bengal (b) Kerala
(c) Tamil Nadu (d) Meghalaya

78. Consider the following statements with respective to Iron Dome Air Defence Systems

1. It is used for countering rockets as well as aircraft, helicopters and unmanned aerial vehicles.

2. It is a short-range, ground-to-air, air defence system.

3. It is manufactured by Almaz-Antey air defence system in Russia

Which of the statements given above are incorrect?

- (a) 1 and 2 only (b) 1 and 3 only
(c) 3 only (d) 1, 2 and 3

79. Migration and Development Brief is released by which of the following organizations?

- (a) NITI Aayog
(b) World Bank
(c) BRICS Employment Working Group (EWG)
(d) UN-Development Program (UNDP)

80. Which of the following statement(s) is/ are incorrect with respect to Prompt Corrective Action

1. It aims to check the problem of Non-Performing Assets (NPAs) in the Indian banking sector.
2. Under this banks with weak financial metrics are directly put under watch by the Department of Economic Affairs under Ministry of Finance.
3. When PCA is applied on a banks, it is not allowed to renew or access costly deposits or take steps to increase their fee-based income.

Select the correct answer using the codes given below:

- (a) 1 only (b) 1 and 3 only
(c) 2 only (d) 2 and 3 only

81. With respect to Judicial Impact Assessment (JIA) in India, consider the following statements:

1. It is a methodology to calculate the workload change that the judiciary has to bear due to procedural or substantive legislation changes.
2. The need for Judicial Impact Assessment in India was first considered in the Salem Advocates Bar Association Vs Union of India case in 2005.
3. Judicial Impact Assessment (JIA) is a unique Indian innovation in the field of Judiciary procedures.

Which of the statements given above are correct?

- (a) 1 and 2 only (b) 1 and 3 only
(c) 2 and 3 only (d) 1, 2 and 3

82. Which of the following is the correct colour identification of Oxygen Cylinders intended for medical use in India?

- (a) Black coloured body with white neck
(b) White coloured body with black neck

- (c) Brown coloured body with grey neck
- (d) Grey coloured body with white neck

83. Consider the following statements with respect to Mission COVID Suraksha

1. Under the mission, health insurance will be provided to vulnerable sections to meet out of pocket expenditure due to COVID infections.
2. The mission was led by the Life Insurance Corporation of India (LIC) with cooperation from the Ministry of Finance.

Which of the statement(s) given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

84. NAIMISHA, 2021, sometimes seen in the news recently, is associated with which of the following ministries?

- (a) Ministry of Culture
- (b) Ministry of Education
- (c) Ministry of Tribal Affairs
- (d) Ministry of Women and Child Development

85. Consider the following statements with respect to e-Sanjeevani OPD

1. It is a flagship telemedicine platform developed by the Centre for Development of Advanced Computing (C-DAC), under the aegis of Ministry of Health and Family Welfare.
2. It facilitates free online medical consultation to all citizens of India, as well as provides for online prescription of medicines.

Which of the statement(s) given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

86. Which of the following statement(s) is/ are incorrect with respect to Cloud Bursts

1. Rainfall rate equal to or greater than 100 mm (3.97 inches) per hour is a cloudburst.
2. It happen when saturated clouds are unable to produce rain because of the upward movement of very warm current of air.

Select the incorrect answer using the codes given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

87. Consider the following statements with respect to Housing Finance Companies (HFCs)

1. It is regulated by the National Housing Bank, under the direct supervision of the RBI.
2. Its financial assets in the business of providing finance for housing constitute not less than 60% of its total assets.

Which of the statement(s) given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

88. Consider the following statements with respect to Tea Cultivation

1. Tea plantation requires 150-300 cm annual rainfall which should be well distributed throughout the year.
2. Sri Lanka is largest producer of green tea in the world while India is the largest black tea producer in the world.
3. The most suitable soil for tea cultivation is slightly acidic porous sub-soil which permits a free percolation of water.

Which of the statement(s) given above is/are incorrect?

- (a) 1 and 2 only
- (b) 2 only
- (c) 1 and 3 only
- (d) 2 and 3 only

89. Amphotericin B is effectively used to treat which of the following infections?

- (a) Molluscum contagiosum (Viral Infection)
- (b) Mucormycosis (Fungal Infection)
- (c) Shingles (Viral Infection)
- (d) Scabies (Parasite Infection)

90. Which of the following statement(s) is/ are correct with respect to FLEUDA Test

1. It uses the gene-editing tool Crispr-Cas9 to target and identify genomic sequences of the novel coronavirus.
2. It is costlier and takes longer time to produce results than RT-PCR tests.

Select the incorrect answer using the codes given below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

91. Women's World Banking Report is released by:

- (a) IMF
- (b) WB
- (c) IBRD
- (d) None of the above

92. Christchurch Call to Action is often seen in news. Which of the following correctly describes it?

- (a) It is an international action plan to achieve sustainable development goals
- (b) It aims to address terrorist and violent extremist contents online
- (c) It aims to create global awareness on Climate Change

- (d) It is an international awareness initiative towards cyber security
93. "Nature in a Globalised World: Conflict and Conservation" report is released by which of the following Organisation?
- (a) World Wide Fund for Nature
(b) Global Environment Facility
(c) World Nature Organisation
(d) International Union for Conservation of Nature
94. Consider the following statements regarding Arctic Council
1. It is intergovernmental forum established by Ottawa Declaration
 2. India is a 'member' in the Arctic Council
- Which of the above statements is/are correct?
- (a) Only 1
(b) Only 2
(c) Both 1 and 2
(d) None of the above
95. Consider the following statements regarding Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY)
1. Under this, each person covered under the National Food Security Act(NFSA) will get an additional 5 kg of grains for free
 2. Ministry of Finance is the Nodal Ministry
- Which of the above statements is/are correct?
- (a) Only 1 (b) Only 2
(c) Both 1 and 2 (d) None of the above
96. Consider the following statements with respect to Types of Lending Rates
1. In the event of inflation, central banks increase repo rate as this acts as a disincentive for banks to borrow from the central bank.
 2. When deposit rates rise, it indicates the banks are likely to hike MCLR and lending rates are set to go up.
- Which of the statement(s) given above is/are incorrect?
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
97. Consider the following statements with respect to Zeolites
1. Zeolites are microporous, three dimensional crystalline solid of aluminium silicate.
 2. Zeolites are either formed naturally or can be synthesized.
 3. An oxygen concentrator uses Zeolites to adsorb atmospheric nitrogen and then vents out the nitrogen.
- Which of the statement(s) given above is/are correct?
- (a) 1 & 2 only (b) 1 & 3 only
(c) 2 & 3 only (d) All of the above
98. Consider the following statements with respect to Common Crane
1. It is a winter visitor to the arid plains of Western India, primarily Gujarat and Rajasthan.
 2. It is listed as Endangered under IUCN Red List of Threatened Species.
- Which of the statement(s) given above is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
99. Which of the following statement(s) is/ are correct with respect to Sarus Crane
1. It is the smallest of all Crane species and state bird of Assam.
 2. It is protected as Vulnerable on IUCN Red List and listed in Schedule IV of the Wildlife (Protection) Act 1972.
- Select the correct answer using the codes given below:
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
100. Which of the following statement(s) is/ are correct with respect to Astronomical object Winchcombe
1. It is a 500-meter wide asteroid in an elliptical orbit around the sun.
 2. It resembles like coal and may offer clues about the beginning of the solar system and maybe even the Earth.
- Select the correct answer using the codes given below:
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

PRELIMS PRACTICE PAPER KEY

1. Answer: (c)

Explanation:

- ★ India is participating in the 3rd Arctic Science Ministerial (ASM3) - the global platform for discussing research and cooperation in the Arctic region (8-9 May, 2021).
- ★ Dr Harsh Vardhan, who participated in the event also proposed that India may be given an opportunity to host the next or future ASM.
- ★ The first two meetings—ASM1 and ASM2—were held in the USA in 2016 and Germany in 2018, respectively.

3rd Arctic Science Ministerial (ASM3).

- ★ ASM3, jointly organised by Iceland and Japan, is the first Ministerial meeting being held in Asia.
- ★ The meeting is designed to provide opportunities to various stakeholders, including academia, indigenous communities, governments and policymakers, to enhance collective understanding of the Arctic region.
- ★ The theme for this year is 'Knowledge for a Sustainable Arctic'.

2. Answer: (b)

Explanation:

Arctic Council

- ★ It is the leading intergovernmental forum promoting cooperation, coordination and interaction among the Arctic States, Arctic Indigenous peoples and other Arctic inhabitants on common Arctic issues, in particular on issues of sustainable development and environmental protection in the Arctic.
- ★ It was formally established in 1996.
The Ottawa Declaration defines the following states as Members of the Arctic Council:
 1. Sweden
 2. Canada
 3. Finland
 4. Iceland
 5. Norway
 6. The United States
 7. The Russian Federation
 8. The Kingdom of Denmark
- ★ Observer status in the Arctic Council is open to non-Arctic states.

- ★ Since 2013, India enjoys 'Observer' status in the Arctic Council with twelve other countries (Japan, China, France, Germany, UK, Italy, Switzerland, Poland, Spain, Netherlands, Singapore, and South Korea).
- ★ The Chairmanship of the Arctic Council rotates every two years among the Arctic States.
- ★ The Arctic Council's mandate, as articulated in the Ottawa Declaration, explicitly excludes military security.

3. Answer: (a)

Explanation:

- ★ Drugs Controller General of India (DCGI) has recently approved an anti-COVID drug developed by DRDO for emergency use.

2-deoxy-D-glucose (2-DG)

- ★ It is an anti-COVID-19 therapeutic application developed by Institute of Nuclear Medicine and Allied Sciences (INMAS), a lab of Defence Research and Development Organisation (DRDO), in collaboration with Dr Reddy's Laboratories (DRL), Hyderabad.
- ★ Clinical trial results have shown that this molecule helps in faster recovery of hospitalised patients and reduces supplemental oxygen dependence.
- ★ The drug will be of immense benefit to the people suffering from COVID-19.
- ★ The drug comes in powder form in sachet, which is taken orally by dissolving it in water.
- ★ It accumulates in the virus infected cells and prevents virus growth by stopping viral synthesis and energy production.
- ★ Its selective accumulation in virally infected cells makes this drug unique.

4. Answer: (a)

Explanation:

- ★ Gopal Krishna Gokhale joined the Indian National Congress (INC) in 1889, motivated by his mentor, social reformer M G Ranade.

5. Answer: (c)

Explanation:

Hakki Pikki Tribes

- ★ It literally means bird hunters in Kannada.
- ★ They are a nomadic tribe of hunter-gatherers that once roamed the forests of the country.

- ★ In the 1970's, once stringent wildlife protection laws were passed, the government rehabilitated the tribe to urban areas in Karnataka.

6. Answer: (a)

Explanation:

Long March 5B Rocket

- ★ China launched the Long March 5B' rocket and prototype spacecraft in 2020 .
- ★ It aims to operate a permanent space station and send astronauts to the Moon.
- ★ It was considered as China's successful step to operate a permanent space station and send astronauts to the Moon.
- ★ Long March 5B' Rocket was launched from the Wenchang launch site in the southern island of Hainan.
- ★ It is expected to transport astronauts to a space station that China plans to complete by 2022 and eventually to the Moon, It will have capacity for a crew of six.
- ★ Recently debris from a Chinese rocket Sunday made an uncontrolled re-entry into the Earth's atmosphere and disintegrated over the Indian Ocean, with remnants falling at a location to the west of Maldives.
- ★ The debris came from the upper stage of a Long March 5B rocket that had been launched for putting into orbit a core module of the new Tianhe space station, which is expected to become operational in 2022.

Non-Hypergolic Liquid Propellants

- ★ Liquid propellants can consist of a single chemical (a monopropellant) or a mix of two chemicals, called bipropellants.
- ★ Bipropellants can further be divided into two categories; hypergolic propellants, which ignite when the fuel and oxidizer make contact, and non-hypergolic propellants which require an ignition source.
- ★ A hypergolic propellant combination used in a rocket engine is one whose components spontaneously ignite when they come into contact with each other.

7. Answer: (c)

Explanation:

Sovereign Credit Rating

- ★ Sovereign Credit Rating is an assessment of a country's creditworthiness.
- ★ The three influential rating agencies include Moody's Services, Fitch Ratings, and Standard & Poor's.

- ★ These ratings are important for countries that want to access funds in the international bond market.
- ★ A credit rating agency will evaluate a country's economic and political environment at the request of the government and assign a rating stretching from AAA grade to grade D.
- ★ A country with high credit ratings can access funds easily from the international bond market and also secure foreign direct investment.
- ★ A low sovereign credit rating means that a country faces a high risk of default and may have experienced difficulties in paying back debts.
- ★ Determinants of Sovereign Credit Ratings are as follows
- ★ Per capita income - It estimates the income earned per person in a specific area.
- ★ It is calculated by taking the total income earned by individuals in a given area divided by the number of people residing in that area.
- ★ A high per capita income increases the potential tax base of the government, which subsequently increases the government's ability to repay its debts.
- ★ GDP growth - It refers to the percentage growth in the GDP of a country from one quarter to another as the economy navigates a business cycle.
- ★ Strong GDP growth means that a country will be able to meet its debt obligations since the growth in GDP results in higher tax revenues for the government.
- ★ Rate of inflation - Sovereign debts are susceptible to changes in the rate of inflation, and an increase in inflation will affect a country's ability to finance its debt.
- ★ A high inflation rate points to structural problems in a country's finances, and it is likely to cause political instability as the public becomes dissatisfied with the increasing inflation.
- ★ External debt - Some countries rely heavily on external debts to finance their development and infrastructure projects.
- ★ Increasing debt levels translate to a higher risk of default, which may affect its ability to access funding from international lenders.
- ★ Economic development - The credit rating agencies consider the level of development when determining the sovereign credit rating of a country.

- ★ History of defaults - A country that defaulted on its debt obligations in the past is considered to have a high sovereign credit risk by rating agencies.
- ★ It means that countries with a record of defaults receive low ratings, making them less attractive to investors looking for low-risk investments.

8. Answer: (d)

Explanation:

Global Methane Assessment

- ★ Recently, a report, titled Global Methane Assessment: Benefits and Costs of Mitigating Methane Emissions suggested that the world needs to dramatically cut methane emissions to avoid the worst of climate change.
 - ★ The report was released by the Climate and Clean Air Coalition and the United Nations Environment Programme (UNEP).
 - ★ Report highlights are as follows
1. Human-caused methane emissions are increasing faster currently than at any other time since record keeping began in the 1980s.
 2. Carbon dioxide levels have dropped during the Covid-19 pandemic. However, methane in the atmosphere reached record levels last year.
 3. This is a cause of concern as it was responsible for about 30% of warming since pre-industrial times.
 4. Human-caused methane emissions must be cut by 45% to avoid the worst effects of climate change.
 5. Such a cut would prevent a rise in global warming by up to 0.3 degrees Celsius by 2045.
 6. It would also prevent 260,000 premature deaths, 775,000 asthma-related hospital visits annually, as well as 25 million tonnes of crop losses.
 7. However, cutting methane emissions can rapidly reduce the rate of warming in the near-term as the gas broke down quickly.

Methane

- ★ Methane is gas that is found in small quantities in Earth's atmosphere.
- ★ Methane is the simplest hydrocarbon, consisting of one carbon atom and four hydrogen atoms (CH₄).
- ★ Methane is a powerful greenhouse gas, it's flammable and is used as a fuel worldwide.

- ★ Methane is produced by the breakdown or decay of organic material and can be introduced into the atmosphere by following ways

1. Natural processes - Such as the decay of plant material in wetlands, the seepage of gas from underground deposits or the digestion of food by cattle
 2. Human activities - Such as oil and gas production, rice farming or waste management.
- ★ Methane is 84 times more potent than carbon and doesn't last as long in the atmosphere before it breaks down.
 - ★ This makes it a critical target for reducing global warming more quickly while simultaneously working to reduce other greenhouse gases.
 - ★ It is responsible for creating ground-level ozone, a dangerous air pollutant.

