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**Q13.** Consider the following statements regarding the Sovereign Gold Bond Scheme

1. It is issued by the State Bank of India on behalf of the Government of India.
2. The tenor of the Bond will be for a period of 8 years with no exit option before that.

Which of the statements given above is/are not correct?

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

**Q14.** Consider the following statements regarding National Monetisation Pipeline (NMP)

1. It aims to unlock value in greenfield projects by engaging the private sector
2. Operations, Maintenance & Development (OMD) monetization models on PPP (Public Private Partnership) basis will be deployed for the road and highways sector.
3. The NMP will run a co-terminus with the National Infrastructure Pipeline of Rs 100 lakh crore

Which of the statements given above is/are correct?

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

**Q15.** Fukutoku-Okanoba volcano recently seen in news is located in-

- (a) Indonesia (b) Malaysia  
(c) Hawaii (d) Japan

**Q16.** Which among the following are the effects of Sand and dust storms

1. Melting of ice on glaciers
2. Reduction in yield of irrigated cotton
3. Improving the phytoplankton balance in oceans

Select the correct code from below:

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

**Q17.** Majma-ul-Bahrain (Mingling of Two Oceans) and Sirr-i-Akbar (Great Mystery) are literary works of-

- (a) Jahan Git (b) Abul Fazl  
(c) Dara Shikoh (d) Razia Sultana Begum

**Q18.** Consider the following statements regarding China-Myanmar Economic corridor

1. The transport corridor involves a sea-road-rail link.
2. This passage connects the logistics lines of Singapore, Myanmar, and China.
3. It is being built under the Belt and Road Initiative of China

Which of the statements given above is/are correct?

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

**Q19.** Malacca strait connects-

- (a) The Andaman Sea & South China Sea  
(b) The Java Sea and the Indian Ocean  
(c) Malay peninsula to Java sea  
(d) Laccadive sea to Assumption islands

**Q20.** Which among the following has recently launched a scheme called 'FASTER' or 'Fast and Secure Transmission of Electronic Records'

- (a) Ministry of heavy industries  
(b) Ministry of Finance  
(c) Supreme court of India  
(d) Ministry of Electronics and Information Technology

**Q21.** Consider the following statements regarding special drawing rights

1. The SDR basket is always reviewed every five years
2. The SDR is neither a currency nor a claim on the IMF
3. Countries can use their SDRs in a range of operations with other countries or settle financial obligations to the Fund

Which of the statements given above is/are correct?

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

**Q22.** Consider the following statements regarding SAARC

1. Maldives Myanmar and Bhutan are part of SAARC nations.
2. The South Asian Free Trade Area (SAFTA) is a free trade agreement signed between the SAARC nations
3. UN has observer status at SAARC

Which of the statements given above is/are correct?

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

**Q23.** Consider the following statements regarding Black-necked Crane

1. It is found in India and Bhutan only
2. The black-necked crane is evaluated as Vulnerable on the IUCN Red List of Threatened Species
3. It is listed in Appendix I of CITES.
4. It is recently adopted as the state bird of Ladakh

Which of the statements given above is/are correct?

- (a) 1 and 4 (b) 3 and 4  
(c) 2,3 and 4 (d) 1,2 and 3

**Q24.** Consider the following statements

1. Raptors MoU is an international, legally binding agreement to protect migratory birds of prey or raptor species.
2. Indonesia had the most raptor species
3. India is a signatory to the Raptor MoU

Which of the statements given above is/are correct?

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

**Q25.** India will sign the 'Reciprocal Exchange of Logistics Agreement (RELOS)' with which country?

- (a) France (b) US  
(c) Russia (d) Japan







**Q59.** Recently GoI has launched PRANA portal, the aim of this portal is -

- (a) To provide all the three modules conversion, substitution and mutation related to properties online.
- (b) To provide data to the farmers about actionable agricultural insights and weather alerts.
- (c) To disseminate the latest freshwater aquaculture technologies to the aqua farmers of the country.
- (d) To regulate air-pollution in Non-Attainment cities under the National Clean Air Programme (NCAP)

**Q60.** Consider the following statements regarding BRICS

1. The BRICS 2021 is hosted by Russia.
2. The theme for the 13th BRICS Summit will is 'BRICS @ 15: Intra-BRICS cooperation for continuity, consolidation and consensus'.
3. Only the members of BRICS can become members of The BRICS New Development Bank (NDB)

Which of the statements given above is/are correct?

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

**Q61.** Consider the following statements regarding National Commission for Women

1. NCW has been constituted on the recommendation of the executive resolution passed by the cabinet.
2. The commission has the powers that are vested upon with a civil court.
3. The commission consists of a chairperson and five other members.
4. The chairman of the NCW must be a women

Which of the statements given above is/are correct?

- (a) 1, 3 and 4
- (b) 2,3 and 4
- (c) 2 and 3
- (d) 2 only

**Q62.** Consider the following statements regarding Central Pollution Control Board (CPCB)

1. CPCB of India is a statutory organization that was established under the provisions of the Environment (Protection) Act, 1986
2. CPCB derives the powers and functions from the Air (Prevention and Control of Pollution) Act, 1981.
3. CPCB is the implementation agency for the National Air Quality Monitoring Programme (NAMP).

Which of the statements given above is/are correct?

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

**Q63.** Consider the following statements regarding National Clean Air Programme (NCAP)

1. National Clean Air Programme aims to reduce key air pollutants PM10 and PM2.5 by 20-30% by 2024 in all the cities of the country.
2. The base year chosen for the comparison of the concentration of air pollutants under NCAP is 2017.

Which of the statements given above is/are correct?

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

**Q64.** Joint Comprehensive Plan of Action (JCPOA) is an agreement on the Iranian nuclear program. Which of the following are current members of JCPOA

1. France
2. Germany
3. Italy
4. USA
5. European Union

Select the correct code from below:

- (a) 1,2, 4 and 5
- (b) 1,2,3 and 5
- (c) 2, 3 and 5
- (d) 1 and 2

**Q65.** Which of the following are crops are considered for the rabi marketing season under the Minimum Support Price (MSP)?

1. Wheat
2. Ragi
3. Barley
4. Rapeseed
5. Areca nut
6. Safflower

Select the correct code from below:

- (a) 1,2,4 and 6
- (b) 2,3,5 and 6
- (c) 1,3,4 and 6
- (d) 1,2,3,4,5 and 6

**Q66.** Consider the following statements regarding Commission for Agricultural Costs & Prices (CACP)

1. The Commission for Agricultural Costs & Prices (CACP) is an attached office of the Ministry of Finance.
2. The recommendations of CACP are recommendatory and not binding on the govt.

Which of the statements given above is/are correct?