9. Answer: (b)

Explanation:

Regulations Review Authority (RRA 2.0)

- ★ Reserve Bank of India (RBI) has constituted an Advisory Group to assist the second Regulations Review Authority (RRA 2.0).
- ★ The RBI has set up the RRA 2.0, initially for a period of one year from 1st May, 2021, with a view to streamline regulations and reduce the compliance burden of regulated entities.
- ★ In 1999, the RBI had set up a Regulations Review Authority (RRA) for reviewing the regulations, circulars, reporting systems, based on the feedback from the public, banks, and financial institutions.
- ★ RRA 2.0 will focus on streamlining regulatory instructions, reducing compliance burden of the regulated entities by simplifying procedures and reducing reporting requirements, wherever possible.
- ★ It will also obtain feedback from regulated entities.
- ★ Regulated entities include commercial banks, urban co-operative banks, Non-Banking Financial Companies.

10. Answer: (c)

Explanation:

Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)

- ★ Prostaglandins are a family of chemicals that are produced by the cells of the body and have several important functions.

- ★ They promote inflammation that is necessary for healing, but also results in pain, and fever.
- ★ The NSAIDs block the cyclooxygenase (COX) enzymes and reduce prostaglandins throughout the body.
- ★ The NSAID family of anti-inflammatory drugs includes those widely used by the general public like ibuprofen, an active substance in common drugs, such as Nurofen or Advil or ketoprofen.
- ★ They are good at treating pain caused by slow tissue damage, such as arthritis pain.
- ★ They also work well fighting back pain, menstrual cramps and headaches.
- ★ They work like corticosteroids (also called steroids), without many of the side effects of steroids.
- ★ Recently, a new observational study of more than 72,000 people in the UK published that the use of non-steroidal anti-inflammatory drugs (NSAIDs) does not lead to higher rates of death or severe disease in patients who are hospitalised with Covid-19.
- ★ In patients with rheumatological disease, the use of NSAIDs did not increase mortality.
- ★ It also found that those who took NSAIDs were no more likely to be admitted to critical care, need invasive or non-invasive ventilation, or require oxygen

11. **Answer: (a)**

12. **Answer: (b)**

13. **Answer: (b)**

Explanation: 5G services will provide up to 1 Gbps (Gigabit per second) of download speed. It is 100 times higher than the existing network speed. The upload time will also increase drastically. The energy efficiency of devices and stability of network connections will improve further with the 5G technology. 5G services work across the low, medium and high-frequency spectrums. This will avoid any network congestions. 5G services will have ultra-low latency (time taken by a network to respond). Latency for is predicted to be below 10 milliseconds, and in best cases around 1 millisecond. Latency for 4G is around 20-30 milliseconds

14. **Answer: (a)**

Explanation: Statement 1 is incorrect: Ayush-64 is an Ayurvedic drug developed by the Central Council for Research in Ayurvedic Sciences

(CCRAS), the apex body for research in Ayurveda under the Ministry of Ayush. The drug was originally developed in 1980 for the management of Malaria. Statement 2 is correct: Ayush-64 is a polyherbal formulation i.e. use of more than one herb. Statement 3 is correct: Drugs' ingredients showed notable antiviral, immune-modulator, and antipyretic properties.

15. **Answer: (d)**

Explanation: US launched 4 astronauts to the International Space Station (ISS) as part of a collaboration between NASA and SpaceX under the Commercial Crew Program. The mission is called Crew-2 Mission. The Crew missions aim to perform research operations in International Space Stations. Crew 1 Mission conducted microgravity studies at the ISS. Crew 2 Mission aims to conduct research on a series of Tissue Chips. Read More: Crew Mission

16. **Answer: (c)**

17. **Answer: (d)**

18. **Answer: (a)**

Explanation: Department of Agriculture and Farmers Welfare under its flagship scheme of Paramparagat Krishi Vikas Yojna (PKVY) has launched the Large Area Certification Scheme. Purpose: To provide a unique and quick organic certification to harness the potential land areas for organic products. Under LAC, each village in the area is considered as one cluster/group. Documentations are simple and maintained village-wise. All farmers with their farmland and livestock need to adhere to the standard requirements. After verification, they will get certified as a group. Once issued they don't need to go under conversion period. So, the farmers do not have to wait for 2-3 years for marketing PGS organic certified products. Read more: Large Area Certification Scheme

19. **Answer: (d)**

20. **Answer: (d)**

21. **Answer: (a)**

Explanation:

- ★ NITI Aayog and Mastercard has recently released a report titled 'Connected Commerce: Creating a Roadmap for a Digitally Inclusive Bharat'.
- ★ The report identifies challenges in accelerating digital financial inclusion in India and provides

recommendations for making digital services accessible to its 1.3 billion citizens.

Key recommendations of the report

- ★ Strengthening the payment infrastructure to promote a level playing field for NBFCs and banks.
- ★ Digitizing registration and compliance processes and diversifying credit sources to enable growth opportunities for MSMEs.
- ★ Building information sharing systems, including a 'fraud repository', and ensuring that online digital commerce platforms carry warnings to alert consumers to the risk of frauds.
- ★ Enabling agricultural NBFCs to access low-cost capital and deploy a 'phygital' (physical + digital) model for achieving better long-term digital outcomes. Digitizing land records will also provide a major boost to the sector.
- ★ To make city transit seamlessly accessible to all with minimal crowding and queues, leveraging existing smartphones and contactless cards, and aim for an inclusive, interoperable, and fully open system such as that of the London 'Tube'.

22. Answer: (c)

Explanation:

- ★ The Department of Telecommunications (DoT), Ministry of Communications has recently clarified that there is no relationship between the second wave of coronavirus and the testing of the 5G mobile towers.
- ★ Several misleading messages are being circulated on various social media platforms claiming the second wave of coronavirus has been caused by the testing of the 5G mobile towers.
- ★ Any apprehension about any mobile tower emitting radio waves beyond the safe limit prescribed by the department can visit Tarang Sanchar portal and verify emf emissions.

Tarang Sanchar Portal

- ★ It has been developed in Public Private Partnership (PPP) mode. Department of Telecommunications initiative with Industry.
- ★ This Portal envisages to disseminate the information to the public regarding Electro Magnetic Fields (EMF) signals and to allay the misconceptions and fear of health issues due to EMF emissions from mobile towers.
- ★ Public, at large will be now able to check the current status of the mobile tower located any-

where in the country and the EMF signal compliance status of the same.

23. Answer: (a)

Explanation:

- ★ Puducherry has recently become 'Har Ghar Jal' Union Territory (UT) by ensuring that every rural home in the Union Territory gets a household tap connection.
- ★ With this, the UT becomes the fourth State/UT after Goa, Telangana and Andaman & Nicobar Islands to provide assured tap water supply to every rural home under Union Government's flagship programme, Jal Jeevan Mission.

Jal Jeevan Mission (JJM)

- ★ It is a flagship programme of the Union Government, which aims to provide tap water connection to every rural household of the country by 2024.

24. Answer: (d)

Explanation:

- ★ Department of Telecommunications (DoT) has recently informed that it has prescribed norms for exposure limit for the Radio Frequency Field (i.e. Base Station Emissions) which are 10 times more stringent than the safe limits prescribed by International Commission on Non-Ionizing Radiation Protection (ICNIRP) and recommended by the WHO.
International Commission on Non-Ionizing Radiation Protection (ICNIRP)
- ★ It is an international commission specialized in non-ionizing radiation protection.
- ★ It aims to protect people and the environment against adverse effects of non-ionizing radiation (NIR).
- ★ To this end, ICNIRP develops and disseminates science-based advice on limiting exposure to non-ionizing radiation.
- ★ Its activities include determining exposure limits for electromagnetic fields used by devices such as cellular phones.
- ★ It is an association registered in Munich, Germany, as a non-profit organization with a scientific mission (Statutes).
- ★ It is formally recognized as an official collaborating non-state actor by the World Health Organization (WHO) and the International Labour Organization (ILO).

25. Answer: (d)

Explanation:

- ★ National Horticulture Board has cleared a record 1278 subsidy applications for integrated development of hi-tech commercial horticulture in the country including promotion of post-harvest and cold chain infrastructure during the last one year which were pending since long.

National Horticulture Board (NHB)

- ★ It was set up by Government of India in April 1984 on the basis of recommendations of the “Group on Perishable Agricultural Commodities”, headed by Dr.M.S. Swaminathan.
- ★ It was established as an autonomous organization under the administrative control of Ministry of Agriculture and Farmers welfare.
- ★ It was registered under Societies Registration Act 1860, thereafter, re-registered under the Haryana Registration and Regulation of Societies Act, 2012, with its headquarters at Gurugram and 29 field offices located all over the country.
- ★ The main objective of the NHB is to improve integrated development of Horticulture industry and to help in coordinating, sustaining the production and processing of fruits and vegetables.

26. Answer: (b)

Explanation:

C-reactive protein (CRP) Test

- ★ C-reactive protein (CRP) test, is mainly conducted for patients who are hospitalised for Covid virus treatment.
- ★ Large number of doctors are recommending the same test even to those Covid positive patients who are in home isolation with moderate to mild symptoms.
- ★ CRP is not a diagnostic test but it has prognostic value, it can be done for any ailment.
- ★ The higher value of CRP level than the normal level indicates that the infection is increasing.
- ★ CRP tests is a marker which shows the level of C-reactive protein, which is made by the liver, in the blood.
- ★ Doctors are conducting it mandatorily for the patients with critical conditions who are in

hospital care, because it is one of the indicators showing the body's reaction to the ongoing treatment.

- ★ If a patient in home isolation sees that his/her oxygen level is fluctuating between 93 to 97 quite often then the CRP is recommend to know the inflammation level in the body.

27. Answer: (d)

Explanation:

Post Devolution Revenue Deficit (PDRD) Grants

- ★ The grants are released as per the recommendations of the Finance Commission in monthly instalments to meet the gap in Revenue Accounts of the States post-devolution (of the divisible tax pool of the Centre).
- ★ The 15th Finance Commission has recommended post devolution revenue deficit grants amounting to about Rs. 3 trillion over the five-year period ending FY26.
- ★ The number of states qualifying for the revenue deficit grants decreases from 17 in FY22, the first year of the award period to 6 in FY26, the last year.
- ★ Over the five-year period, Andhra Pradesh, Assam, Haryana, Himachal Pradesh, Karnataka, Kerala, Manipur, Meghalaya, Mizoram, Nagaland, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand and West Bengal are recommended to be provided with the deficit grants.
- ★ The Ministry of Finance has accepted the recommendation.

Article 275 of the Constitution

- ★ It provides for the payment of such sums as Parliament may by law provide as grants-in aid to such States as Parliament may determine to be in need of assistance.
- ★ The grants are paid out of the Consolidated Fund of India in each year, and different sums may be fixed for different States.
- ★ These grants are to be of the nature of capital and recurring sums as may be necessary.
- ★ These aim to enable that State to meet the costs of such schemes of development as may be undertaken by it with the approval of the Government of India for the purpose of promoting the welfare of the Scheduled Tribes in that State or raising the level of administration

of the Scheduled Areas there in to that of the administration of the rest of the areas of that State.

- ★ Grants are primarily intended to correct Inter-State disparities in financial resources and to coordinate the maintenance and expansion of the welfare schemes of the State Governments on a uniform national level.

28. Answer: (c)

Explanation:

Conflict and Conservation Report

- ★ It is released by International Union for Conservation of nature (IUCN) release a report titles.
- ★ It focuses on the complex relationships between nature and armed conflict.
- ★ Objective of the report us to help bring the importance of nature conservation into mainstream political and economic decision making.
- ★ Major threats posed by the conflict are as follows
 1. Direct killing of wildlife for food
 2. Degradation of ecosystems
 3. Disruption of conservation efforts
- ★ Key highlights of the report are as follows
 1. Armed conflicts were particularly prevalent in some of the world's more biodiverse regions
 2. Conflicts were less frequent within the boundaries of natural reserves and other protected areas
 3. Degradation of nature was associated with increased risk of conflict

29. Answer: (d)

Explanation:

Paediatric Task Force

- ★ Recently, the Maharashtra government has constituted a nine-member committee called Paediatric Task Force.
- ★ The task force has been set up under the chairmanship of Dr Suhas Prabhu in an attempt to brace for the next wave.
- ★ The special paediatric task force will be responsible for procuring medicines for children, paediatric ventilators and building Covid-19 care centres for children.
- ★ It aims to develop a comprehensive plan for treating children affected with Covid-19.

- ★ It will set up more sick new born care units (SNCUs), more ventilators suited for infants and prepare a separate line of medication for them.
- ★ It has recommended setting up fever clinics with paediatricians or trained staff to screen children with Covid symptoms.

30. Answer: (b)

Explanation:

NASA's Artemis mission

- ★ The Artemis Program is a United States-led international human spaceflight program launched in 2017 to return humans to the Moon, specifically at the lunar South Pole region, in the mid-2020s.
- ★ It was originally going to happen in 2024, but delays changed that.
- ★ The Artemis programme was initiated by the administration of former President Donald Trump.

SpaceX's Starship

- ★ The Starship is a spacecraft and super-heavy booster rocket designed by SpaceX.
- ★ The spacecraft is meant to act as a reusable transportation system for crew and cargo to the Earth's orbit, Moon and Mars.
- ★ The SpaceX has described Starship as "the world's most powerful launch vehicle" with an ability to carry over 100 metric tonnes to the Earth's orbit.
- ★ The Starship has been under development since 2012 and is a part of Space X's central mission to make interplanetary travel accessible and affordable.
- ★ The Starship system is expected to replace SpaceX's partially reusable Falcon rockets that are currently operational.
- ★ The Starship can deliver satellites further and at lower marginal costs than Falcon vehicles.
- ★ It can ferry both cargo and crew to the International Space Station (ISS).
- ★ It is expected to help carry large amounts of cargo to the Moon, for human spaceflight development and research.
- ★ It is expected to enter Mars's atmosphere at a speed of 7.5 km per second and will be designed to withstand multiple entries

31. Answer: (c)

Explanation:

- ★ PM CARES Fund has recently accorded sanction for procurement of 1,50,000 units of 'Oxycare' system.
- ★ Under this sanction, 1,00,000 manual and 50,000 automatic Oxycare systems along with non-rebreather masks are being procured.

Oxycare System

- ★ Oxycare is a SpO₂ based Oxygen Supply System which regulates the oxygen being administered to patients based on the sensed SpO₂ levels.
- ★ This system was developed by Defence Bio-Engineering & Electro Medical Laboratory (DEBEL), Bengaluru of DRDO for soldiers posted at extreme high-altitude areas.
- ★ The Oxycare system delivers supplemental oxygen based on the SpO₂ levels and prevents the person from sinking into a state of hypoxia which can be fatal.
- ★ The system is indigenously developed for operation in field conditions and is robust.
- ★ It can be effectively used to treat COVID-19 patients.

32. Answer: (c)

Explanation:

- ★ A sudden increase in demand has been observed in some states for Amphotericin B.
- ★ Amphotericin B is a drug actively prescribed by the physicians to patients suffering from Mucormycosis, a post COVID complication.

Mucormycosis

- ★ Mucormycosis is also called Black Fungus or Zygomycosis and is a serious but rare fungal infection.
- ★ It is caused by a group of molds called mucormycetes.
- ★ Mucormycetes, the group of fungi that cause mucormycosis, are present throughout the environment, particularly in soil and in association with decaying organic matter, such as leaves, compost piles, and animal dung.
- ★ They are more common in soil than in air, and in summer and fall than in winter or spring.
- ★ It usually occurs in people who have health problems or take medicines that lower the body's ability to fight germs and sickness.
- ★ It occurs through inhalation, inoculation, or ingestion of spores from the environment.

- ★ Mucormycosis does not spread between people or between people and animals.
- ★ It may lead to loss of vision and brain damage that may lead to death of infected patient.