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

**Q67.** Which among the following announces MSP on the crops?

- (a) Ministry of Agriculture and Farmers Welfare
- (b) Cabinet committee on economic affairs
- (c) Commission for Agricultural Costs & Prices (CACP)
- (d) Prime minister office

**Q68.** Recently Nord Stream 2 pipeline was seen in the news. It is a new gas pipeline between

- (a) Afghanistan to India
- (b) Uzbekistan to India
- (c) Iran to Afghanistan
- (d) Russia to Germany

**Q69.** Zika virus infections are is closely related to Guillain-Barré syndrome (GBS). The Guillain-Barré syndrome (GBS) affects-

- (a) Lungs
- (b) Blood
- (c) Nervous system
- (d) Bones

**Q70.** Consider the following pairs

- |                  |   |              |
|------------------|---|--------------|
| Nuclear facility | - | Country      |
| 1. Natanz        | - | Iran         |
| 2. Fordo         | - | Saudi Arabia |
| 3. Arak          | - | Russia       |

Which of the pair/s given above is/are correct?

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





**Q81.** Nainativu, Delft, and Analaitivu islands frequently seen in the news are located in-

- (a) Sunda strait (b) Palk Strait  
(c) Malacca Strait (d) Formosa Strait

**Q82.** Consider the following statements regarding Porunai River or Thamirabarani) civilization

1. Porunai River (Thamirabarani) civilization dates back to 3,200 years
2. Adichanallur, Korkai, and Sivakalai are all Indus valley sites on the banks of the ancient Porunai (Thamirabarani river) presently in the Thoothukudi district of Tamil Nadu.
3. The ancient port Muziris is located on the banks of the Porunai River(Thamirabarani).

Which of the statements given above is/are not correct?

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

**Q83.** Arrange the following from North to south

1. Palk strait
2. Jaffna
3. Katchatheevu island
4. Rameshwaram

Select the correct code from below:

- (a) 2-1-3-4 (b) 1-2-4-3  
(c) 1-2-3-4 (d) 2-1-4-3

**Q84.** Consider the following statements regarding Ude Desh Ka Aam Naagrik UDAN scheme

1. The scheme UDAN envisages providing connectivity to un-served and under-served airports of the country through the revival of existing airstrips and airports.
2. It is a market-based mechanism in which airlines bid for seat subsidies.
3. The first UDAN Flight under Regional Connectivity Scheme (RCS) was from Shimla - Chandigarh

Select the correct code from below:

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

**Q85.** Which among the following was an inter-ministerial committee set up by the government on virtual currencies which proposed the banning of private cryptocurrencies in India by enacting a law and imposing fines and penalties?

- (a) Amitabh Kant committee  
(b) Injeti srinivas committee  
(c) Subhash Chandra Garg committee  
(d) Rajiv Gauba Committee

**Q86.** Consider the following statements

1. Korkai was popularly known for its pearl fishery
2. Korkai was a major port during the Chera era
3. Korkai is currently located in modern-day Andhra Pradesh

Which of the statements given above is/are correct?

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

**Q87.** Consider the following statements

1. Allen's rule" in evolutionary biology states that animal species in colder climates tend to grow larger body parts as an adaptation to help keep the body warm.
2. Bird lineage can adapt to the rising climate change conditions by having larger ears, tails, legs, wings, and beaks

Which of the statements given above is/are correct?

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

**Q88.** Consider the following statements regarding **Transport and Marketing Assistance (TMA)**

1. It provides assistance for the international component of freight, to mitigate the disadvantage of higher freight costs faced by the Indian exporters of the MSME sector.
2. This scheme has been launched by the Department of Commerce under the ministry of commerce and industry.
3. Recently dairy sector has been included in the scheme

Which of the statements given above is/are correct?

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

**Q89.** The Houthi rebels, sometimes in the news, related to which of the following countries?

- (a) Afghanistan (b) Syria  
(c) Yemen (d) Libya

**Q90.** Nuakhai, an important agrarian festival was recently celebrated in-

- (a) Meghalaya (b) Manipur  
(c) Odisha (d) Assam

**Q91.** Consider the following statements regarding Pacific Decadal Oscillation (PDO).

1. The PDO is a long-term fluctuation of the Pacific Ocean that waxes and wanes between cool and warm phases approximately every five to 20 years
2. The PDO is detected in the Pacific Ocean, north of 20°N.
3. Pacific Decadal Oscillation (PDO) affects the climatic rainfall patterns in the northeast.

Which of the statements given above is/are correct?

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

**Q92.** pgSIT technology recently seen in the news, is about-

- (a) It is a novel solar-powered drone technology that can beam Internet services to remote locals  
(b) It is CRISPR-based genetic engineering by which in insects only sterile i.e no offspring producing, adult males emerge which leads to a reduction in the future population of that insect species  
(c) This is novel nanotechnology by which nanorobots are released in the body for performing surgery on the targeted organ.  
(d) It is a technology that converts industrial waste effluents to biofuels



**Q104.** Consider the following statements  
 1. He proclaimed the first Provisional Government of India outside India at the historic Bagh-e-Babur in Kabul.  
 2. He was nominated for the Nobel Peace Prize  
 3. He published the 'World Federation Monthly Magazine' in 1929, trying his best to use the world war situations to free India  
 4. He participated in Swadeshi Movement.  
 Identify the above Freedom Fighter  
 (a) Sultan Haider Ali  
 (b) Hasrat Mohani  
 (c) Maghfoor Ahmed Ajazi  
 (d) Raja Mahendra Pratap Singh

**Q105.** Consider the following statements regarding The National Financial Reporting Authority (NFRA)  
 1. It is a statutory body constituted by the Goods and services act 2017  
 2. It has the powers as a Civil Court  
 3. The National Advisory Committee on Accounting Standards is replaced by the NFRA.  
 Which of the statements given above is/are correct?  
 (a) 1 and 2 (b) 2 and 3  
 (c) 1 and 3 (d) 1,2 and 3

**Q106.** Consider the following statements regarding National Commission for Minorities (NCM)  
 1. It is an extra-constitutional body  
 2. The chairman of the NCM must belong to the minorities community.  
 3. The Jains community was the latest addition made by the NCM in the minorities list in 2014  
 Which of the statements given above is/are correct?  
 (a) 1 and 2 (b) 2 and 3  
 (c) 1 and 3 (d) 1,2 and 3

**Q107.** The Mandatory maximum time limit, including time spent in the legal process to complete the resolution process as prescribed by the India Insolvency and Bankruptcy Code is-  
 (a) 180 days (b) 260 days  
 (c) 250 days (d) 330 days

**Q108.** Consider the following statements regarding the pre-pack resolution process PIRP  
 1. Under a pre-pack resolution process, creditors and owners of a business agree to sell the business to an interested buyer before going to the court to sanction the agreement under IBC code 2016.  
 2. As per the current law, the pre-pack resolution mechanism can be started for defaults not exceeding Rs. 5 crores.  
 Which of the statements given above is/are correct?  
 (a) 1 only (b) 2 only  
 (c) Both 1 and 2 (d) Neither 1 nor 2