33. Answer: (d)

Explanation:

- ★ The Cabinet, chaired by Prime Minister Shri Narendra Modi, has recently approved the proposal of Department of Heavy Industry for implementation of the Production Linked Incentive (PLI) Scheme 'National Programme on Advanced Chemistry Cell (ACC) Battery Storage' for achieving manufacturing capacity of 50 Giga Watt Hour (GWh) of ACC and 5 GWh of "Niche" ACC with an outlay of Rs.18,100 crore.

The outcomes/ benefits expected from the scheme are as follows:

- ★ Setup a cumulative 50 GWh of ACC manufacturing facilities in India under the Programme.
- ★ Direct investment of around Rs.45,000 crore in ACC Battery storage manufacturing projects.
- ★ Facilitate demand creation for battery storage in India.
- ★ Facilitate Make-In-India: Greater emphasis upon domestic value-capture and therefore reduction in import dependence.
- ★ Net savings of Indian Rs. 2,00,000 crore to Rs.2,50,000 crore on account of oil import bill reduction during the period of this Programme due to EV adoption as ACCs manufactured under the Programme is expected to accelerate EV adoption.
- ★ The manufacturing of ACCs will facilitate demand for EVs, which are proven to be significantly less polluting. As India pursues an ambitious renewable energy agenda, the ACC program will be a key contributing factor to reduce India's Green House Gas (GHG) emissions which will be in line with India's commitment to combat climate change.
- ★ Import substitution of around Rs.20,000 crore every year.
- ★ Impetus to Research & Development to achieve higher specific energy density and cycles in ACC.
- ★ Promote newer and niche cell technologies.

34. Answer: (c)

Explanation:

- ★ Dr Shakuntala Haraksingh Thilsted, a global nutrition expert of Indian descent has won the prestigious 2021 World Food Prize for her groundbreaking research in developing holistic, nutrition-sensitive approaches to aquaculture and food systems.

World Food Prize

- ★ It is the foremost international honor recognizing the achievements of individuals who have advanced human development by improving the quality, quantity or availability of food in the world.
- ★ The World Food Prize was created in 1986 with sponsorship by General Foods Corporation.
- ★ It is presented by the World Food Prize Foundation (USA), which has over 80 companies, individuals, etc. as donors.
- ★ It is also known as the “Nobel Prize for Food and Agriculture”.
- ★ It is an annual award that recognizes contributions in any field involved in the world food supply including plant, animal and soil science; food science and technology; nutrition, rural development, etc.
- ★ It is open for any individual without regard to race, religion, nationality or political beliefs.
- ★ In addition to the cash award of \$2,50,000, the laureate receives a sculpture designed by the noted artist and designer, Saul Bass.
- ★ The Prize is presented each October on or around UN World Food Day (16th October).
- ★ Dr. Norman E. Borlaug, winner of the Nobel Peace Prize in 1970 for his work in global agriculture, conceived the Prize. He is also known as the Father of the Green Revolution.
- ★ Dr. M.S. Swaminathan, the father of India’s green revolution, was the first recipient of this award in 1987.

35. Answer: (a)

Explanation:

Shuvuuia deserti

- ★ Shuvuuia was a pheasant-sized, two-legged Cretaceous Period dinosaur weighing about as much as a small house cat.
- ★ Lacking the strong jaws and sharp teeth of many carnivorous dinosaurs, it had a remark-

ably bird-like and lightly built skull and many tiny teeth.

- ★ It lived in desert habitats about 70 million years ago, in what is today Mongolia and northern China.
- ★ It employed excellent night vision and superb hearing to thrive as a menacing pint-sized nocturnal predator.
- ★ Shuvuuia is unique among predatory dinosaurs with a hyper-elongated lagena, almost identical in relative size to a barn owl’s.
- ★ The barn owl, a proficient nocturnal predator even in pitch-black conditions, has the proportionally longest lagena of any living bird.
- ★ Shuvuuia had a very wide scleral ring, indicating an extra-large pupil size that made its eye a specialized light-capture device.
- ★ Nocturnality was uncommon among dinosaurs, aside from a group called alvarezsaur to which Shuvuuia belonged.
- ★ Alvarezsaur had nocturnal vision very early in their lineage, but super-hearing took more time to evolve.

36. Answer: (b)

Explanation:

Foreign Contribution (Regulation) Amendment Act

- ★ The amendments to the Foreign Contribution Regulation Act (FCRA) enacted in 2020 made it compulsory for NGOs to open a bank account in Delhi.
- ★ It proposes to reduce the use of foreign funds to meet administrative costs by NGOs from the existing 50 per cent to 20 per cent.
- ★ It seeks to “prohibit any transfer of foreign contribution to any association/person”.
- ★ It proposes to make Aadhaar cards a mandatory identification document for all office-bearers, directors and other key functionaries of NGOs or associations eligible to receive foreign donations.
- ★ It seeks to allow for the central government to hold a summary inquiry to direct bodies with FCRA approval to “not utilise the unutilised foreign contribution or receive the remaining portion of foreign contribution”.
- ★ And to limit the use of foreign funds for administrative purposes. This would impact research and advocacy organisations which

use the funding to meet their administrative costs.

- ★ Recent Amendments to FCRA has crippled the work of many organisations that are unable to receive foreign funds.
- ★ Many NGOs are affected by the new regulations as they are hampering charitable work during the pandemic.

37. Answer: (a)

Explanation:

High Resolution Computed Tomography (HRCT) Scan

- ★ High-resolution computed tomography (HRCT) is a type of computed tomography (CT) with specific techniques to enhance image resolution.
- ★ It is used in the diagnosis of various health problems, though most commonly for lung disease, by assessing the lung parenchyma.
- ★ Computed Tomography, or CT, refers to a computerized x-ray imaging procedure in which a narrow beam of x-rays is aimed at a patient and quickly rotated around the body, producing signals that are processed by the machine's computer to generate cross-sectional images or "slices" of the body.
- ★ The biggest difference between CT and MRI scans is that, MRIs (magnetic resonance imaging) use radio waves and CT (computed tomography) scans use X-rays.
- ★ HRCT or CT scan of the chest becoming a common procedure to detect Covid-19 infection and degree of damage to the lung.
- ★ CT scan exposes individuals to unnecessary radiation, which may increase the risk of cancer later in life for young people.
- ★ A chest CT can be useful in evaluating patients with moderate or severe disease, to identify complications like thromboembolism or pneumomediastinum.

38. Answer: (b)

Explanation:

Hoolock Gibbons

- ★ Hoolock gibbons are small apes and the only apes present in India.
- ★ Centre for Cellular and Molecular Biology (CCMB) has debunked the popular notion that there are two species of gibbons in India.

- ★ The confusion arose earlier as these small apes present in the northeast have populations with different physical features though they are of the same species.
- ★ CCMB scientists said the gibbon species present in the country is Hoolock Hoolock.
- ★ The other species, Hoolock leuconedys, is not present in India.
- ★ Physically different two populations of Hoolock gibbons are found in Arunachal Pradesh.
- ★ Those found in Mishmi Hills of eastern Arunachal Pradesh were thought to be a species from Myanmar.
- ★ Recent genetic analysis shows that Hoolock gibbons in India belong to only one species, the Western Hoolock gibbons.
- ★ This helps design conservation programmes by inter-breeding the two populations and maintain their genetic diversity.

Western hoolock gibbon

- ★ It inhabits in all the states of the north-east, restricted between the south of the Brahmaputra river and east of the Dibang river.
- ★ And outside India, it is found in eastern Bangladesh and north-west Myanmar.
- ★ It is listed as Endangered under the International Union for Conservation of Nature (IUCN) Red List.
- ★ It is listed on Schedule 1 of the Indian (Wildlife) Protection Act 1972.

39. Answer: (c)

Explanation:

Asteroid Bennu

- ★ The Asteroids are rocky objects that orbit the Sun, much smaller than planets.
- ★ Bennu is an asteroid about as tall as the Empire State Building, located about 200 million miles away from the Earth.
- ★ It is believed to have been born in the Main Asteroid belt between Mars and Jupiter.
- ★ The asteroid is coming closer to Earth because of gravitational tugs from other celestial objects and the slight push asteroids get when they release absorbed sunlight.
- ★ It is considered to be an ancient asteroid that has not gone through a lot of composition-altering change through billions of years.
- ★ It implies that below its surface lie chemicals and rocks from the birth of the solar system.

- ★ The asteroid reflects about four per cent of the light that hits it, which is very low when compared with a planet like Venus, which reflects about 65 per cent of the light that hits it.
- ★ Around 20-40 percent of Bennu's interior is empty space and scientists believe that it was formed in the first 10 million years of the solar system's creation, implying that it is roughly 4.5 billion years old.
- ★ Recently, the NASA's OSIRIS-Rex spacecraft will depart asteroid Bennu, and start its two-year long journey back to Earth.
- ★ In October 2020, the spacecraft briefly touched asteroid Bennu, from where it collected samples of dust and pebbles.

40. Answer: (a)

Explanation:

Millisecond Pulsar

- ★ A pulsar is a neutron star that emits beams of radiation that sweep through Earth's line of sight, like a black hole it is an endpoint to stellar evolution.
- ★ The "pulses" of high-energy radiation we see from a pulsar are due to a misalignment of the neutron star's rotation axis and its magnetic axis.
- ★ A millisecond pulsar (MSP) is a pulsar with a rotational period smaller than about 10 milliseconds.
- ★ The leading theory for the origin of millisecond pulsars is that they are old, rapidly rotating neutron stars that have been spun up or "recycled" through accretion of matter from a companion star in a close binary system.
- ★ For this reason, millisecond pulsars are sometimes called recycled pulsars.
- ★ Millisecond pulsars are thought to be related to low-mass X-ray binary systems.
- ★ It is thought that the X-rays in these systems are emitted by the accretion disk of a neutron star produced by the outer layers of a companion star that has overflowed its Roche lobe.
- ★ Millisecond pulsars, which can be timed with high precision, have a stability comparable to atomic-clock-based time standards when averaged over decades.
- ★ This also makes them very sensitive probes of their environments.

41. Answer: (a)

42. Answer: (b)

Explanation: Statement 1 is correct: Under international human rights law, the principle of non-refoulement guarantees that no one should be returned to a country where they would face torture, cruel, inhuman or degrading treatment or punishment and other irreparable harm. This principle applies to all migrants at all times, irrespective of migration status.

Statement 2 is incorrect: The principle of non-refoulement forms an essential protection under international human rights, refugee, humanitarian and customary law

Statement 3 is correct: Refoul means to refuse entry to a country and repatriate. Under international human rights law the prohibition of refoulement is explicitly included in the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (CAT) and the International Convention for the Protection of All Persons from Enforced Disappearance (ICPPED). In regional instruments the principle is explicitly found in the Inter-American Convention on the Prevention of Torture, the American Convention on Human Rights, and the Charter of Fundamental Rights of the European Union.

43. Answer: (b)

Explanation: The Real Estate (Regulation and Development) Act was enacted by Central government on two entries of concurrent list. Such as Contracts and the transfer of property. Being the concurrent list, the state government laws enacted prior to the enactment of the RERA becomes unconstitutional. But the recent Supreme Court judgement on West Bengal Housing Industry Regulation Act (WB HIRA) mentions that if any areas have been left out in the central legislation, the state legislatures can provide cognate (related) legislation

44. Answer: (b)

Explanation: In 1990, the government accepted the recommendations of the Mandal Commission and implemented it. By this, the reservation in India raised to 49.5 per cent. o 22.5% reservation for SCs and STs (7.5% for STs, 15% for SCs) o 27% reservation for the OBCs

The government under the 103rd Constitution Amendment Act, 2019 again provided a 10% reservation for the EWS in India. The Act also amended Article 15 and 16 correspondingly. So at present,

the total reservation stands at 59.5 per cent. Few State governments also provide the reservation over and above 59.5 per cent. (Statement 1 is wrong)

The Supreme Court recently declared the Maratha reservation law as unconstitutional. The judgement also upheld the constitutional validity of the 102nd Amendment Act, the President alone has the power to notify backward classes from now on.

45. Answer: (a)

46. Answer: (c)

Explanation: Statement 1 is correct: A product patent ensures that the rights to the final product is protected, and anyone other than the patent holder can be restrained from manufacturing it during a specified period, even if they were to use a different process. A process patent enables any person other than the patent holder to manufacture the patented product by modifying certain processes in the manufacturing exercise

Statement 2 is correct: India moved from product patenting to process patenting in the 1970s, which enabled India to become a significant producer of generic drugs at global scale, and allowed companies like Cipla to provide Africa with anti-HIV drugs in the 1990s.

47. Answer: (b)

Explanation: According to Australian Constitutional expert K.C. Wheare Indian constitution is "quasi-federal". He also clarifies that the "Indian Union as a unitary state with subsidiary federal features rather than a federal state with subsidiary unitary features." The term 'Federal' does not figure anywhere in the constitution

48. Answer: (a)

49. Answer: (c)

Explanation: Model Code of Conduct (MCC) will come into operation from the date the election is announced by the Election Commission. MCC prohibits using official resources for electoral activities, announcing financial grants, new schemes, etc on the party in power. In the Lok Sabha election, the MCC applies to both the Union and State Governments. During the Assembly elections for a state, the Union government cannot introduce new schemes specific to that state. For bye-elections, the application of MCC is similar and restricted to the District concerned

50. Answer: (d)

Explanation: Statement 1 is correct: It is the interest rate at which the central bank of a country lends money to commercial banks. Hence, a decrease in RR means money is infused into the economy which makes lending cheaper thereby encouraging enhanced borrowing. This leads to economic growth.

Statement 2 is correct: Reverse Repo is the interest rate paid to commercial banks when they deposit their excess funds in the central bank or when the central bank borrows money from them. At a given point in time, the reverse repo rate provided by RBI is generally lower than the repo rate. While repo rate is used to regulate liquidity in the economy, reverse repo rate is used to control cash flow in the market.

51. Answer: (c)

Explanation:

- ★ The Ministry of Home Affairs, through its order in March, 2021, had required the professional Overseas Citizens of India (OCIs), such as journalists, engineers and researchers, to notify the Ministry about their activities in India.

Overseas Citizen of India (OCI)

- ★ OCIs are of Indian origin but hold foreign passports.
- ★ India does not allow dual citizenship but provides certain benefits under Section 7B(I) of the Citizenship Act, 1955 to the OCIs.

Who is an Overseas Citizen of India?

A foreign national of the following are eligible for registration as OCI cardholder in India.

1. who was a citizen of India at the time of, or at any time after 26th January, 1950; or
 2. who was eligible to become a citizen of India on 26th January, 1950; or
 3. who belonged to a territory that became part of India after 15th August, 1947; or
 4. who is a child or a grandchild or a great grandchild of such a citizen; or
 5. who is a minor child of such persons mentioned above; or
 6. who is a minor child and whose both parents are citizens of India or one of the parents is a citizen of India
- ★ Besides, spouse of foreign origin of a citizen of India or spouse of foreign origin of an

Overseas Citizen of India Cardholder and whose marriage has been registered and subsisted for a continuous period of not less than two years immediately preceding the presentation of the application is also eligible for registration as OCI cardholder.

- ★ However, no person, who or either of whose parents or grandparents or great grandparents is or had been a citizen of Pakistan, Bangladesh or such other country as the Central Government may, by notification in the Official Gazette, specify, shall be eligible for registration as an Overseas Citizen of India Cardholder.
- ★ Foreign nationals cannot apply for OCI in India while on Tourist Visa, Missionary Visa and Mountaineering Visa.
- ★ Moreover, the foreigner has to be ordinarily resident of India to be eligible to apply for OCI registration in India.
- ★ Note: 'ordinarily resident' will mean a person staying in a particular country or in India for a continuous period of 6 months.

Benefits of OCI

- ★ Multiple entry, multi-purpose life long visa to visit India;
- ★ Exemption from reporting to Police authorities for any length of stay in India; and
- ★ Parity with NRIs in financial, economic and educational fields except in the acquisition of agricultural or plantation properties.