**Q109.** T+1, T+2, and T+3 cycles some times seen in the news are all about-  
 (a) Time period of the El Nino-Southern Oscillation (ENSO) system  
 (b) A financial transaction settlement system for stock market exchanges  
 (c) Boom and recession period in the economy  
 (d) time elapsed between observations of the same point on Earth by a satellite

**Q110.** Recently, carbon dating done on organic material retrieved from archaeological excavations revealed some information related to the Thamirabarani civilization. This civilization was part of -  
 (a) Andhra Pradesh (b) Karnataka  
 (c) Tamil Nadu (d) Telangana

**Q111.** Which among the following has recently launched Groundswell report on climate change?  
 (a) UNEP (b) World Wildlife Fund  
 (c) World Bank (d) UNFCCC

**Q112.** Consider the following statements  
 1. Black hydrogen is produced by the use of fossil fuel  
 2. Pink hydrogen is produced through electrolysis, but using energy from solar power sources.  
 3. Grey hydrogen is created from natural gas or methane  
 4. Yellow hydrogen is a relatively new phrase for hydrogen made through electrolysis using **nuclear power.**  
 Which of the statements given above is/are correct?  
 (a) 1,2 and 3 (b) 2,3 and 4  
 (c) 1 and 3 (d) 1,2,3 and 4

**Q113.** Consider the following statements  
 1. Constitution has provided a special scheme of administration in Manipur via Manipur's Hill Areas Committee and district council over tribal identity, culture, development, and local administration under article 371A  
 2. Go to Hills 2.0 is a campaign launched by the ministry of tourism to promote Northeast states tourism.  
 3. Gopinath Bordoloi Committee of the Constituent Assembly sought to accommodate the distinctive identity, culture, and way of life of tribal groups in the Northeast by envisioning 'self-rule'.  
 Which of the statements given above is/are correct?  
 (a) 1 and 2 (b) 2 and 3  
 (c) 1 and 3 (d) 1,2 and 3

**Q114.** Consider the following statements regarding Exclusive Economic Zone

1. The exclusive economic zone can be defined as a belt of water that extends up to 20 nautical miles from the baseline of the coastal state.
2. The coastal state has jurisdiction regarding the protection and preservation of natural resources, and drilling for the exploitation of natural resources in the continental shelf area is also allowed.

Which of the statements given above is/are correct?

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

**Q115.** Climate & Clean Energy Agenda 2030 Partnership, sometimes seen in the news recently, is a joint initiative by India and?

- (a) France  
(b) United Arab Emirates  
(c) United Kingdom  
(d) United States of America

**Q116.** Consider the following statements

1. The Central Government, after consultation with the Central Drugs Standard Control Organisation (CDSCO), specifies the devices intended for use in human beings or animals as drugs.
2. The Drugs Technical Advisory Board is a statutory body constituted under the Drugs and Cosmetics Act, 1952.

Which of the statements given above is/are correct?

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

**Q117.** Consider the following statements

1. Originally the strength of the Supreme Court was fixed at five (one chief justice and four other judges)
2. The Constitution of India vests the power to increase the number of judges in the Supreme Court with the President of India.

Which of the statements given above is/are correct?

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

**Q118.** Consider the following statements regarding Unified Payment Interface

1. It was launched in India in 2017
2. It uses a two-click factor authentication process.
3. This app eliminates the need to enter bank details or other sensitive information each time a customer initiates a transaction making it a safe way to the bank.

Which of the statements given above is/are correct?

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

**Q119.** Recently seen in the news, Panchmuli lake is in?

- (a) Haryana (b) Karnataka  
(c) Gujrat (d) Tamilnadu

**Q120.** Consider the following statements regarding United Nations World Geospatial Information Congress (UNWGIC)

1. The first session of the United Nations World Geospatial Information Congress (UNWGIC) was held by Russia in 2018.
2. The second UNWGIC session is to be held in Hyderabad in 2022.
3. It is held after every five years

Which of the statements given above is/are correct?

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

**Q121.** Among which of the following landmark case the Supreme Court of India ruled that an undefined restriction of internet services would be illegal and that orders for internet shutdown must satisfy the tests of necessity and proportionality

- (a) Lily Thomas vs Union of India  
(b) Anuradha Bhasin vs Union of India,  
(c) Navtej Singh Johar & Ors. v. Union of India  
(d) K.S Puttaswamyvs union of India

**Q122.** Consider the following statements regarding Quad Group

1. The PM of Japan, Shinzo Abe, formalised the Quadrilateral Security Dialogue or the Quad in 2010.
2. Malabar naval exercise is the official naval exercise of all four members of the quad group.
3. China has recently supported the formation of the Quad group
4. The Quad has no formal sacteriate as well as permanent body for decision making

Which of the statements given above is/are correct?

- (a) 1 and 2 (b) 2,3 and 4  
(c) 2 and 4 (d) 1,2, 3 and 4

**Q123.** Consider the following statements regarding the IIP index

1. Index of Industrial Production India, IIP data is compiled and published by Central Statistical Organisation every quarter
2. IIP index is currently calculated using 2017-2018 as the base year.
3. Eight core industries form nearly 40 % of the IIP index

Which of the statements given above is/are correct?

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

**Q124.** Annual Survey of Industries (ASI) is conducted by –

- (a) Department for Promotion of Industry and Internal Trade  
(b) Reserve Bank of India  
(c) MoSPI  
(d) Ministry of heavy industries

**Q125.** Which among the following correctly describes the correct relation between Gross value added GVA and Gross domestic product (GDP)-

- (a)  $GVA = GDP + \text{Subsidies on products} - \text{Taxes on products}$
- (b)  $GDP = GVA + \text{Subsidies on products} - \text{Taxes on products}$
- (c)  $GVA = GDP - \text{Subsidies on products} + \text{Taxes on products}$
- (d)  $GDP = GVA + \text{Subsidies on products} + \text{Taxes on products}$

**Q126.** Consider the following statements regarding Black Tigers

- 1. Black tiger in India found in Himalayan foothills of Northeast.
  - 2. The drastic change in patterning and colouring of the black tigers' coat is caused due to genetic mutation.
  - 3. The Black Tigers are basically Bengal tiger
- Which of the statements given above is/are correct?

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

**Q127.** Cocos-Keeling islands recently seen in news is located in-

- (a) Pacific ocean
- (b) Indian ocean
- (c) Mediterranean sea
- (d) Caribbean sea

**Q128.** Consider the following statements regarding Shoonya Campaign

- 1. It aims to drive manufacturing with the adoption of Zero Defect production processes without impacting the environment (Zero Effect).
- 2. This campaign has been launched by the Ministry of Micro Small and medium enterprises

Which of the statements given above is/are correct?

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

**Q129.** Joint Counter Terrorism Exercise PEACEFUL MISSION recently seen in news is a biennial military exercise of-

- (a) BIMSTEC
- (b) SCO
- (c) NATO
- (d) SAARC

**Q130.** Consider the following statements

- 1. 16th September is observed as the World Ozone Day
  - 2. Montreal protocol that regulates the ozone-depleting substances was signed in 1987
  - 3. The theme of ozone day 2021 is "Life and Ozone"
- Which of the statements given above is/are correct?