52. Answer: (d)

Explanation:

- ★ National Commission for Protection of Child Rights (NCPCR) is providing Tele-Counselling to children through SAMVEDNA. Sensitizing Action on Mental Health Vulnerability through Emotional Development and Necessary Acceptance (SAMVEDNA)
- ★ It is a Toll-Free Helpline launched to provide psycho-social mental support for Children affected during COVID 19 Pandemic.
- ★ SAMVEDNA tele counselling service is for psychological support to children to address their stress, anxiety, fear and other issues during the Pandemic.

Tele counselling is provided to the children under three categories:

1. Children who are in Quarantine/isolation/ COVID Care centers.

2. Children who have COVID positive parents or family members and near ones.
3. Children who have lost their parents due to Covid-19 Pandemic.

- ★ This Toll-free Tele-Counselling cater to the children from all over India in various regional languages.

National Commission for Protection of Child Rights (NCPCR)

- ★ It is a statutory body established through Commissions for Protection of Child Rights (CPCR) Act, 2005, an Act of Parliament (December 2005..)
- ★ It works under the aegis of Ministry of Women and Child Development, Govt. of India.

53. Answer: (d)

Explanation:

- ★ China has recently accused the United States of threatening the peace and stability of the Taiwan Strait after a U.S. warship again sailed through the sensitive waterway that separates Taiwan from China.

Taiwan Strait

- ★ It is a 180 km wide strait separating the island of Taiwan and continental Asia.
- ★ The strait is currently part of the South China Sea and connects to the East China Sea to the north.

54. Answer: (d)

Explanation:

- ★ A study, Permafrost carbon feedbacks threaten global climate goals, was published in the journal Proceedings of the National Academy of Sciences.
- ★ According to the study, warming Arctic tundra will make it harder for the world to curb climate change, as thawing permafrost and wildfires release greenhouse gases that are not fully accounted for in global emissions agreements.
- ★ As temperatures rise and permafrost thaws, carbon dioxide and methane trapped within the long-frozen soil are released.
- ★ The deeper the thaw, the more gas is released.
- ★ The study warns that the situation threatens to create a feedback loop that contributes to even more warming of the atmosphere.

India's relationship with Arctic Region

- ★ India's engagement with the Arctic dates back to 1920 with the signing of the Svalbard Treaty

in Paris.

- ★ Since July 2008, India has a permanent research station in the Arctic called Himadri at Ny-Alesund, Svalbard Area in Norway.
- ★ It has also deployed a multi-sensor moored observatory called IndARC in the Kongsfjorden fjord since July 2014.
- ★ The research in the Arctic region from India is coordinated, conducted, and promoted by the National Centre for Polar and Ocean Research (NCPOR), Goa, under the Ministry of Earth Sciences, Government of India.

55. Answer: (c)

Explanation:

- ★ A new species of Skink was found recently in the Western Ghats, India.

Subdoluseps Nilgiriensis

- ★ It was named after Nilgiris, a district in Tamil Nadu where it was found.
- ★ The reptile has a slender body of just about 7 cm and is sandy brown in colour.
- ★ This species is only the third skink species discovered from mainland India in the last millennium.

Skinks

- ★ They are non-venomous.
- ★ They resemble snakes because of the often-inconspicuous limbs and the way they move on land.
- ★ Such resemblance has led to confusion often resulting in humans killing this lowly harmless creature.
- ★ Most skinks are diurnal and are usually secretive in their habits.
- ★ Because of their elusiveness, not much is known about their natural and evolutionary history.
- ★ Most of the species are placed under the data-deficient category.

56. Answer: (c)

Explanation:

Deep Shake Earthquake Prediction

- ★ It is an earthquake early warning system that uses artificial intelligence (AI) to predict how the ground will move during a temblor to give several seconds' advance notice that the earthquake is coming.
- ★ It uses a deep neural network, a type of AI learning, to identify patterns from past earth-

quakes in order to predict how the shaking from a new quake will travel.

- ★ This could lead to faster processing and easier generalizability across different earthquake-prone regions.
- ★ Despite the fact that DeepShake was given no information about the earthquake's location or type, it was able to warn of shaking at other seismic stations in the network between 3-13 seconds before it happened

57. Answer: (c)

Explanation:

Dengue

- ★ Dengue is a mosquito-borne tropical disease caused by the dengue virus (Genus Flavivirus), transmitted by several species of mosquito within the genus Aedes, principally Aedes aegypti.
- ★ This mosquito also transmits chikungunya, yellow fever and Zika infection.
- ★ Symptoms of dengue includes sudden high fever, severe headaches, pain behind the eyes, severe bone, joint, and muscle pain, etc.
- ★ Diagnosis of dengue infection is done with a blood test, as of now there is no specific medicine to treat dengue infection.
- ★ In India National Vector-Borne Disease Control Programme (NVBDCP) is the central nodal agency for prevention and control of six vector borne diseases i.e. Malaria, Dengue, Lymphatic Filariasis, Kala-azar, Japanese Encephalitis and Chikungunya in India.
- ★ It works under the Ministry of Health and Family Welfare.
- ★ Recently researchers from the World Mosquito Program have used mosquitoes infected with Wolbachia bacteria to successfully control dengue in Indonesia.

58. Answer: (b)

Explanation:

Article 311

- ★ Article 311 (1. says that no government employee either of an all India service or a state government shall be dismissed or removed by an authority subordinate to the one that appointed him/her.
- ★ Article 311 (2. says that no civil servant shall be dismissed or removed or reduced in rank except after an inquiry in which s/he has been

informed of the charges and given a reasonable opportunity of being heard in respect of those charges.

- ★ People Protected under Article 311 are the members of
 1. Civil service of the Union,
 2. All India Service, and
 3. Civil service of any State,
 4. People who hold a civil post under the Union or any State.
- ★ The protective safeguards given under Article 311 are applicable only to civil servants, i.e. public officers, and they are not available to defence personnel.
- ★ According to Article 310, except for the provisions provided by the Constitution, a civil servant of the Union works at the pleasure of the President and a civil servant under a State works at the pleasure of the Governor of that State (English doctrine of Pleasure), but this power of the Government is not absolute.
- ★ Article 311 puts certain restrictions on the absolute power of the President or Governor for dismissal, removal or reduction in rank of an officer.

59. Answer: (b)

Explanation:

Tianwen-1 Mission

- ★ It is China's uncrewed spacecraft landed on a large plain located in the northern hemisphere of Mars, known as Utopia Planitia.
- ★ Launched in July 2020, the mission consists of an orbiter, a lander and a golf cart-sized rover called 'Zhurong'.
- ★ 'Zhurong' rover, which will soon be deployed to study the Martian atmosphere and geology.
- ★ China's Yinghuo-1 mission launched in 2011, ultimately failed after the spacecraft burnt while still in the Earth's atmosphere.
- ★ With 'Zhurong' China becomes the first country to successfully orbit, land and offload a rover during its maiden Mars mission.
- ★ Apart from China, only the United States has been able to deploy rovers to study the surface of the Red Planet.

Rovers on Mars

- ★ The first successful landing was made by NASA in July 1976, when the Viking 1 rover touched down on Mars.

- ★ Shortly after that, Viking 2 arrived on the Red Planet.
- ★ In the decades that followed, the US successfully sent the Opportunity and Spirit rovers to explore Mars.
- ★ Most recently, in February this year, NASA's Perseverance rover landed at the Jezero Crater on the Red Planet, after which it resumed work to look for signs of past life.

60. Answer: (c)

61. Answer: (c)

Explanation:

- ★ Union Minister for Finance & Corporate Affairs Smt. Nirmala Sitharaman has recently handed over possession to homebuyers virtually as Government of India's Special Window for Affordable & Mid-Income Housing (SWAMIH) completes its first residential project.
- ★ The residential project - Rivali Park, located in suburban Mumbai, was the first housing project in India to have received funding under the SWAMIH Fund.

SWAMIH Fund

- ★ In order to give relief to homebuyers of stalled projects, a Special Window for Completion of Affordable and Mid-Income Housing (SWAMIH) investment fund was launched by Smt. Sitharaman in November 2019.
- ★ The fund will provide last mile funding to the stressed affordable and middle-income housing projects in the country.
- ★ The fund has been formed to complete construction of stalled, brownfield, RERA registered residential developments that are in the affordable housing / mid-income category, are networth positive and requires last mile funding to complete construction.
- ★ It has a target corpus of INR 12,500cr with a greenshoe option of INR 12,500cr.
- ★ The funding for stalled projects includes projects that have been declared as Non-Performing Assets (NPAs) or are pending proceedings before the National Company Law Tribunal under the Insolvency and Bankruptcy Code.
- ★ SBICAP Ventures, an arm of SBI Capital Markets, is entrusted by the government to manage this Alternative Investment Fund (AIF).

62. Answer: (b)

Explanation:

- ★ In spite of adding the highest number of cases in the world every day, India continues to label itself as a country with no community transmission (CT), the weekly report of the World Health Organisation (WHO) said recently.
- ★ Instead it is opting for the lower, less serious classification called 'Cluster of Cases'.
- ★ Countries such as the United States, Brazil, United Kingdom, France — and a perusal of the list of over 190 countries suggest the majority — have all labelled themselves as being in 'community transmission'.
- ★ India, since the beginning of the pandemic has never marked itself as being in community transition.

Community Transmission

- ★ Community Transmission is said to be happened when new cases in the last 14 days can't be traced to those who have an international travel history, when cases can't be linked to specific cluster.
- ★ The WHO guidelines further suggest four sub-categories within the broader definition of Community Transmission.
- ★ States and countries are expected to classify themselves appropriately and point to the kind of public health measures in place.

63. Answer: (b)

Explanation:

- ★ The Election Commission has recently announced the deferment of elections in Andhra Pradesh and Telangana till the pandemic situation significantly improves and conditions become conducive to hold elections.
- ★ The term of office of 03 members of Andhra Pradesh Legislative Council and 06 members of Telangana Legislative Council elected by the members of respective Legislative Assemblies (MLAs) are expiring.
- ★ As per the provisions of Section 16 of the Representation of the People Act, 1951, the seats of State Legislative Council which are going to be vacant on expiration of the term of the members, are required to be filled up by holding biennial election before the said expiration of the term.

State Legislative Councils (SLCs)

Composition of Council

- ★ Unlike the members of the legislative assembly, the members of the legislative council are indirectly elected.
- ★ The maximum strength of the council is fixed at one-third of the total strength of the assembly and the minimum strength is fixed at 40.
- ★ It means that the size of the council depends on the size of the assembly of the concerned state.
- ★ This is done to ensure the predominance of the directly elected House (assembly) in the legislative affairs of the state.
- ★ Though the Constitution has fixed the maximum and the minimum limits, the actual strength of a Council is fixed by Parliament.

Manner of Election

Of the total number of members of a State Legislative Council (SLCs),

1. 1/3 are elected by the members of local bodies in the state like municipalities, district boards, etc.,
 2. 1/12 are elected by graduates of three years standing and residing within the state,
 3. 1/12 are elected by teachers of three years standing in the state, not lower in standard than secondary school,
 4. 1/3 are elected by the members of the legislative assembly of the state from amongst persons who are not members of the assembly, and
 5. the remainder are nominated by the governor from amongst persons who have a special knowledge or practical experience of literature, science, art, cooperative movement and social service.
- ★ Thus, 5/6 of the total number of members of a legislative council are indirectly elected and 1/6 are nominated by the governor.
 - ★ The members are elected in accordance with the system of proportional representation by means of a single transferable vote.
 - ★ The bonafides or propriety of the governor's nomination in any case cannot be challenged in the courts.
 - ★ This scheme of composition of a legislative council as laid down in the Constitution is tentative and not final.

- ★ The Parliament is authorized to modify or replace the same.
- ★ However, it has not enacted any such law so far.

64. Answer: (d)

Explanation:

- ★ Non-Stick frying pans use alloys that are quasicrystal for their coatings due to their having low friction, high hardness and low surface reactivity.

65. Answer: (a)

Explanation:

- ★ Prime Minister Narendra Modi has recently released the 8th installment of Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme, giving over Rs 20,000 crore to about 9.5 crore farmer beneficiaries.

Pradhan Mantri Kisan Samman Nidhi

- ★ It is a central sector scheme that guarantees direct income support of Rs.6,000 for farmers to help them meet farm inputs and other costs during the crop season.
- ★ The amount will be given in three instalments of Rs.2000 each.
- ★ The cash transfer is not linked to the land size and hence it becomes an income supplement to landowning households.
- ★ However, it has left the landless tenants out of its scope.
- ★ PM Kisan Maan Dhan Yojana is a central sector and pension scheme for only small and marginal farmers who own less than 2 hectares of land. (while PM-KISAN is for all farmers)

66. Answer: (c)

Explanation:

Liquid Medical Oxygen

- ★ It is high purity oxygen suitable for use in the human body, it is used for medical treatments.
- ★ This oxygen provides a basis for virtually all modern anaesthetic techniques, restores tissue oxygen tension by increasing the oxygen availability, aids cardiovascular stability, etc.
- ★ The World Health Organisation includes this on their List of Essential Medicines.

67. Answer: (b)

Explanation:

Commodity Super Cycle

- ★ A commodity is a basic good used in commerce that is interchangeable with other goods

of the same type.

- ★ Commodities are most often used as inputs in the production of other goods or services.
- ★ Commodity super cycles are decade-long periods in which commodities trade above their long-term price trend.
- ★ Some market analysts are seeing signs that a new super cycle is beginning in 2021 pointing to a weakening dollar and supportive central banks and fiscal stimulus geared towards infrastructure spending as well as renewable energy.
- ★ Steel, the most commonly used input in the construction sector and industries, is at all-time highs, as most metals including base and precious metals prices have increased a lot in the last one year.
- ★ Sugar, corn, coffee, soybean oil, palm oil have risen sharply in the US commodities market, the effect of which is being seen in the domestic market, too.
- ★ The new commodity super cycle is resulting from:
 1. Recovery in global demand (led by recovery in China and the US).
 2. Supply-side constraints.
 3. Loose monetary policy of global central banks.

68. Answer: (d)

Explanation:

Global Variant of Concern

- ★ The WHO says that a variant of interest (VOI) becomes a variant of concern (VOC) if it has been demonstrated to be associated with increase in transmissibility or detrimental change in COVID-19 epidemiology.
- ★ The increase in virulence or change in clinical disease presentation or a decrease in effectiveness of public health and social measures or available diagnostics, vaccines, therapeutics are also considered.
- ★ A variant may be classified as a VOC by the WHO in consultation with the WHO SARS-CoV-2 Virus Evolution Working Group.
- ★ A VOC is defined as a variant for which there is:
 1. Evidence of an increase in transmissibility;
 2. More severe disease (e.g. increased hospitalizations or deaths);

3. Significant reduction in neutralization by antibodies generated during previous infection or vaccination; and
4. Reduced effectiveness of treatments or vaccines, or diagnostic detection failures.

- ★ Recently, the World Health Organization (WHO) has classified a coronavirus variant which was first identified in India as a “global variant of concern”.
- ★ The variant called B.1.617 was classified as a variant under investigation (VUI) by authorities in the UK.
- ★ The B.1.617 variant of SARS-CoV-2 carries two mutations, E484Q and L452R.
- ★ The two mutations are found in the virus’s spike protein.
- ★ The spike protein helps the virus to bind itself to the human cell’s receptors and gain entry into a host cell.
- ★ It can increase the binding power of spike proteins with ACE2 receptors on human cells, making it more transmissible.

69. Answer: (c)

Explanation:

Tocilizumab

- ★ It is a biological therapy and can be prescribed for rheumatoid arthritis, juvenile idiopathic arthritis (JIA) or giant cell arteritis.
- ★ It is a recombinant humanized monoclonal antibody IL-6 receptor inhibitor used to treat inflammatory and autoimmune conditions.
- ★ Tocilizumab has a long duration of action as it is generally given every 4 weeks and has a wide therapeutic index.
- ★ Tocilizumab binds soluble and membrane bound IL-6 receptors, preventing IL-6 mediated inflammation.
- ★ Due to its property to fight auto immune disease Tocilizumab is used in the Treatment of Coronavirus Induced Diseases.