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

**Q131.** Which of the following are members of the Five eyes alliance

- 1. Australia
- 2. France
- 3. New Zealand
- 4. USA
- 5. UK

Select the correct code from below:

- (a) 1,2,3 and 5
- (b) 2,3,4 and 5
- (c) 2,4 and 5
- (d) 1,3,4 and 5

**Q132.** Consider the following statements regarding "AUKUS alliance"

- 1. It is a trilateral security partnership between Australia, France and the United States.
- 2. The 'AUKUS' grouping will be to help Australia acquire nuclear-powered submarines

Which of the statements given above is/are correct?

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

**Q133.** Consider the following statements regarding National Asset Reconstruction Company Limited (NARCL)

- 1. NARCL has been set up by banks to aggregate and consolidates stressed assets for their subsequent resolution.
- 2. NARCL will pay 25 per cent of the agreed value for the loan in cash and the remaining 75 per cent will be a government-guaranteed security receipt.
- 3. Public Sector Banks (PSBs) will retain 51 per cent ownership in NARCL

Which of the statements given above is/are correct?

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

**Q134.** Consider the following statements regarding the recently proposed India Debt Resolution Company Ltd. (IDRCL)

- 1. IDRCL will be engaged for management and value addition of the stressed assets which are acquired by the NARCL (asset reconstruction company) by making an offer to the lead bank
- 2. Public Sector Banks (PSBs) will retain 51 per cent ownership in IDRCL

Which of the statements given above is/are correct?

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

**Q135.** Consider the following pairs

- GI tag- State
- 1. Hathei Chilly- Assam
- 2. Tamenglong orange- Sikkim
- 3. Idu Mishmi Textiles -Arunachal Pradesh

Which of the pair/s given above is/are correct?

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



3. G-33 Group is a coalition of developed countries, that have coordinated during the Doha Round of World Trade Organization negotiations, specifically in regard to agriculture.

Which of the statements given above is/are correct?

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

**Q148.** Recently a new species namely *Strophodus jaisalmerensis*: was discovered. It is kind of-

- (a) Shark (b) Dinosaurs  
(c) Butterfly (d) Frog

**Q149.** Consider the following statements regarding Kigali Amendment

1. It is not legally binding on member countries
2. The Kigali Amendment to the Montreal Protocol made it to gradually reduce the consumption and production of hydrofluorocarbons (HFCs).
3. India has not currently ratified the Kigali amendment.

Which of the statements given above is/are correct?

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

**Q150.** Recently a committee is constituted by the Ministry of Defence for a comprehensive review of the National Cadet Corps (NCC). This committee is headed by-

- (a) Rajnath Singh (b) DB. Shektakar  
(c) Baijayant Panda (d) K. Kasturirangan

**Q151.** Consider the following statements regarding The National Trust

1. The National Trust is an autonomous body established under the aegis of the Ministry of Social Justice via presidential order.
2. The objectives of the National Trust is to facilitate the realization of equal opportunities, protection of rights and full participation of persons with disability;
3. Niramaya is a health insurance scheme started by the national trust.

Which of the statements given above is/are correct?

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

**Q152.** Consider the following statements regarding De-extinction

1. De-extinction is the process of generating an organism that either resembles or is an extinct species.
2. The de-extinction can lead to the extinction of other species due to Gause's law principle.
3. De-extinction is not possible for large species like the woolly mammoth

Which of the statements given above is/are correct?

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

**Q153.** Consider the following statements regarding Agriculture Infrastructure Fund

1. The scheme shall provide a medium - long term debt financing facility for investment in viable projects for post-harvest and pre-harvest management Infrastructure
2. Agriculture Infrastructure Fund (AIF) is managed by the NABARD.
3. It is a Centrally sponsored scheme

Which of the statements given above is/are correct?

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

**Q154.** Consider the following statements regarding isothermal forging technology

1. This technology is widely used to forge titanium-based alloys and is best suited for the high-pressure compressors (HPC) discs that are used in aero-engines.
2. The technology has been recently developed by ISRO

Which of the statements given above is/are correct?

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

**Q155.** Consider the following statements regarding the Sea cucumbers

1. Sea cucumbers are echinoderms from the class Mollusca
2. India treats sea cucumber as an endangered species and has listed it in the Wildlife Protection Act, 1972.
3. Andaman and Nicobar has India's first sea cucumber conservation reserve

Which of the statements given above is/are correct?

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

**Q156.** Consider the following statements regarding the Quantum Key Distribution technology

1. Quantum Key Distribution technology enables two communicators to produce a random secret key known only to them, which can be used to encrypt and decrypt messages
2. It provides unconditional data security.
3. It has the computational power which can be utilized to be able to break the cryptosystem

Which of the statements given above is/are correct?

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

**Q157.** Which among the following is correct about the de-extinction Process?

- (a) De-extinction is a very expensive process  
(b) It could also lead to the extinction of prey species in the same environment  
(c) In the extinct species' ecological niche it can become invasive species only  
(d) All of the above

**Q158.** Amrabad Tiger Reserve recently seen in news is located in-

- (a) Andhra Pradesh (b) Tamilnadu  
(c) Telangana (d) Karnataka

**Q159.** Consider the following statements regarding census in India

1. Under British Viceroy Lord Mayo, the first complete census was taken in 1881
2. In pre Independence era data on castes other than Scheduled Castes and Scheduled Tribes was notified.
3. The individual's data is collected in Census under the Census Act, 1950.

Which of the statements given above is/are correct?

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

**Q160.** Consider the following statements regarding the Marburg virus

1. The virus causes hemorrhagic fever and belongs to the same family as the Ebola virus
2. Marburg is transmitted to people from fruit bats
3. The first case of the Marburg virus was spotted in Angola, Africa
4. Antiviral therapy is the only treatment available at the present time for the Marburg virus

Which of the statements given above is/are correct?

- (a) 1 and 4 (b) 1,2 and 3  
(c) 2 and 4 (d) 1 and 2

**Q161.** Consider the following statements regarding G-20

1. G20 was formed In the wake of the 2008 Global economic recession.
2. The group collectively accounts for around 80 per cent of gross world product (GWP)
3. The Troika countries of G20 are currently Saudi Arabia, Italy and Indonesia.
4. G-20 has its permanent seceriarte at the Paris

Which of the statements given above is/are correct?

- (a) 1,3 and 4 (b) 2 and 3  
(c) 2,3 and 4 (d) 1,2 and 4

**Q162.** Consider the following statements regarding Global Innovation Index (GII)

1. It is released by World Intellectual Property Organization
2. The list was topped by Sweden.
3. India currently ranks 45 in the latest release.

Which of the statements given above is/are correct?

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

**Q163.** Consider the following pairs

Rice variety- Cultivation Region

1. Bao-dhaan-Assam
2. Kalanamak-Bihar
3. Tilak Chandan-Uttar Pradesh

Which of the pairs given above are correct?