Interleukin 6 (IL-6).

- ★ It is a pro-inflammatory cytokine produced by cells including T-cells, B-cells, lymphocytes, monocytes, fibroblasts.
- ★ It rapidly induces C-reactive protein, serum amyloid A, fibrinogen, haptoglobin, and α -1-antichymotrypsin while inhibiting production of fibronectin, albumin, and transferrin.

- ★ It induces antibody production, induces cytotoxic T-cell differentiation and inhibits regulatory T-cell differentiation.

70. Answer: (c)

Explanation:

Socially and Educationally Backward Classes (SEBC)

- ★ The Supreme Court said that the Centre alone is empowered to identify Socially and Educationally Backward Classes (SEBC) and include them in the Central List for claiming reservation benefits.
- ★ The President (that is the Central government) alone, to the exclusion of all other authorities, is empowered to identify SEBCs and include them in a list to be published under Article 342A (1., which shall be deemed to include SEBCs in relation to each State and Union Territory for the purposes of the Constitution.
- ★ States could only make suggestions to the President or the statutory commissions concerned for inclusion, exclusion or modification of castes and communities to be included in the List.
- ★ The Central List is to be the “only list” for the SEBC.
- ★ Once published, under Article 342A (1., the list can only be amended through a law enacted by Parliament, by virtue of Article 342A (2..

71. Answer: (c)

Explanation:

- ★ A cute American turtle, popular as a pet, is threatening to invade the natural water bodies across the Northeast which is home to 21 of the 29 vulnerable native Indian species of freshwater turtles and tortoises.

Red-eared slider

- ★ The red-eared slider (*Trachemys scripta elegans*) derives its name from red stripes around the part where its ears would be and from its ability to slide quickly off any surface into the water.
- ★ Native to the U.S. and northern Mexico, this turtle is an extremely popular pet due to its small size, easy maintenance, and relatively low cost.
- ★ But on the flip side, they grow fast and virtually leaves nothing for the native species to eat.

- ★ Since they are omnivores, they pose a threat to both native aquatic animals and plants.
- ★ It is regarded as the most invasive species of turtles in the world.
- ★ People who keep it as pets released them in natural water bodies after they outgrow an aquarium, tank or pool at home.
- ★ Also, the red-eared slider is traded legally in India and the government should come up with regulations against keeping invasive as pets.
- ★ Preventing this invasive species from Northeast India is crucial because the Northeast is home to more than 72% of the turtle and tortoise species in the country, all of them are very rare.

72. Answer: (d)

Explanation:

- ★ According to the Marine Turtle Action Plan (2021-2026., the Indian coastal waters supports five species of sea turtles found world-wide.

They are:

1. Olive ridley (*Lepidochelys olivacea*)
2. Green (*Chelonia mydas*)
3. Hawksbill (*Eretmochelys imbricata*)
4. Leatherback (*Dermochelys coriacea*)
5. Loggerhead (*Caretta caretta*)

- ★ These five species of sea turtles that occur in Indian coastal waters are protected under Schedule I of the Wildlife (Protection) Act, 1972.

73. Answer: (c)

Explanation:

- ★ Several centers are being set up by the Department of Science and Technology to house major analytical instruments to provide common services of high-end analytical testing, thus avoiding duplication and reduced dependency on foreign sources.
- ★ Three such centers set up at IIT Kharagpur, IIT Delhi and BHU Varanasi, are being operated with a transparent, open access policy.
- ★ These centers were initiated under SATHI scheme.

Sophisticated Analytical & Technical Help Institutes (SATHI)' Scheme

- ★ The Department of Science and Technology (DST) is initiating of setting up a shared, professionally managed, Science and Technology

infrastructure facility, which can be readily be accessible to academia, start-ups, manufacturing units, industries and R&D Labs.

- ★ Such S&T infrastructure will be known as Sophisticated Analytical & Technical Help Institute (SATHI).
- ★ These Centres will be equipped with major analytical instrument and advanced manufacturing facility, which is usually not available at Institutes / Organizations.
- ★ The aim is to provide professionally managed services with efficiency, accessibility and transparency of highest order under one roof to service the demands of industry, start-ups and academia.
- ★ DST is planned to set up five SATHI Centers every year for the next four years.
- ★ This will also foster a strong culture of collaboration between institutions and across disciplines to take advantage of developments, innovations and expertise in diverse areas.

74. Answer: (b)

Explanation:

- ★ With the second wave of COVID-19 sweeping across the rural heartland of Odisha, infections are being reported among the Particularly Vulnerable Tribal Groups (PVTGs).
- ★ As many as 21 tribals across eight different PVTGs in the State have so far tested positive, including the Bonda tribes, known for its secluded lifestyle.

Tribes in Odisha

- ★ Odisha has among the largest and most diverse tribal populations in the country.
- ★ Of the 62 tribal groups residing in Odisha, 13 are recognised as PVTGs.
- ★ According to the 2011 Census, Odisha's share of the country's total tribal population was 9%.
- ★ Tribals constitute 22.85% of State's population.
- ★ The PVTGs of Odisha are Bonda, Birhor, Chuktia Bhunjia, Didayi, Dongaria Kandha, Hill Kharia, Juang, Kutia Kondh, Lanjia Saora, Lodha, Mankirdia, Paudi Bhuyan and Saora.
- ★ PVTGs are identified on the basis of stagnant or diminishing populations, subsistence level of economy associated with pre-agricultural stages of hunting, food gathering and shifting cultivation, and relative physical isolation.

The only PVTGs of various states:

1. Tripura – Raing
2. Rajasthan – Saharia
3. Manipur – Maram Naga

75. Answer: (c)

Explanation:

- ★ A total of 186 elephants were killed after being hit by trains across India between 2009-10 and 2020-21, according to the Ministry of Environment, Forest and Climate Change (MoEFCC).
- ★ According to the data furnished by the Project Elephant Division of the Ministry, Assam accounted for the highest number of elephant casualties on railway tracks (62., followed by West Bengal (57., and Odisha (27.. Uttar Pradesh saw just one death.
- ★ Trains claimed the highest number of pachyderms in 2012-13, when 27 elephants were killed in 10 States.

Elephants in India

- ★ According to the census report, released by the Union Ministry of Environment, Forests and Climate Change (MoEFCC) in 2017, the population estimation of Asian elephant in India is around 27,312.
- ★ The population estimation of Asian elephants in 2017 census is lower than from the last census estimate in 2012.
- ★ Karnataka has the highest number of elephants (6,049., followed by Assam (5,719. and Kerala (3,054..

76. Answer: (c)

Explanation:

Sovereign Gold Bond (SGB) Scheme

- ★ The Sovereign Gold Bond (SGB) scheme was launched in November 2015 with an objective to reduce the demand for physical gold and shift a part of the domestic savings - used for the purchase of gold - into financial savings.
- ★ These are issued by the RBI on behalf of the Government of India.
- ★ Bonds are sold through Commercial banks, Stock Holding Corporation of India Limited (SHCIL), designated post offices (as may be notified) and recognised stock exchanges viz., National Stock Exchange of India Limited and Bombay Stock Exchange, either directly or through agents.

- ★ The bonds are restricted for sale to resident individuals, Hindu Undivided Families (HUFs), trusts, universities and charitable institutions.
- ★ The price of the gold bonds is calculated based on the spot price of gold as provided by the Mumbai-based India Bullion and Jewellers Association (IBJA).
- ★ Gold bonds can be purchased in the multiples of one unit, up to certain thresholds for different investors.
- ★ The upper limit for retail (individual) investors and HUFs is 4 kilograms (4,000 units) each per financial year.
- ★ For trusts and similar entities, an upper limit of 20 kilograms per financial year is applicable.
- ★ Minimum permissible investment is 1 gram of gold, the gold bonds come with a maturity period of eight years, with an option to exit the investment after the first five years.
- ★ The interest on Gold Bonds shall be taxable as per the provision of Income Tax Act, 1961.
- ★ Bonds can be used as collateral for loans, the capital gains tax arising on redemption of SGB to an individual has been exempted.
- ★ Redemption is the act of an issuer repurchasing a bond at or before maturity.
- ★ Capital gain is the profit earned on the sale of an asset like stocks, bonds or real estate.
- ★ It results in when the selling price of an asset exceeds its purchase price.

77. Answer: (c)

Explanation:

Beema Bamboo

- ★ Beema or Bheema Bamboo is a superior clone, selected from Bambusa balcooa, a higher biomass yielding bamboo species.
- ★ This bamboo clone has been developed by the conventional breeding method.
- ★ This species is considered to be one of the fastest-growing plants. It grows one-and-a-half feet per day under tropical conditions.
- ★ It is said to be the best 'carbon sink' to mitigate carbon dioxide emissions.
- ★ The Tamil Nadu Agricultural University (TNAU) has designed an 'oxygen park' within its premises at Coimbatore with Beema Bamboo.

Bambusa balcooa

- ★ Bambusa balcooa is a very large, thick-walled, clumping bamboo, growing up to a height of 25 metres, and a thickness of 150 millimetres.

- ★ The length and strength of Bambusa balcooa make it a useful material for the construction industry.
- ★ It is a drought-resistant species with low rainfall requirements and can reach yields upwards of 100 metric tons per hectare.

78. Answer: (c)

Explanation: Iron Dome Air Defence Systems

- ★ It is a short-range, ground-to-air, air defence system.
- ★ In 2007, Israel announced that its state-run Rafael Advance Systems would come up with a new air defence system to protect its cities and people.
- ★ It was developed with Israel Aerospace Industries and deployed in 2011.
- ★ It includes a radar and Tamir interceptor missiles that track and neutralise any rockets or missiles aimed at Israeli targets.
- ★ It is used for countering rockets, artillery & mortars (C-RAM) as well as aircraft, helicopters and unmanned aerial vehicles.
- ★ It can protect deployed and manoeuvring forces, as well as the Forward Operating Base (FOB) and urban areas, against a wide range of indirect and aerial threats.

79. Answer: (b)

Explanation: Migration and Development Brief

- ★ Recently, the World Bank has released the Migration and Development Brief which provides information regarding remittances received by various countries
- ★ The report said India's remittances fell by just 0.2 per cent in 2020, with much of the decline due to a 17 per cent drop in remittances from the United Arab Emirates.
- ★ India received over USD 83 billion in remittances in 2020 which is a drop of just 0.2 per cent from the previous year.
- ★ Remittances outflow from India in 2020 was USD7 billion, against USD 7.5 billion in 2019

80. Answer: (c)

Explanation: Prompt Corrective Action

- ★ PCA is a framework under which banks with weak financial metrics are put under watch by the RBI.
- ★ The RBI introduced the PCA framework in 2002 as a structured early-intervention mechanism for banks that become undercapitalised

due to poor asset quality, or vulnerable due to loss of profitability.

- ★ The framework was reviewed in 2017 based on the recommendations of the working group of the Financial Stability and Development Council on Resolution Regimes for Financial Institutions in India and the Financial Sector Legislative Reforms Commission.
- ★ The PCA is invoked when certain risk thresholds are breached. There are three risk thresholds which are based on certain levels of asset quality, profitability, capital and the like.
- ★ There are two type of restrictions, mandatory and discretionary. Restrictions on dividend, branch expansion, directors compensation, are mandatory while discretionary restrictions could include curbs on lending and deposit.
- ★ Banks will also have to launch a special drive to reduce the stock of NPAs and contain generation of fresh NPAs.
- ★ They will also not be allowed to enter into new lines of business.
- ★ RBI will also impose restrictions on the bank on borrowings from interbank market.

81. Answer: (a)

Explanation:

Judicial Impact Assessment

- ★ It is a methodology of calculating the workload change that the judiciary has to bear due to procedural or substantive law changes and then calculating the expected indicative costs for the same change.
- ★ The USA undertakes the Judicial impact assessment exercise, although the developments are not shared except the results.

Background

- ★ The Supreme Court of India, for the first time, in Salem Advocates Bar Association (II) Vs Union of India case (2005., considered the question of the need for "Judicial Impact Assessment" in our country.
- ★ The Supreme Court of India also directed the Central Government to examine the issue of Judicial Impact Assessment as done in USA.
- ★ The Government of India, based on the direction of the Supreme Court, constituted a Task Force with Justice M. Jagannadha Rao as the chairman in 2008 to study the feasibility of Judicial Impact Assessment (JIA) in India.

82. Answer: (a)

Explanation:

- ★ Any cylinder with any compressed gas shall ensure that the cylinder is painted with appropriate identification colours specified in IS:3933 for medical cylinders.
- ★ According to the standards, Oxygen cylinders, intended for medical use, should be painted Black throughout its body and white at the neck of the cylinder.

83. Answer: (d)

Explanation:

Mission COVID Suraksha

- ★ It is an Indian COVID-19 Vaccine Development Mission with end-to-end focus from preclinical development through clinical development and manufacturing and regulatory facilitation.
- ★ The mission was led by Department of Biotechnology and implemented by a dedicated Mission Implementation Unit at Biotechnology Industry Research Assistance Council (BIRAC).
- ★ The existing activities under National Bio Pharma Mission (NBM) and Ind-CEPI Mission will provide complementary strengths to this Mission.
- ★ It will help accelerate development of approximately 5-6 vaccine candidates and ensure that these are brought closer to licensure and introduction in market for consideration of regulatory authorities.

Department of Biotechnology (DBT)

- ★ It works under the Ministry of Science & Technology.
- ★ It promotes the use and application of biotechnology in the areas of agriculture, healthcare, animal sciences, environment and industry.
- ★ It is focused on attaining new heights in biotechnology research, shaping biotechnology into a premier precision tool of the future for creation of wealth and ensuring social justice – especially for the welfare of the poor.

Biotechnology Industry Research Assistance Council (BIRAC)

- ★ It is a not-for-profit Section 8, Schedule B, Public Sector Enterprise, set up by Department of Biotechnology (DBT), Government of India
- ★ It was established as an Interface Agency to

strengthen and empower the emerging Biotech enterprise to undertake strategic research and innovation, addressing nationally relevant product development needs.

84. Answer: (a)

Explanation:

NAIMISHA 2021

- ★ It is an online summer programme created by the National Gallery of Modern Art (NGMA), New Delhi.
- ★ Through the event, NGMA is creating a virtual museum space.
- ★ This unique art fiesta will provide a platform to create and engage with the arts.
- ★ The events are expected to spark imagination, creativity and interest in visual and other related arts.

85. Answer: (c)

Explanation:

- ★ In order to mitigate the criticality of inadequate availability of specialised medical manpower, veteran defence doctors have come forward answering the call of the nation to provide free online consultation services on the e-Sanjeevani platform.

e-Sanjeevani OPD

- ★ It is a Govt of India flagship telemedicine platform, developed by the C-DAC, Mohali under the aegis of MoHFW, Govt of India.
- ★ It facilitates free online medical consultation to all citizens of India, as well as provides for online prescription of medicines.

Centre for Development of Advanced Computing (C-DAC)

- ★ It is the premier R&D organization of the Ministry of Electronics and Information Technology (MeitY) for carrying out R&D in IT & E (Information Technologies and Electronics) and associated areas.

86. Answer: (c)

Explanation:

Cloud Bursts

- ★ A cloudburst is an extreme amount of precipitation, sometimes with hail and thunder, which normally lasts no longer than a few minutes but is capable of creating flood conditions.
- ★ Rainfall rate equal to or greater than 100 mm (3.97 inches) per hour is a cloudburst.