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

**Q164.** The Climate shocks have recently caused the rapid and significant rise of Lake Tanganyika leading to at least a total of 84 per cent internal migration in east Africa. Which among the following countries is **not** bordered by Lake Tanganyika?

- (a) Democratic Republic of Congo  
(b) Zambia  
(c) Burundi  
(d) Ethiopia

**Q165.** Consider the following statements regarding Sansad TV

1. On this channel, programmes will be aired in all the 22 languages provided in the Indian Constitution.
2. The Surya Prakash Committee was set up for the merger of Rajya sabha and Loksabha TV.
3. When Parliament is in session, both channels Rajya Sabha TV and Lok Sabha TV will continue to operate as before bringing in the live telecast but when it is in recess, only Sansad TV will be telecast.

Which of the statements given above is/are correct?

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

**Q166.** Consider the following statements

1. An IPO grey market is one where a company's shares are bid and offered by traders unofficially
2. Securities and Exchange Board of India (SEBI) has recently framed guidelines for setting up a regulatory mechanism for IPO grey market

Which of the statements given above is/are correct?

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

**Q167.** Which of the following country is not a part of the Mura-Drava-Danube Biosphere Reserve, seen recently in news?

- (a) Austria (b) Slovenia  
(c) Switzerland (d) Croatia





**Q168.** Consider the following statements  
 1. Collegium System is the system of appointment and transfer of judges provided by the Constitution.  
 2. As per the Constitution of India, the Chief Justices of the High Court must be from outside the respective States.  
 Which of the statements given above is/are correct?  
 (a) 1 only (b) 2 only  
 (c) Both 1 and 2 (d) Neither 1 nor 2

**Q169.** Consider the following statements  
 1. Substandard assets are the assets that have remained NPA for a period of less than or equal to 3 months.  
 2. Doubtful Assets are of little value and can no longer continue as a bankable assets.  
 Which of the statements given above is/are correct?  
 (a) 1 only (b) 2 only  
 (c) Both 1 and 2 (d) Neither 1 nor 2

**Q170.** D .Prabhakaran committee was recently seen in the news. It was constituted-  
 (a) To identify strategic assets for monetisation under the National Monetisation pipeline  
 (b) to recommend on its regulatory limits and labelling and display requirements for regulating foods high in fat, salt or sugar in the Indian market  
 (c) To recommend reforms in Secondary market regulations  
 (d) None of the above

**Q171.** Metal-Organic Framework (MOF) composite can be utilized in-  
 1. Creating Quantum dots  
 2. Absorbing Oil Spills  
 3. Drug delivery  
 4. Encapsulation of enzymes  
 Select the correct code from below:  
 (a) 1,2 and 3 (b) 2,3 and 4  
 (c) 2 and 4 (d) 1,2,3 and 4

**Q172.** Consider the following statements regarding Humboldt penguins  
 1. Humboldt penguins are endemic to the Pacific coasts of Chile and Peru  
 2. The species is listed as vulnerable by the IUCN  
 3. The Humboldt penguin (*Spheniscus humboldti*) belongs to the crested group of genus.  
 Which of the statements given above is/are correct?  
 (a) 1 and 2 (b) 2 and 3  
 (c) 1 and 3 (d) 1,2 and 3

**Q173.** The Island of La Palma was recently seen in the news due to a volcanic eruption. It is located in-  
 (a) Indonesia (b) Japan  
 (c) Philippines (d) Spain

**Q174.** Consider the following pairs  
 1. Golden beach- Goa  
 2. Eden Beach- Kolkata  
 3. Ghoghla Beach -Diu  
 Which of the pair/s given above is/are correct?  
 (a) 1 and 2 (b) 3 only  
 (c) 2 and 3 (d) 1,2 and 3

**Q175.** Consider the following statements regarding Blue Flag certification  
 1. Blue Flag certification is a globally recognized eco-label accorded for the conservation and safety and services on the beaches.  
 2. Blue Flag certification tag is accorded by UNEP.  
 3. India has currently 10 Blue flag certified beaches  
 Which of the statements given above is/are correct?  
 (a) 1 and 2 (b) 2 and 3  
 (c) 1 and 3 (d) 1,2 and 3

**Q176.** Recently Project Taara was seen in the news. Which of the following is correct about this-  
 (a) Under this ISRO would map the constellation around the earth  
 (b) Under this Google will utilize light is to transmit data between the remote cities  
 (c) It is a conservation plan for Asiatic lions in the country  
 (d) None

**Q177.** Congo river flows through-  
 1. Zambia  
 2. Angola  
 3. The Democratic Republic of the congo  
 Select the correct code from below:  
 (a) 1 and 2 (b) 2 and 3  
 (c) 1 only (d) 1,2 and 3

**Q178.** Consider the following statements regarding Integrated coastal zone management (ICZM)  
 1. The concept of ICZM was introduced in 1992 during the Earth Summit at Rio de Janeiro  
 2. Integrated coastal zone management (ICZM) aims to improve the livelihood of coastal communities and conserve the coastal ecosystem.  
 3. It is world bank assisted project  
 Which of the statements given above is/are correct?  
 (a) 1 and 2 (b) 2 and 3  
 (c) 1 only (d) 1,2 and 3

**Q179.** BEAMS Programme is an Ecolabel certification scheme for-  
 (a) Energy-efficient electrical devices  
 (b) Bottled water  
 (c) Clean beaches in the country  
 (d) Organic food

**Q180.** Consider the following statements regarding R-Value

1. It indicates the speed at which a disease is spreading in the country, along with the efficiency of the spread
2. The higher the R-value number, the less contagious is the disease caused by the virus and the faster it will spread in the community.

Which of the statements given above is/are correct?

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

**Q181.** Consider the following statements regarding Comprehensive Economic Cooperation and Partnership Agreement (CECPA)

1. It is a kind of free trade pact that aims to provide an institutional mechanism to encourage and improve trade between the two countries.

2. India does not have any comprehensive economic Cooperation and Partnership Agreement (CECPA) with African countries.

3. The agreement is a limited agreement, which will cover Trade in Goods, Rules of Origin, Trade in Services, but fails to cover Technical Barriers to Trade (TBT) and Sanitary and Phytosanitary (SPS) measures as prescribed by WTO.

Which of the statements given above is/are correct?

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

**Q182.** Recently Global Air Quality Guidelines (AQGs) have been issued by WHO where evidence has advanced the most on health effects from exposure. These pollutants are-

1. Ozone (O<sub>3</sub>),
2. PM<sub>10</sub> and PM<sub>2.5</sub>
3. Carbon monoxide (CO)
4. Carbon dioxide (CO<sub>2</sub>)
5. Nitrogen dioxide (NO<sub>2</sub>)
6. Methane (CH<sub>4</sub>)

Choose the correct answer from the codes given below:

- (a) 1,2,3 and 5 (b) 1,2,3,5 and 6  
(c) 2,3,4 and 5 (d) 1,2,3,4,5 and 5

**Q183.** Consider the following statements regarding Rhinos

1. India Rhino Vision 2020 (IRV2020) seeks to increase the rhino population in the All the protected Rhino areas in the Northeast.

2. Assam is home to the world's largest population of one-horned rhinoceros.

3. It is listed as Critically Endangered by IUCN

4. Rhinoceros are listed in Schedule 1 of the Wildlife (Protection) Act, 1972

Which of the statements given above is/are correct?

- (a) 1,2 and 4 (b) 2,3 and 4  
(c) 2 and 4 (d) 1,2,3 and 4

**Q184.** Recently Vishnuonyx was seen in the news it is-

- (a) Newly discovered constellation by astronomers in a milky way
- (b) An endangered species of marine sea Cow
- (c) Endemic species of mangroves in eastern ghats
- (d) Fossils of otters lived in the major rivers of southern Asia

**Q185.** Which among the following has recently released the State Food Safety Index (SFSI)?

- (a) UN World Food Programme
- (b) Food Safety and Standards Authority of India
- (c) Food and Agricultural Organization
- (d) International Food Policy Research Institute

**Q186.** Consider the following statements regarding the Competition Commission of India (CCI):

1. It is a statutory body constituted under the Monopolies and Restrictive Trade Practices Act, 1969 (MRTP Act).

2. The chairman of the CCI is a retired Chief justice of the Supreme court or high court appointed by the central govt.

Which of the statements given above is/are correct?

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

**Q187.** Consider the following statements regarding the Central Pollution Control Board (CPCB):

1. It is a statutory organization constituted under the Environment (Protection) Act, 1986.

2. It was entrusted with the powers and functions under the Air (Prevention and Control of Pollution) Act, 1981.

3. It aims to promote the cleanliness of streams and wells in different areas of the States by prevention, control, and abatement of water pollution.

Which of the statements given above is/are correct?

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

**Q188.** Consider the following statements regarding National Financial Reporting Authority (NFRA)

1. It was constituted under the Companies Act, 2013.

2. It can undertake investigation related to the companies whose securities are listed on any stock exchange in India only

3. It can undertake investigation related to unlisted public companies having paid-up capital of not less than Rs. 500 cr.

Which of the statements given above is/are correct?

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

**Q189.** Consider the following statements

- Habitat is the structure of the life of an organism that allows it to survive in a particular environment.
- Niche is the sum of all the activities and relationships of a species by which it uses the resources in its habitat for its survival and reproduction.

Which of the statements given above is/are correct?

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

**Q190.** Consider the following statements

- Monoclonal antibody production requires the collection of the antibody-producing cells found in the spleen or lymph nodes.
- Monoclonal antibodies (mAb or Moab) are identical immunoglobulins, generated from a single T-cell clone.
- Monoclonal antibody production is an inexpensive process

Which of the statements given above is/are correct?

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

**Q191.** Consider the following statements

- Article 131 of the Constitution allows the Supreme Court to pass any order necessary for doing complete justice in any cause or matter pending before
- Recently launched Fast and Secure Transmission of Electronic Records (FASTER) scheme by the Supreme court, courts can send e-authenticated copies of bail orders and stay orders, through secured electronic communication to duty officers at prisons.

Which of the statements given above is/are correct?

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

**Q192.** Consider the following statements regarding Chandaka Wildlife Sanctuary

- It is located on the uplands of North-Western Ghats' biotic region
- The elephant is the flagship species and indicative of the potential productivity of this habitat area.
- Jhumka Dam located within the sanctuary

Which of the statements given above is/are correct?

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

**Q193.** Which of the following countries are part of the "Five Eyes" coalition?

- New Zealand
- Australia Russia
- France

Select the correct code from below:

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

**Q194.** Consider the following statements regarding National Green Tribunal (NGT)

- The NGT has been established under the Parliamentary Statute.
- The Tribunal shall not be bound by the procedure laid down under the Code of Civil Procedure.

Which of the statements given above is/are correct?

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

**Q195.** Recently GoI has launched the PRANA portal, the aim of this portal is -

- To provide all the three modules conversion, substitution, and mutation related to properties online.
- To provide data to the farmers about actionable agricultural insights and weather alerts.
- To disseminate the latest freshwater aquaculture technologies to the aqua farmers of the country.
- To regulate air pollution in Non-Attainment cities under the National Clean Air Programme (NCAP)

**Q196.** Arrange the following events in chronological order

- formation of the All India Trade Union Congress (AITUC), the first national-level trade union in India
- Lala Lajpat Rai attended the ILO Conference in Geneva
- Formation of The Bharatiya Mazdoor Sangh
- The setting up of the first factory Commission

Select the correct code from below:

- (a) 4-2-1-3 (b) 1-4-2-3  
(c) 1-4-3-2 (d) 2-4-1-3

**Q197.** The 'Fall of Saigon' is associated with which of the following historical event-

- The gulf war
- The disintegration of the Soviet Union
- Vietnam war
- Iraq war

**Q198.** Consider the following statements regarding The Tribunals Reforms Act, 2021

- The Chairperson and Members of the Tribunals will be appointed by the central government on the recommendation of a Search-cum-Selection Committee chaired by the Chief Justice of India, or a Supreme Court Judge nominated by him with casting vote
- The act provides for a four-year term of office subject to the upper age limit of 70 years for the Chairperson of the search cum selection committee as provided by central or state government.
- It specifies a minimum age requirement of 40 years for the appointment of a chairperson or a member of a tribunals

Which of the statements given above is/are correct?

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







**Q232.** Who among the following stated "It is easy to kill individuals but you cannot kill the ideas. Great empires crumbled, while the ideas survived"

- (a) Ram Prasad Bismil (b) Shaheed Bhagat Singh  
(c) Mahatma Gandhi (d) Dr. B R Ambedkar

**Q233.** Consider the following statements regarding National Disaster Management Authority (NDMA)

1. It is a statutory body.
2. It is the nodal agency to tackle bioterrorism attack in India.
3. It is chaired by the Cabinet secretary

Which of the statements given above is/are correct?

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

**Q234.** Consider the following statements

1. The Akash Prime is a medium-range mobile surface-to-air missile (SAM) system developed by the DRDO
2. Akash Missile has an operational range of 27-30 km
3. The Akash system is fully mobile and capable of protecting a moving convoy of vehicles.

Which of the statements given above is/are correct?

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

**Q235.** Consider the following statements

1. Imazethapyr is a herbicide that is effective against weeds but can't be used on normal paddy.
2. Recently launched Pusa Basmati 1979 and Pusa Basmati 1985 varieties are genetically modified rice varieties that can work with Imazethapyr herbicide

Which of the statements given above is/are correct?