- ★ The associated convective cloud can extend up to a height of 15 km above the ground.
- ★ During a cloudburst, more than 20 mm of rain may fall in a few minutes.
- ★ If rainfall of about 10 cm or above per hour is recorded over a place that is roughly 10 km x 10 km in area, it is classified as a cloudburst event.
- ★ And by this definition, 5 cm of rainfall in half an hour would also be classified as a cloudburst, that's an anomaly for Indian conditions.
- ★ Cloudbursts do happen in plains as well, but there is a greater probability of them occurring in mountainous zones; it has to do with the terrain.
- ★ Forecasts on cloud bursts for a very small area can be done through the use of Doppler radars.
- ★ Through them, it is possible to forecast the possibility of cloudbursts about six hours in advance, sometimes even 12-14 hours in advance.

87. Answer: (c)

Explanation: Housing Finance Companies (HFCs)

- ★ It is a form of non-banking financial company which is engaged in the principal business of financing of acquisition or construction of houses.
- ★ Any non-banking finance company can operate as a housing finance company, subject to the fulfilment of basic requirements as specified in the Companies Act, 1956.
- ★ Under the Revised Framework, a HFC has been defined to mean a non-banking financial company engaged in the housing finance business and which fulfils the following conditions:
 1. Its financial assets (in the business of providing finance for housing) constitute not less than 60% of its total assets; and
 2. Out of the total assets (netted off by intangible assets), not less than 50% should be by way of housing financing for individuals.
- ★ While there is a large gap between banks and HFCs when it comes to passing the benefit of a repo rate cut to existing borrowers, large HFCs compete with banks and offer similar rates to new customers.
- ★ As HFC rates are benchmarked to PLR, they increase the discount on PLR for new customers.

- ★ While both HFCs and banks offer the facility of switching to rates being offered to new customers after payment of conversion charge, a reduction in their PLR/MCLR would directly benefit borrowers.

88. Answer: (b)

Explanation:

Tea Cultivation

- ★ Tea is a tropical and sub-tropical plant and grows well in hot and humid climate.
- ★ The ideal temperature for its growth is 20°-30°C and temperatures above 35°C and below 10°C are harmful for the bush.
- ★ The most suitable soil for tea cultivation is slightly acidic soil (without calcium) with porous sub-soil which permits a free percolation of water.
- ★ Tea is a shade-loving plant and develops more vigorously when planted along with shady trees.
- ★ There is a very close relation between climate, the yield and the quality of tea.
- ★ A recent study has found that climate change would impact the very taste of tea, Increasing rain will change the "subtle flavours of the tea leaf and potentially reduce its health benefits".
- ★ Kenya is the largest producer of black tea in the world while China produces the maximum green tea.

89. Answer: (b)

Explanation:

Amphotericin B

- ★ It is fungistatic or fungicidal depending on the concentration obtained in body fluids and the susceptibility of the fungus.
- ★ The antibiotic is without effect on bacteria, rickettsiae, and viruses.
- ★ The drug acts by binding to sterols (ergosterol) in the cell membrane of susceptible fungi.
- ★ It shows a high order of in vitro activity against many species of fungi.
- ★ It is a polyene antifungal antibiotic produced by *Streptomyces nodosus*, with antifungal activity.

90. Answer: (b)

Explanation:

FLEUDA Test

- ★ Feluda is an acronym for FNCAS9 Editor Linked

Uniform Detection, a paper strip test that detects the coronavirus in an hour.

- ★ It is expected to help to fulfil an urgent need of the rapid testing in India.
- ★ It is the first such indigenous test kit to be developed in India based on Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR) technology by CSIR-IGIB.
- ★ The Feluda test will cost less than Rs.500 compared to Rs. 4500 for the real-time PCR test which is currently being used for Covid-19 diagnosis in India.
- ★ This test does not rely on expensive real-time PCR machines for RNA isolation, DNA conversion, and amplification which are already in limited supply in the country.

CRISPR-Cas9

- ★ CRISPR is a gene editing technology, which replicates natural defence mechanisms in bacteria to fight virus attacks, using a special protein called Cas9.
- ★ CRISPR-Cas9 technology behaves like a cut-and-paste mechanism on DNA strands that contain genetic information.
- ★ The specific location of the genetic codes that need to be changed, or edited, is identified on the DNA strand, and then, using the Cas9 protein, which acts like a pair of scissors, that location is cut off from the strand.
- ★ A DNA strand, when broken, has a natural tendency to repair itself.
- ★ Scientists intervene during this auto-repair process, supplying the desired sequence of genetic codes that binds itself with the broken DNA strand.

91. Answer: (d)

Explanation: The report is released by Women's World Banking Network. They partner with leading corporations to prove the commercial and social value of women's financial inclusion

92. Answer: (b)

93. Answer: (d)

94. Answer: (a)

Explanation: The Arctic Council was formally established in 1996 by the Ottawa Declaration. Purpose: It is an intergovernmental forum for promoting cooperation, coordination and interaction among the Arctic States. Members: The members of the Arctic Council include Canada, Denmark,

Finland, Iceland, Norway, Russia, Sweden and the United States. Observer Status: Since 2013, India enjoys 'Observer' status in the Arctic Council. Twelve other observer countries are Japan, China, France, Germany, UK, Italy, Switzerland, Poland, Spain, Netherlands, Singapore, and South Korea.

95. Answer: (c)

Explanation:

PMGKAY was first announced in 2020 as a part of the Pradhan Mantri Garib Kalyan Package(PMGKP). It aims to help the poor to fight the battle against Covid-19.

Aim: The scheme is aimed at providing each person who is covered under the National Food Security Act(NFSA) with an additional 5 kg of grains (wheat or rice) for free. This is given over and above their monthly entitlement

Duration of the Scheme: The scheme was announced in 2020 for three months till July 2020. Later it was extended till November 2020. o However, the scheme is functional once again. Under this new phase, around 80 crore beneficiaries would be covered for the months of May and June 2021. Its nodal Ministry is the Ministry of Finance.

96. Answer: (d)

Explanation:

Types of Lending Rates

- ★ Marginal Cost of Lending Rate: It came into effect in April 2016 and it is a benchmark lending rate for floating-rate loan, it is linked to the actual deposit rates.
- ★ This is the minimum interest rate at which commercial banks can lend.
- ★ This rate is based on four components, the marginal cost of funds, negative carry on account of cash reserve ratio, operating costs and tenor premium.
- ★ Prime Lending Rates: Under it, bank loans were priced on the actual cost of funds.
- ★ However, the PLR was subverted, resulting in an opaque system, it was used till June 2010.
- ★ Under this system, banks were subsidising corporate loans by charging high interest rates from retail and small and medium enterprise customers.
- ★ The Housing Finance Companies base their lending rates on Prime Lending Rates and offer a discount on it to customers.

- ★ The cut in rates for existing customers depends on the reduction in MCLR by banks and in PLR by HFCs in response to a repo cut by RBI.
- ★ Repo Rate: It is the rate at which the central bank of a country (Reserve Bank of India in case of India lends money to commercial banks in the event of any shortfall of funds. It is used by monetary authorities to control inflation.
- ★ In the event of inflation, central banks increase repo rate as this acts as a disincentive for banks to borrow from the central bank.
- ★ This ultimately reduces the money supply in the economy and thus helps in arresting inflation.
- ★ The central bank takes the contrary position in the event of a fall in inflationary pressures.
- ★ When the RBI slashes its repo rate, it expects the banks to lower their interest rates charged on loans.

97. Answer: (d)

Explanation: Zeolites

- ★ Zeolites are microporous, three dimensional crystalline solid of aluminium silicate.
- ★ Zeolites have small openings of fixed size in them which allow small molecules to pass through them easily but larger molecules cannot pass through them; that is why they are sometimes called molecular sieve.
- ★ Zeolites are very stable solid under different environmental conditions. The melting point of zeolite is very high, i.e. 1000°C.
- ★ They are insoluble in water or other inorganic solvents and they do not undergo oxidation in the presence of air.
- ★ Since zeolites are not reactive and are obtained from naturally occurring minerals, therefore, they do not have any harmful environmental effects; although skin contact or inhalation may have a carcinogenic effect.
- ★ Recently DRDO imports zeolite to make oxygen for COVID-hit by using it in an oxygen concentrator to vent out nitrogen and leave oxygen gas for patients.

98. Answer: (a)

Explanation: Common Crane

- ★ Common Cranes stand at 4 feet tall with a wingspan of over 7 feet, and used to be the largest birds in Ireland.
- ★ It is a bird that is part of its folklore and was a popular pet during medieval times.
- ★ It is typically seen in Ireland during the winter, but is not sighted during the breeding season.

- ★ The birds are in Ireland's Midlands region, but their exact location has been kept secret to protect them.
- ★ It breeds across temperate Eurasia and migrates south across its range.
- ★ In its normal breeding range, Common Cranes are found in wet meadows, forest clearings, wetlands, bogs, and grassy fields.
- ★ It feeds on grains and seeds, berries, and tender shoots and roots of plants.
- ★ It is listed as Least Concerned under IUCN Red List of Threatened Species.

99. Answer: (b)

Explanation:

Sarus Crane

- ★ It is the tallest flying bird in the world and state bird of Uttar Pradesh.
- ★ Demoiselle Crane is the smallest crane species and has a size of only 90 cm, while the biggest species (Sarus crane) can reach a size of up to 175 cm.
- ★ The current range of the Indian Sarus Crane includes the plains of north-western India, the western half of Nepal's Terai Lowlands and parts of Pakistan.
- ★ The Eastern Sarus Crane occurs in Myanmar, Laos, Vietnam and Cambodia.
- ★ The species mostly lives and breeds in and around wetlands as well as marshy areas, small lakes and cultivated land with the presence of water, like paddy fields.

100. Answer: (b)

Explanation: Winchcombe Meteorite

- ★ NASA notes that the difference between a meteor, meteorite and meteoroid is nothing but where the object is.
- ★ Meteoroids are objects in space that range in size from dust grains to small asteroids.
- ★ When meteoroids enter the Earth's atmosphere they are called meteors.
- ★ If a meteoroid enters the Earth's atmosphere and hits the ground, it is called a meteorite.
- ★ A meteorite touched down in the town of Winchcombe in Gloucestershire in the UK in February 2021.
- ★ It is a 103 gram fragment of black rock resembling coal, it dates back to the birth of the solar system nearly 4.5 billion years ago.

UPSC CIVILS MAIN TEST

TOPIC: GENERAL STUDIES

Time allowed: 180 Minutes Maximum Marks: 250

Question Paper Specific Instructions

Please read the following instructions carefully before attempting questions:

- ★ There are **TWENTY** questions printed in **ENGLISH**
- ★ All the questions are compulsory.
- ★ The number of marks carried by a question/part is indicated against it.
- ★ Answer must be written in the medium authorized in the Admission certificate which must be stated clearly on the cover of this Question-cum-Answer (QCA) booklet in the space provided. No marks will be given for answer written in medium other than the authorized one.
- ★ Answers to Questions No.1 to 10 should be in 150 words, whereas answers to Questions No.11 to 20 should be in 250 words.
- ★ Each question carries 12.5 marks.
- ★ Any page or portion of the page left blank in the Question-cum-Answer booklet must be clearly struck off.

MAINS QUESTION PAPER

1. There is a growing movement in the West to legalise cannabis, with rumblings of the same in India. Discuss why India should not legalise cannabis.
2. India's presence at the G7 as an observer state is an acknowledgement of another dimension of this new reality. Discuss.
3. Recently, Union Defence Minister Rajnath Singh said that the future of India's 'No First Use' (NFU) policy on nuclear weapons depend on "circumstances". Discuss the pros and cons of revisiting the NFU Policy.
4. Discuss the reasons of slowdown in textile sector and its implications on Indian economy.
5. A healthy Individual, a healthy family and a healthy= society are the essentials to make New India - a Fit India. Discuss it in context of recently launched 'Fit India Movement'.
6. The police in a just and democratic setup, has to be made responsive to the prevailing and emerging needs of new India. Discuss it in context of SPIR 2019 report.
7. What do you understand by 'community kitchen'? Discuss how community kitchens could be effective tools to combat hunger & malnutrition in India.
8. Discuss the pros and cons of the RBI's decision to transfer surplus fund to government.
9. Discuss the efforts made by the government to achieve the target of power for all 24x7.
10. "in recent years, India's coastal regions have become more vulnerable to multiple risks related to climate change." Discuss why making coastal infrastructure climate resilient is need of the hour.
11. What is India's 'Act Far East' policy. Discuss the strategic implications of the policy.
12. Recently, RBI has made it mandatory for banks to link loans to external interest rate benchmark. Discuss how this move will effect the banking system as well as borrowers.
13. The new approach of South Korea also puts an emphasis on enhancing its strategic relationship with India. India also looks at South Korea as an indispensable partner in its Act East Policy (AEP). Comment.
14. Critically discuss the rationale behind the recent decision of government of merging the public sector banks.
15. "Xenophobic violence is the product of both nationalist and localised politics rather than an inevitable outcome of multi-ethnic or multi-national diversity amidst social and economic marginalisation." Comment.
16. Information sharing empowers the citizens and deepens their trust towards the government. Do you agree? Illustrate.
17. What is 'probity'? Why is it a desirable attribute to have for a civil servant? Examine.

18. Expand upon the philosophy of 'Saam, Daam, Dand, Bhed'. Is it relevant today? Comment.
19. You are head of an organization which has large public interface. One day an old man approaches you and complains that one Assistant incharge of Old Age Pension Scheme is demanding Rs. 100.00 from him for clearing his pension claims. He has further revealed that this is a common practice in this office and those who do not pay the bribe money, are harassed. You have become very upset with the state of affairs and want to solve the problem of the old man alongwith bringing some qualitative change in the work culture of the organization, for better service delivery.
- (a) What are the options available to you?
- (b) Evaluate each of these options and choose the option which you would adopt, giving reasons.
20. A girl has lot of interest in biology and medical sciences and she wants to seek admission in medical stream in a private college because she missed the cut off for government run medical colleges. Her father has sufficient wherewithal and he has no objections and he is ready to help in admission. However, her grandfather as well as mother say that, what is the use of spending so much money on daughter as eventually she would go to somebody else's family. It is better to keep money for her marriage or for their son's requirement who will look after the family. Assess the attitudinal differences between father on one side and grandfather and mother on the other side and its repercussions on society.

MAINS KEY PAPER

1. Recently, Prime Minister of Bangladesh has described Dhaka's ties with India and engagements with New Delhi as 'organic' and 'beyond a few billions of dollars of trade'. Critically discuss.

Hints:

- ★ India was one of the first countries to recognize Bangladesh and establish diplomatic relations immediately after its independence in December 1971. India - Bangladesh relationship is anchored in history, culture, language and shared values of secularism, democracy and countless other commonalities between the two countries.
- ★ India's 'neighbourhood policy' has focussed on Bangladesh, which has emerged as a key interlocutor in India's 'Act East Policy' and sub-regional groupings like Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and the Bangladesh, Bhutan, India, Nepal (BBIN) Initiative.

- ★ In Bangladeshi geopolitics, India has always been at the center while the United States has had leverage. Other regional powers such as China used to be on the periphery. Historically Bangladesh has more cultural and societal links with India. India, Pakistan, and Bangladesh are collectively known as a subcontinent.

However, India's hegemonic posture and coercive tactics created deep resentment among ordinary Bangladeshis, especially when contrasted with China's model of non-interference in domestic affairs coupled with lavish spending.

- ★ Bangladesh could work as a bridge to access the Indian markets for its products. Again, Bangladesh' strategic location, especially, close proximity to Siliguri Corridor, a narrow strip of land connecting India's Northeast region to the rest of the country also motivating factors.

2. What were the reasons for which Fundamental Duties have repeatedly been called ineffective? Highlight the need and importance of incorporating FDs in Indian Constitution

42nd Constitutional Amendment to the constitution added a new part IVA to the Constitution. This part contained the Fundamental duties. Why FDs are called ineffective:

- ★ They are non-justiciable as the constitution does not provide for their direct enforcement by the courts.
- ★ There is no legal sanction against their violation life in the case of Fundamental Rights.
- ★ The list of duties is not exhaustive as it does not cover other important duties like casting vote, paying taxes, family planning and so on.