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

**Q236.** Which of the following action/s do/does not qualify for disqualifications on the ground of defection?

1. If a member elected on the ticket of a party voluntarily gives up membership of the party or votes in the House against the party's wishes
2. When a legislator who has won his or her seat as an independent candidate joins a political party after the election
3. If a nominated member joins a party during the first six months of his/her nomination

Which of the statements given above is/are correct?

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

**Q237.** Which of the following factors are considered favorable for the formation of tropical cyclones?

1. Warm Sea surface temperature
2. High-level positive vorticity
3. Large convective instability

Select the correct code from below:

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

**Q238.** Consider the following statements

1. COVAX is a global initiative co-led by Coalition for Epidemic Preparedness Innovations (CEPI), GAVI Alliance.WHO and UNICEF

2. Maharashtra is the first state to join Covax Facility

Which of the statements given above is/are correct?

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

**Q239.** Consider the following statements regarding International Criminal Court

1. It is a primary judicial branch of the United Nations.
2. It consists of a panel of 10 judges elected by the UN General Assembly and Security Council.
3. It derives its authority from Rome Statute.

Which of the statements given above is/are correct?

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

**Q240.** Consider the following pairs

1. Chagos Islands: Indonesia

2. Agalega Island: Mauritius

Which of the pair/s given above is/are correct?

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

**Q241.** Consider the following statements regarding the erstwhile Mid Day Meal Scheme or PM POSHAN scheme

1. PM POSHAN Scheme aims to provide one hot cooked meal in Government and Government-aided schools from 2021-22 to 2024-25

2. This is a Centrally-Sponsored Scheme which covers all school children studying in Classes I-VIII of Government and Government-Aided Schools.

3. Nutri-gardens will be developed in schools

4. Supplementary nutrition items will be provided to children in aspirational districts and districts having a high prevalence of Anemia.

Which of the statements given above is/are correct?

- (a) 1,2 and 4 (b) 2,3 and 4  
(c) 2 and 3 (d) 1,2,3 and 4

**Q242.** Consider the following statements regarding Meningitis

1. Meningitis is caused by viruses and bacteria only

2. Meningitis epidemics is most commonly prevalent in the 'Meningitis Belt,' which spans 26 countries across Sub-Saharan Africa.

3. Currently, there is no vaccine for Meningitis

Which of the statements given above is/are correct?

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

**Q243.** Build Back Better World (B3W) Initiative or B3W is launched by

- (a) G20 (b) G7  
(c) ASEAN (d) UNICEF

**Q244.** Recently All-India Debt and Investment Surveys (AIDIS), was released by-

- (a) SEBI
- (b) Ministry of Finance
- (c) RBI
- (d) National Statistical Office

**Q245.** Consider the following statements regarding Landsat 9

1. Landsat 9, is a joint mission of NASA and the ISRO
2. It is an earth monitoring satellite that can help to study the melting ice sheets of the Antarctic and Arctic regions
3. The instruments aboard Landsat 9 are the Operational Land Imager 2 (OLI-2) and the Thermal Infrared Sensor 2 (TIRS-2).

Which of the statements given above is/are correct?

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

**Q246.** Which among the following are the criteria for a state to be accorded the status of special category status-

1. High population density
2. Presence of a sizable tribal population
3. Hilly and difficult terrain
4. High illiteracy

Select the correct code from below:

- (a) 1,2 and 4
- (b) 2,3 and 4
- (c) 2 and 3
- (d) 1,2,3 and 4

**Q247.** Consider the following statements regarding special category status

1. The decision to grant special category status lies with the National Development Council.
2. States with special category status are **exempted from customs duty, corporate tax, income tax**, and other taxes for industries investment.
3. 25 percent of the Centre's gross budget also goes to special category states.

Which of the statements given above is/are correct?

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

**Q248.** SACRED Portal, which was recently seen in the news, refers to?

- (a) Employment Exchange for Elderly
- (b) Online platform to engage State Government, District, civil society and the public in eradicating child labor
- (c) Database of all the cities selected under PRASAD Scheme for development
- (d) National Database for Unorganised Workers

**Q249.** Consider the following statements

1. The Trojan asteroids are leftovers of the primordial material from which Jupiter and the other outer planets were formed.
2. OSIRIS-REx spacecraft sent by NASA is the first spacecraft to study Trojan asteroids at a larger scale

Which of the statements given above is/are correct?

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

**Q250.** Recently NASA has announced to launch of its new Mission "Lucy". It aims to-

- (a) Study surface of Jupiter
- (b) Study Trojan asteroids
- (c) Study the south pole of Moon
- (d) Study the composition of Martian soil

**Q251.** Consider the following statements

1. The share of debt from institutional credit agencies in total outstanding debt in urban India is more than as compared to rural India
2. The major cause of the rural debt trap in rural India is due to the reliance on non-institutional sources for credit.
3. All-India Debt and Investment Surveys (AIDIS) recently seen in the news was conducted by RBI

Which of the statements given above is/are correct?

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

**Q252.** Consider the following statements regarding the Bharatkosh portal

1. Bharatkosh is an online web portal-single window of the Union Government for consolidated collection of non-taxes for all Ministries and Departments
2. It works under the supervision of the Ministry of Finance.

Which of the statements given above is/are correct?

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

**Q253.** Which of the following is the aim of the recently launched the DigiSaksham scheme

- (a) To provide technology-based skill training to the job seekers
- (b) To provide finance and credit facilities to the MSMEs
- (c) To provide mentorship to the incubated startups in higher education institutions having commercial potential
- (d) For mapping the demand of skilled workforce.

**Q254.** Consider the following statements regarding one sun one world one grid

1. The OSOWOG was first floated in 2018 during the first assembly of the International Solar Alliance (ISA)
2. The Green Grids Initiative is launched by the International Solar Alliance (ISA)

Which of the statements given above is/are correct?

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



**Q255.** C.K. Mishra Committee recently seen in the news was constituted-

- (a) To inquire into new technological innovation in financial products for the secondary market
- (b) to develop the required eco-system for the development of a Sustainable Finance Hub
- (c) To recommend an approach to improve health care services in the rural areas
- (d) To recommend reforms in the labour market in India

**Q256.** Consider the following statements

- 1. The Cabinet Committee on Economic Affairs (CCEA) approves Fair and Remunerative Price (FRP) of sugarcane
- 2. Different Fair and Remunerative Price (FRP) of sugarcane is announced for different states by the central government

Which of the statements given above is/are correct?

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

**Q257.** The Protocol on Transboundary Elephant Conservation was recently seen in the news. It was signed between India and-

- (a) Bhutan
- (b) Nepal
- (c) Tibbet
- (d) Bangladesh

**Q258.** Consider the following statements regarding Defence Acquisitions Council (DAC)

- 1. DAC is Chaired by the Prime Minister of India
- 2. It monitors the progress of major projects on feedback from the Defence Procurement Board

Which of the statements given above is/are correct?