- ★ Some of the duties are vague, ambiguous and difficult to be understood by the common man. They are used to abuse people who choose to interpret the duties differently.

- ★ Though Swaran Singh Committee had suggested for penalty or punishment for the non-performance of Fundamental Duties, it was not incorporated.

Need for incorporating FDs in constitution:

- ★ Swaran Singh committee felt that citizens should become conscious that in addition to the enjoyment of rights, they also have certain duties to perform as well.
- ★ They serve as a reminder to the citizens that while enjoying their rights, they should also be conscious of duties they owe to their country, their society and to their fellow citizens.
- ★ They serve as a source of inspiration for the citizens and promote a sense of discipline and commitment among them. They create a feeling that the citizens are not mere spectators but active participants in the realisation of national goals.

Importance of FDs in constitution:

- ★ Cherishing noble ideals of freedom struggle is a moral precept and respecting the Constitution, National Flag and National Anthem is a civic duty.
- ★ They contain a codification of tasks integral to the Indian way of life.
- ★ They serve as a warning against the anti-national and anti-social activities like burning the national flag, destroying public property and so on.
- ★ They help the courts in examining and determining the constitutional validity of a law. In 1992 SC ruled that in determining the constitutionality of any law, if a court finds that the law in question seeks to give effect to a FD, it may consider such law to be 'reasonable' in relation to Article 14 (equality before law) or Article 19 (six freedoms) and thus save such law from unconstitutionality.
- ★ The moral value of fundamental duties would be not to smother rights but to establish a democratic balance by making the people conscious of their duties equally as they are conscious of their rights.

3. Do you think adultery law in India is in contravention to the Constitutional Provisions under Art 14 and 15. Critically analyze, with special emphasis on various governmental reports and committees' views on the issue.

Adultery refers to extra-marital voluntary sexual intercourse. Provisions in Section 497 of IPC mandates a punishment of 5 years in prison for the man who had consensual sexual intercourse with a married woman. But it does

not punish the woman who had consensual sexual intercourse with a married man. Contravention to Art 14 and 15:

- ★ As it considers that women could not be punished as they were vulnerable.
- ★ By punishing only a man for adultery, the law is discriminating against citizens based on “sex”, covered under Article 15.
- ★ Section 198 (1) of CrPC says only “aggrieved party” can bring forth a complaint on cases of adultery. Section 198 (2) clarifies that only the husband can be the “aggrieved party”.
- ★ It is discriminatory against men as it presumes the morality of man and judges his behavior. It is in violation of Article 14 and 15 which prohibits discrimination on grounds of religion, caste, sex.

Committees:

- ★ The 42nd Law Commission of India Report and the Malimath Committee on Criminal Law Reforms suggested that the section be amended to ensure both the erring wife and the husband be held equally liable for adultery.
- ★ Law Commission rendered liable only the male offender considering the condition of women in this country and law's duty to protect it.
- ★ SC in Yusuf Abdul Aziz v. The State of Bombay (1954) case held that Section 497 did not violate the right to equality in Articles 14 and 15 of Constitution. Constitution itself provides for special provisions with regard to women and children.
- ★ Fifth Law Commission made suggestions as to changes in the provision, including making the law gender-neutral

4. Discuss the factors behind poor health of the private Industrial Training Institutes of India? In your opinion what measures should be taken to improve their quality?

The recent parliamentary report on private ITIs has exposed a scam on the Quality Council of India's approval for thousands of private ITIs. The number of private ITIs has grown from under 2,000 to over 11,000 in five years. Sharda Prasad committee points to the poor state of skill training going on in these institutes. Other Problems with private ITIs:

- ★ Failure to align with global standards.
- ★ Lack of regulation and monitoring to keep a check on the quality of training.
- ★ Policy changes make the governmental affiliation mandatory to start operation and ministry often introduces new conditions.
- ★ The complex set of rules, regulations and laws governing the sector makes it difficult to setup and run an institute in India.

- ★ Huge entry restrictions life working capital requirements.
- ★ Poor results in the form of placements of trained candidates. This can be due to lack of industry tie ups and also due to adoption of poor skill standards. Placement in NSDC training has been less than 15%.

- ★ Lack of a regulator with teeth, for skill development has led to poor quality affiliation, assessment and certification.

- ★ A national survey by the research institute (NILERD) of Planning Commission in 2011 about private ITIs: they offered training in less than five trades; had fewer classrooms and workshops for practice; and their teachers were very poorly paid.

- ★ NILERD nationwide survey, 2011 found that ITIs have many internal issues such as staffing and salaries.

Measures for improving the quality of ITIs:

- ★ More industry - institute tie ups can be promoted to cater to the skills demanded by industry.
- ★ Simplifying red tape to enable private sector participation in the skill development industry.
- ★ The Sharada Prasad Committee recommended that the number of SSCs should correspond to the National Industrial (Activity) Classification.
- ★ Periodic surveys through National Sample Survey Office, to collect data on skill providers and skill gaps by sector to guide evidence-based policy-making.
- ★ We need better oversight, with a national board for all skill development programmes. The core work of accreditation, assessment, certification and course standards cannot be outsourced.
- ★ Mandatory rating system for the ITIs can be published periodically. A ranking of ITIs on several parameters such as the National Assessment and Accreditation Council in tertiary education can be replicated.
- ★ We need a unified national vocational system where the ITIs, NSDC private vocational trainers work with each other. 12th Five Year Plan recommends a national vocational act that replaces all scattered regulations.
- ★ Need to reskill ITI teachers and maintain the student-teacher ratio.
- ★ Since technology obsolescence is a continuous challenge, financial support envisaged through NSDC should be extended to the ITIs.
- ★ A reimbursable industry contribution (RIC) — a 1-2% payroll tax that will be reimbursed when employers train using public/private infrastructure and provide data. It is implemented in 62 other countries and was recommended in the 12th Plan

5. What is meant by social constraints? Are constraints of any kind necessary for enjoying freedom? What is the difference between the negative and positive concep-

tion of liberty?

Social constraints : Given the diverse interests and ambitions of people any form of social living requires some rules and regulation. These rules may impose some constraints to on the freedom of individuals and are called social constraints. Constraints are needed for freedom:

- ★ Some constraints may free us from insecurity and provide us with the conditions in which we can develop ourselves.
- ★ We need some constraints or else society would descend into chaos. Differences may exist between people regarding their ideas and opinions, they may have conflicting ambitions, they may compete for scarce resources.
- ★ Sme legal and political restraints ensure that differences may be discussed and debated without one group coercively imposing its views on the other

Constraints not needed for freedom:

- ★ In South Africa, the constraints imposed by the apartheid regime discriminated between citizens based on their race.
- ★ Constraints on freedom from social inequality like in the caste system and based on economic inequalities are not desirable.
- ★ Constraints limit an individual from enjoying equality of status and opportunity.
- ★ Also state most of the times limits the freedom of individual in the name of larger public interest. Here the check should be the extent of compromise of individual freedom and the importance of national interest. The debate between Fundamental Rights and DPSPs is an example.

As freedom is at the core of human society, is so crucial for a dignified human life, it should only be constrained in special circumstances. The 'harm caused' must be 'serious'. Difference between +ve and -ve liberty: Negative liberty' seeks to defend an area in which the individual can 'do, be or become' whatever he wants. This is an area in which no external authority can interfere. It recognises that human nature and dignity need an area where the person can act unobstructed by others. 'Positive liberty' is concerned with looking at the conditions and nature of the relationship between the individual and society. It recognises that one can be free only in society (not outside it) and hence tries to make that society such that it enables the development of the individual.

6. Health care in India is obviously not egalitarian and becoming increasingly dependent on the private sector to deliver health care. Discuss and suggest measures for equitable medical care.

Of the total health spending in India, the government contributes just 29%. In the UK, the government's share is 83%. The health care services in India are not egalitarian. The out-of-pocket expenses for medical care are about

70% of all medical expenditure, enough to push a family into poverty. Problems with present healthcare system:

- ★ Poor government spending in healthcare is resulting in deteriorated standards in service provision from public sector. Indian government only spends about 1.4% of the GDP on the sector
- ★ The gap between what is technologically possible and what government hospitals generally provide widened appreciably after the technological leaps in medical care - this can be called "medical rationing".
- ★ The deteriorating state of public healthcare in India means that an increasingly larger percentage of its citizens are being driven to the private sector for their medical needs.
- ★ Mounting costs and decreasing availability of drugs is a major issue
- ★ Medical rationing has other detrimental effects like creating distrust of the public in government hospitals.

Measures for equitable health care:

- ★ The new Ayushman Bharat health scheme to provide secondary and tertiary care to those who are socioeconomically deprived.
- ★ NITI Aayog's document recommends the government to prioritise preventive care rather than provide curative care.
- ★ AIIMS like institutions in every state to make tertiary care accessible.
- ★ Generic medicines should be mandated and be made available.
- ★ Niti Aayog suggested a model that provides for a greater role for private players in the India's healthcare sector.

7. Discuss the factors behind India's ailing indigenous defense manufacturing. How new Strategic Partnership guidelines would be able to transform defense manufacturing in India?

India continues to remain in the strategically-vulnerable position of being the world's largest arms importer, accounting for 12% of the global imports from 2013-2017. Factors behind poor indigenous industry

- ★ Ordnance Factories : Dependence only on the government owned defence public sector units (PSUs) and ordnance factories which failed to produce cutting edge technologies.
- ★ R&D: Researching and developing new military systems is the job of the Defence Research and Development Organization (DRDO). The DRDO consumes 20% of the Indian government's total R&D funding. Its inherent problems and contradictions led to the gross failure of indigenous production.
- ★ Rama Rao Committee on DRDO says that it requires passionate and inspiring leadership. IT points to poor HR management with only 3% of its scientists have PhDs in

engineering-related subjects. It warns that DRDO's "biggest challenge" is to attract, nurture and retain talent.

- ★ Bias against private sector participation - Kelkar committee had suggested nominating more than a dozen Indian private sector companies Raksha Udyog Ratnas, with a status equivalent to that of the defence.

Strategic Partnership guidelines - Recently the Defence Acquisition Council (DAC) approved the implementation of Strategic Partnership guidelines.

- ★ **4 segments - The model has four segments** — submarines, single engine fighter aircraft, helicopters and armoured carriers/main battle tanks. These would be specifically opened up for the private sector.
- ★ **Global Equipment Manufacturers** - One Indian private company would be selected in each segment which would tie-up with shortlisted global equipment manufacturers to manufacture the platforms in India under technology transfer.
- ★ **Procurement** - All procurements would be executed by specially constituted Empowered Project Committees for timely execution.

How they can help:

- ★ The model aims to revitalise defence industrial ecosystem and build indigenous capabilities in the private sector to design, develop and manufacture complex weapon systems.
 - ★ They lay emphasis on incentivisation of transfer of niche technology and higher indigenous content.
 - ★ This creates scope for innovation transfer from foreign companies.
 - ★ Private sector participation can attract more investments into the sector.
8. **Power loom sector, which contributes to 40 per cent of the nation's man-made fabric demand, is in a shutdown mode in Surat, discuss the challenges faced by the sector and steps taken by government to deal with them.**

The decentralized powerloom sector is the lifeline of Indian Textile Industry. 60% of Indian cloth is produced through decentralized power loom sector, provides employment to more than 7 million workers.

Major issues faced by Powerloom sector:

- ★ Poor infrastructure - Most of the powerloom clusters face common problems like poor roads, effluent issues, frequent power cuts, non-availability of water, no warehouses & logistic issues etc.
- ★ Obsolete Technology - Modernisation in looms is less, There are less than 15,000 modern looms, whereas traditional looms are in large numbers.
- ★ Value addition and the manufacturing of fabrics according to customer's compliances, is not possible due to obsolete technology of looms.

- ★ Loom's depreciation & maintenance cost is very high. It results in increase in the operating cost and the overall cost of production also increases.
- ★ The productivity of plain powerloom is very low as compared to automatic, shuttleless and semi-automatic looms
- ★ Unskilled labour - Most of the labors lack good technical knowledge. They are not been trained for increasing productivity & efficiency. Lack of marketing support - Mostly, the weavers are uneducated or less educated and are unable to estimate the demand of their products according to the need of the market. d. The middlemen exploit the powerloom owners and gain the main surplus. e. The merchants and agents are united while the powerloom owners are dispersed. So, the buyers have more bargaining power and sellers are dependent on the buyers.
- ★ Finance - The majority of the weavers start their business with the self-finance. They don't have adequate supply of finance to modernize their power looms. They don't have sufficient capital to pile up the stock of raw material when the prices are low.

Government initiatives:

- ★ Powerloom Development and Export Promotion Council (PDEXCIL) - nodal agency for development and promotion of exports of powerloom products by promotional activities such as participation in international trade shows, sending and hosting trade delegations, and sustained image-building exercises through advertisements abroad, publications and audio visuals.
- ★ Comprehensive Powerloom Cluster Development Scheme (CPCDS) by Ministry of Textiles - for development of Powerloom Mega Clusters.
- ★ Telangana State government announced incentives, provided training and marketing facilities and had been promoting handloom textiles in a big way by placing bulk orders for school uniforms, Ramzan gifts and Bathukamma sarees.

9. **Enumerate the land-use categories as maintained in the Land Revenue Records and highlight the patterns of land use changes that have taken place in last few decades in India.**

Land use categories mentioned : The land-use categories as maintained in the Land Revenue Records are as follows :

- ★ **Forests** : Area under actual forest cover is different from area classified as forest. There may be an increase in this category without any increase in the actual forest cover.
- ★ **Barren and Wastelands** : The land which may be classified as a wasteland such as barren hilly terrains, desert lands, ravines, etc. normally cannot be brought under cultivation with the available technology.
- ★ **Land put to Non-agricultural Uses** : Land under urban

and rural settlements, infrastructure, industries etc., are included in this category.

★ **Area under Permanent Pastures and Grazing Lands :** Most of this type land is owned by the village 'Panchayat' or the Government. Only a small proportion of this land is privately owned.

★ **Area under Miscellaneous Tree Crops and Groves :** The land under orchards and fruit trees are included in this category.

★ **Culturable Wasteland :** Any land which is not cultivated for more than five years is included in this category.

★ **Current Fallow :** it is the land which is left without cultivation for one or less than one agricultural year.

★ **Fallow other than Current Fallow :** This is also a cultivable land which is left uncultivated for more than a year but less than five years.

★ **Net Area Sown:** The physical extent of land on which crops are sown and harvested is known as net sown area

Broad patterns of land use changes:

★ The rate of increase is the highest in case of area under non-agricultural uses. This is due to the changing structure of Indian economy, which is increasingly depending on the contribution from industrial and services sectors

★ The increase in the share under forest could be by increase in the demarcated area under forest rather than an actual increase in the forest cover

★ The increase in net area sown is a recent phenomenon due to use of culturable waste land for agricultural purpose.

★ As the pressure on land increased from agricultural and nonagricultural sectors, the wastelands and culturable wastelands have witnessed decline over time.

★ The decline in land under pastures and grazing lands can be explained by pressure from agricultural land.

10. While safeguard duty on solar panels from China, Malaysia may benefit domestic manufacturers, it will do a lot of damage to existing solar projects. Explain. And discuss the other factors that are hurting the development of solar power in India.

The government implemented a 25% safeguard duty on solar cell imports from China and Malaysia for the period between July 30, 2018 and July 29, 2019. This import duty has been placed in order to encourage local solar panel manufacturers in the country in a push to the 'Make in India' effort. Thus it may encourage local manufacturers of solar panels.

How it damages existing solar projects?

★ Majority of top solar projects are using these imported panels especially from China.

★ More than 10,000 MW capacity of solar panels are imported annually from China and Malaysia and this duty would adversely impact the commercial viability of some solar

power projects

★ The increased tariffs will be ultimately passed on to the customers, hampering the adoption of clean energy.

★ The duty does not provide any relief to developers in SEZs.

★ It would increase cost of solar power and make it less attractive to buying utilities. Thus it could jeopardise the pace of growth of development of solar power. Tariffs are likely to rise 30-35 paise per unit due to the duty.

★ There could also be short term delays in project completion.

Factors hurting development of solar power in India:

★ Solar projects require land and lack of availability of land is a challenge.

★ Lack of grid connectivity to sites of solar power production.

★ Huge dependence on imports of solar panels make the production expensive if there are any changes in international market.

★ During daytime, the weather may be cloudy or rainy, with little or no sun radiation. Hence, this makes solar energy panels less reliable as a solution.

★ Solar panels also require inverters and storage batteries to convert direct electricity to alternating electricity so as to generate electricity. While installing a solar panel is quite cheap, installing other equipment becomes expensive.

★ Energy production is quite low compared to other forms of energy.

★ The renegotiation of existing Power Purchase Agreements (PPA) in the light of falling solar prices is a trouble for the producers.

11. Invasive species have contributed to 40% of all animal extinctions since the 17th century, discuss the implications of the invasive species on the local environment and economy. What international mechanisms are available to deal with them?

An invasive species can be any kind of living organism that is not native to an ecosystem and causes harm. They can harm the environment, the economy, or even human health. Implications on local environment:

★ Widespread loss of habitat

★ Some invaders can physically alter the habitat. Eg., change in the nature of trees that survive depending on the new species

★ Invading species destroy endemic species diversity as, often, they do not have any predators.

Impact on the economy:

★ Invasive species can also impact human health. Sometimes, invasive animals can also be vectors for disease.

★ As they impact the local habitat, they affect the livelihoods of people depending on local resources like trees,

ponds, fishes etc., In Tamil Nadu the Seemai karuvelam tree was blamed for affecting groundwater resources.

- ★ The introduction and spread of an invasive species can have major trade implications. There is the prospect of losing a competitive advantage in exports because unaffected countries will either prohibit import of goods from affected countries or establish costly precautionary measures

Mechanisms to deal them:

- ★ IUCN has formulated guidelines for managing invasives specifically in islands. The mechanism involves data collection, community engagement, policy measures and management plans.
- ★ The Convention on Biological Diversity (CBD) – Article 8(h) of the CBD states that parties shall prevent the introduction of alien species which threaten ecosystems, habitats or species.
- ★ Agreement on the Application of Sanitary and Phytosanitary Measures – It provides an international legal basis for all sanitary and phytosanitary measures that affect international trade.
- ★ CITES – The aim of Convention on International Trade in Endangered Species is to ensure that international trade of wild animals and plants does not threaten their survival.
- ★ Convention on Migratory Species of Wild Animals (CMS or Bonn Convention) – it aims to conserve terrestrial, marine and avian migratory species.
- ★ Convention on Wetlands (Ramsar Convention) – COP 7 resolution addresses threats of invasive species to wetland ecosystems.
- ★ International Convention for the Control and Management of Ship's Ballast Water and Sediments – Not yet in force. It provides guidance and strategies to minimize and eliminate the transfer of harmful aquatic organisms and pathogens from ballast water and sediments.
- ★ International Plant Protection Convention (IPPC) – it aims to prevent introduction of pests of plants and plant products in international trade.
- ★ United Nations Convention on the Law of the Sea (UNCLOS) – States are required to protect and preserve the marine environment from intentional or unintentional introduction of alien species.
- ★ World Organisation for Animal Health (OIE) Agreement – to guarantee the safety of international trade in animals and animal products and to control animal diseases and zoonoses worldwide while avoiding unjustified sanitary barriers

12. What are the reasons of urban flooding in India? Discuss the mechanism available to deal with urban flooding and why it has proved to be ineffective in times of need?

Urban flooding is the inundation of land or property in more densely populated areas, caused by rainfall overwhelming the capacity of drainage systems, such as storm sewers. Reasons for urban flooding: Leaving aside the natural causes like torrential rainfall and lack of natural water bodies in many urban areas, man-made factors play a major role in urban floods. These are:

- ★ Urbanisation and increasing pressure on land. The urban areas are highly dense making them more vulnerable to disasters like floods.
- ★ Land use changes life levelling, deforestation.
- ★ Settlements along flood plains
- ★ Poor infrastructure to dispose municipal solid wastes and for drainage of sewage water.
- ★ Urban heat islands and micro-climate changes in urban areas

Mechanisms to deal with urban floods:

- ★ The NDMA has the responsibility of laying down policies, plans and guidelines for DM and coordinating their enforcement and implementation for ensuring timely and effective response to disasters.
- ★ The DM Act 2005 has mandated the constitution of NDRF for the purpose of specialised response to a threatening disaster situation or disaster.
- ★ All States and UTs will be required to train some personnel of their existing armed police battalions in DM, as they are critical first responders.
- ★ Ministry of Water Resources and Central Water Commission have been the nodal ministry and agency for dealing with Floods, focusing on riverine floods affecting large extents of rural areas.
- ★ NDMA decided to address urban flooding as a separate disaster de-linking it from Floods and evolved separate guidelines. Taking into consideration the fact that stormwater drainage system is one of the important components of UFD, it is allotted to Ministry of Urban Development (MoUD).
- ★ IMD is the custodian of rainfall data in India

Why it is not effective:

- ★ Most of the times, urban infrastructure does not include risk planning. Many local bodies fail to meet the infrastructure requirements, leave aside the disaster preparedness.
- ★ The communication networks often fail due to lack of sufficient awareness and preparedness among the officials from top to the local levels.
- ★ The NDRF teams are not sufficiently manned to meet the emergencies across the country. Most of the state governments failed to develop their own standalone forces as instructed by the DM Act.
- ★ The IMD data is at a more broader level and not specific to

localities. This creates challenges in assessing the risks at a particular location at a time.

- ★ Rapid urbanisation has made the urban planning limited and inefficient in response.

13. Highlight the need for National security reforms and restructuring in India and discuss the steps taken by government towards this goal.

Need for national security reforms and restructuring:

- ★ Increasing threats from the northern and western border. This is understood from the Doklam crisis and cross border infiltration and attacks at Pathankot and Uri.
- ★ Rising cyber threats and need for a cyber warfare in times of contingency.
- ★ Failure to build a robust defence-industrial base.
- ★ Lack of long term strategic planning to build military capabilities.
- ★ India's growing geopolitical presence and super power ambitions need a different set of defence infrastructure.

Steps taken so far:

1. The new Defence Planning Committee(DPC) was created to create a coherent plan for national defence which integrates all national forces and addresses all threats.
2. The new Defence Procurement Policy gives a boost to domestic production of arms and enables technology transfer.
3. The reform initiatives in army were recommended by a committee headed by Shekatkar.

They include:

- a) Better utilization of Supply and Transportation echelons and Animal Transport Units.
- b) Closure of Military Farms and Army Postal Establishments in peace locations.
- c) Enhancement in standards for recruitment of clerical staff and drivers in the Army.
- d) Improving the efficiency of the National Cadet Corps.
- e) Redeployment of Ordnance echelons to include Vehicle Depots, Ordnance Depots and Central Ordnance Depots apart from streamlining inventory control mechanisms.
- f) Optimization of Signals Establishments to include Radio Monitoring Companies, Corps Air Support Signal Regiments, Air Formation Signal Regiments, Composite Signal Regiments and merger of Corps Operating and Engineering Signal Regiments.

14. Is morality important to lead a happy life? Support your answer with examples.

Morality can be defined as principles concerning the distinction between right and wrong or good and bad behavior. In our day to day lives we often face situations where

we have to choose between options and moral character of a person plays big part in it. Morality is definitely a very important value to lead a happy life. A person with high integrity and moral character will choose the right and we know that the path of truth will lead to happiness in the long term even at the cost of short term sufferings.

In his childhood, Gandhi Ji once stole some money from his father's pocket. He knew that his father would never come to know about it. However, showing high moral character, he confessed his mistake.

The rest is history and we know Mohan Das became father of the nations.

There are numerous examples in our daily life where a moral life can lead to happiness. Some of them are explained below:

1. Corrupt vs. Honest Officers – Former CAG Mr. Vinod Rai unearthed big scams and was at the receiving end of the then government. However, now he is respected by all. At the same time, a dishonest officer can accumulate huge wealth but will always live in fear
2. Tax Evasion – People who pay taxes honestly are living happily without any fear versus tax evading people are always in fear of raid or penal action
3. Every day scenarios such as jumping red light, bribing traffic police, cheating in exams test out morality and people who are at the right side are always happy in the long term

There are many other ethical values in addition to morality such as honesty, integrity, truthfulness which are required to lead a happy and satisfying life. It is the responsibility of a society to teach them to our childrens so that overall we became a happy world.

15. Citizen's Charter helps maintaining a healthy work culture. Do you agree? Explain with Examples.

Citizen's charters' main objective is to improve the quality of public services. This is done by letting people know the mandate of the concerned Organisation, how one can get in touch with its officials, what to expect by way of services and how to seek a remedy if something goes wrong.

How they help maintain healthy work culture:

1. They maintain a clear communication between various employees because they are together answerable to the people.
2. It enables a clear accountability mechanism for each employee and thus reduces the scope for subjectivity in assessing their performance. For example, an employee who caters to many citizens' requests can be clearly identified due to clearly specified duties.
3. It aligns the personal goals of each employee to the organisations goals and thus creates a spirit of service

for the organisation.

4. Citizen charters streamline the processes of the organisation to reduce time lag in service delivery. Hence, employees do not find it burdensome to fulfil their mandated duties. For example, the current physical filing system in time taking and cumbersome. It does not incentivise the employee to speed up his work.
5. It centers the administration around citizen and makes employees more citizen-friendly.
6. It improves the efficiency of work by putting to use the available resources wisely.
7. It encourages fairness of treatment and reduces scope for nepotism, corruption at workplace.

16. Differentiate between dilemma and ethical dilemma with suitable examples. How does conscience act as a source of ethical guidance?

A dilemma can be regarding any decision man takes in his life. It can be over which dress to choose or which ice cream to eat. Ethical dilemma is more specific. It is a dilemma about which is the "right" way to act. Whether to reach office on time or help a victim in accident is an ethical dilemma as, here, both the choices seem right.

In such cases conscience acts as a clear source for guiding the ethical action of individual. This is how:

1. Conscience tells a man what is right and wrong. Though it is considered wrong by others or rules, it guides him.
2. A man feels pleasure when he does something good. He suffers pain on doing bad. Conscience compels a man to pursue pleasure and discard pain. Thus it guides him to act ethically.
3. Conscience is formed from the learnings, experiences and beliefs of an individual. Even for a bad person, his conscience guides him to do correct as that is what he has learnt over time.
4. Immanuel Kant expressed the idea of the critical conscience which was rather like a court of law in our minds where the prosecutors or conscience excuse or accuse thoughts and actions.

17. What do you understand by corporate social responsibility? What relationship does corporate governance share with corporate social responsibility?

Corporate social responsibility is a business approach to contributes to sustainable development by delivering economic, social and environmental benefits for all stakeholders.

IT is generally understood that following the principles of corporate governance will eventually lead to CSR. The Companies Act prescribes a mandatory CSR spend of 2% of average net profits for companies.

Relation between CG and CSR:

Similarities:

1. CG is usually incorporated in the company's governance mechanisms.
2. Both these concepts focus on the ethical aspects of doing business.
3. They lead to better image of the company and thus affects its performance positively.

Differences:

1. Fulfilling CSR norms but faulting on Corporate Governance is usually seen. Here, CSR is used as a marketing strategy than genuine intention in helping all round development.
2. CG is related to profit maximisation while CSR is about sharing the profits for others' welfare.
3. The officials of an organisation who are hired with due technical qualifications may not fulfil its CSR mandates.

18. While preparing for civil services, an aspirant come across many new legal and social concepts as natural justice, rule of law, equality, fraternity, maintenance of dignity of individual, etc. But as he enters the service, the concepts or ideal principles take a back seat.

(a) What can be the reasons behind this change?

Thinking line:

- ★ When a person enters a job it usually comes across the external obstacles as political interference, rigid rules, social ideologies, continuous pressure from media and civil society.

These obstacles are stated as the reason for change in behaviour but this can be handled by being emotional intelligent.

- ★ But the other reason is erosion of internal values.

(b) Is it true to quote "Power tends to corrupt, and absolute power corrupts absolutely"?

Thinking line:

- ★ Power is authority and strength, which is any form of motive force or energy, ability to act, or control.

- ★ When someone possesses control and authority over others, they become infected with evil and wicked behaviours which begin to dominate and destroy their minds. Like Hitler, Mussolini, and Saddam Hussein who all desired absolute power, Their "vaulting ambition" led to many unfortunate incidents which resulted in the death of innocent lives. Power is evil unless used appropriately.

- ★ In case of civil services they have discretionary powers. These powers are absolute in sense and civil servants in welfare state have impacts on society from womb to tomb. Handling discretionary powers requires a sound value system.

19. There comes a case of molestation against a very senior officer by a woman employee in an office where you are

the incharge of women welfare. In view of the fact that these days molestation charges are levied against many upright officers by the instigation of peers due to rivalry or by women workers who are not allowed undue advantages with regard to punctuality, promotion and annual performance evaluation thus, you as a Woman Welfare Officer need to be extra cautious in judgment.

As an upright woman government officer what are the moral and professional issues that would you like to enquire during the process of enquiry against the officer charged with the allegation of molestation? Give reasons.

Thinking line:

In cases when molestation charges are levied against the upright officers by the instigation of peers due to rivalry or by women workers who are not allowed undue advantages with regard to punctuality and promotion, a woman welfare officer examining such cases needs to be extra cautious in judgement and need to analyse the cases from ethical and moral angles both.

The woman officer while holding the position of welfare officer and arbiter in a molestation case should desist from having a bias against the male officer. She should try to segregate the professional differences and frictions from moral and ethical issues. She should first analyse the past record of the senior officer with regard to his treatment of women. And also the past personal and professional record of the woman in question while enquiring the case so that unbiased decision may be taken.

It is necessary to analyse the role played by the peer rivalry and office politics. For such allegations which have repercussions for the personal and official reputation, hearing should be kept secret as long as enquiry is on. Ample opportunity should be given to both the parties to explain their points without any prejudice.

Such an issue might lead to loss of job and strict disciplinary punishments therefore any decision should be taken after due consideration of the gravity of the allegation.

It is important to make space for bonafide human misconceptions or confusions as any wrong judgement may lead to a wrong decision. Such cases need to be examined after thorough investigations.

20. There was a residential school situated in the remote part of the country in which approximately 250 class IXth and Xth level boys used to study and stay. School principal had his residence in the school premises only. The principal used to attend and participate in the daily morning prayers and take his two meals along with students. He was a kind hearted and empathetic person who used to provide also the

moral education. The students liked and admired him because not only he preached, he used to set personal examples.

On the basis of above, answer the following questions.

- (a) What could be contribution of school principal in attitude formation of the students?
(b) If one of the students gets into civil services at a later stage, what impact and influence does the school will make on his attitude and behaviour?

Thinking line:

- (a) The attitude of students has been influenced by the school principal. The principal has influenced the student and developed an attitude which will help them in later life. He has set personal examples by attending prayers, taking meal with students. His teachings will enable the students to be empathetic, kind hearted, down to earth and be more disciplined.

Since, he has been able to do so by setting personal examples and not by preaching, the students will remember his lessons. There is no doubt the school students will become early risers, will be able to mixup with others and be morally responsible to various sections of society.

- (b) The attitude of any individual is shaped in his early life. Our habits and behaviour are affected by the people we live with, the activities we do and the things we practice. When one of them enters into civil services these activities will help him. By rising early, he will get extra time and will be able to finish his work within time. He will develop kind and considerate attitude to other people. Since from the school time, they have been doing things in groups, it will help him to work with his other team mates. The behaviour of the civil servant towards all sections of society will be of cooperation and one with positive approach.

He will be able to utilize the teachings he has learnt for the ultimate welfare of the society.

This will be reflected in various policies and programmes and the civil servant will also be able to set example for others in the organization.



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