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

**Q259.** Consider the following statements regarding NIPUN Bharat) programme

- 1. It aims that every child in the country necessarily attains foundational literacy and numeracy by the end of Grade 3, by 2025.
- 2. NIPUN Bharat aims to cover the learning needs of children in the age group of 3 to 12 years.
- 3. This Mission, which has been launched under the aegis of the centrally sponsored scheme of Samagra Shiksha,

Which of the statements given above is/are correct?

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

**Q260.** Consider the following statements regarding National Action Plan for dog Mediated Rabies Elimination

- 1. 33% of global rabies deaths are recorded in India
- 2. It is a preventable zoonotic viral disease that can be caused by dogs, bats, and foxes.
- 3. NAPRE launched under the one health concept aims to eliminate rabies in India by 2030

Which of the statements given above is/are correct?

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

**Q261.** Consider the following statements

- 1. Article 46 says that the State shall endeavour to bring about the prohibition of intoxicating drinks and drugs that are injurious to health.
- 2. The Narcotics Control Bureau was set up under The Narcotic Drugs and Psychotropic Substances Act, 1987
- 3. The Narcotics Control Bureau NCB is outside the ambit of the Right to Information Act by the RTI act 2005

Which of the statements given above is/are correct?

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

**Q262.** india is a signatory to the-

- 1. Conventions on Psychotropic Substances, 1971
- 2. United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988.
- 3. Single Convention on Narcotics Drugs 1961

Select the correct code from below:

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

**Q263.** Consider the following statements regarding Jal Jeevan Mission

- 1. The JJM was launched in 2019 to ensure a 100 per cent functional tap water supply in rural areas by 2024.
- 2. Sustainable Development Goal 4 is about "clean water and sanitation for all
- 3. The Ministry of drinking water and sanitation is responsible for implementing Jal Jeevan Mission in the rural area.

Which of the statements given above is/are correct?

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

**Q264.** Consider the following statements regarding the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)

- 1. CCAMLR is an international treaty to manage Antarctic fisheries to preserve species diversity and stability of the entire Antarctic marine ecosystem.
- 2. India has observer status at CCAMLR
- 3. Work pertaining to CCAMLR is coordinated in India by the Ministry of Earth Sciences
- 4. It came into force in 1992

Which of the statements given above is/are correct?

- (a) 1 and 3
- (b) 2,3 and 4
- (c) 1,2 and 4
- (d) 1,2,3 and 4

**Q265.** The Weddell Sea recently seen in the news is a part of-

- (a) Southern Ocean
- (b) Pacific ocean
- (c) Arctic ocean
- (d) Indian Ocean

**Q266.** WHO has recently released the 11th revision of the International Classification of Diseases (ICD-11) in mid-2018. It had added which of the following as new disorder/disease in its list?

- (a) Hantavirus disease
- (b) West Nile fever
- (c) Gaming disorder
- (d) Zika virus disease



**Q278.** Tax Inspectors Without Borders which is focuses on International Taxation and Transfer Pricing through sharing of best audit practices is a joint initiative of-

- (a) OECD and World customs organization
- (b) UNDP and World customs organization
- (c) OECD and UNDP
- (d) FATF and World customs organization

**Q279.** Recently “Hara Bhara” campaign was seen in news. It is

- (a) Community-led program to promote organic farming
- (b) Campaign to promote fortified foods by FSSAI
- (c) Drone-based afforestation project by aerial seeding
- (d) Campaign for plantation of *trees* along the *national highways* in a bid to promote green highways policy.

**Q280.** A “Recognized political party” means a party recognized as a national or state party by ECI under the

- (a) Conduct of Elections Rules, 1961
- (b) Representation of the People Act, 1950
- (c) Representation of the People Act, 1951
- (d) Election Symbols (Reservation and Allotment) Order, 1968

**Q281.** Consider the following statements regarding Indian Peafowl

1. Peafowl are omnivores and eat mostly plants, flower petals, and seeds
2. It is classified under the Indian Wildlife (Protection) Act, Schedule II of 1972
3. The Indian Peafowl is listed as Least Concern by IUCN (2014) Red data

Which of the statements given above is/are correct?

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

**Q282.** Consider the following statements

1. TRPM8 is a receptor in the skin that responds to high temperatures
2. Nociceptors are involved in the detection of some spices in food
3. Somatosensation is all about the perception of touch

Which of the statements given above is/are correct?

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

**Q283.** Which of the following statements are correct about Shyamji Krishna Varma

1. He founded the India House and The Indian Sociologist,
2. He opposed the secure Home Rule for India, as advocated by the Bhikaji Cama,
3. He Supported Arya Samaj founded by the Dayanand Saraswati

Which of the statements given above is/are correct?

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

**Q284.** Recently i-drone Project was seen in the news. It was about-

- (a) Mapping Disaster prone zones in India with the use of drones
- (b) Monitoring Poachers and illegal traders of wildlife trafficking in the national parks with the use of drones
- (c) Delivering life-saving vaccines in the Northeast region
- (d) Mapping of every property with the help of drones in all the villages of the country under the SWAMITVA scheme

**Q285.** Consider the following statements regarding adhar enabled payment system

1. AePS enables consumers to withdraw cash after biometric authentication from micro ATMs operated by the Business correspondent of any bank
2. Reserve Bank of India (RBI) mandates a T+7 settlement period—or seven days for the failure of Aadhar enabled transaction following the transaction date—and a monetary per day penalty for a failure to do so.

Which of the statements given above is/are correct?

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

**Q286.** The Unique Identification Authority of India (UIDAI) works under the aegis of-

- (a) Ministry of Law and Justice
- (b) Ministry of Finance (MoF)
- (c) Ministry of Electronics and Information Technology (MEITY)
- (d) It is an autonomous institution working independently

**Q287.** The terms ‘Langas’ and ‘Manganiyars’ were recently in the news. These are:

- (a) Buddhist monks in the western part of India.
- (b) Muslim musicians residing in Rajasthan.
- (c) Religious rituals
- (d) Handicraft techniques prevalent in South India.

**Q288.** Consider the following statements regarding United Nations General Assembly:

1. Its president is elected every five years.
2. It is the only United Nations body having universal representation.

Which of the statements given above is/are correct?

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

**Q289.** Which among the following statements is correct about Purchasing Managers’ Index (PMI)

- (a) Purchasing Managers’ Index (PMI) is an indicator of business activity for the manufacturing sector only
- (b) A figure above 40 denotes expansion in business activity.
- (c) the Purchasing Managers' Index is based on five major indicators: new orders, inventory levels, production, supplier deliveries, and the employment environment.
- (d) It is published every month by NSO

**Q290.** The 2021 Nobel prize in physics has been awarded for the research in-

- (a) Inventions in the field of laser physics
- (b) The physical modeling of earth's climate, quantifying variability and reliably predicting global warming"
- (c) Contributions to the ligo detector and the observation of gravitational waves
- (d) Theoretical discoveries of topological phase transitions and topological phases of matter

**Q291.** Consider the following statements

- 1. The molecules or ions that cannot be superimposed are called chiral.
- 2. Optical isomers are mirror images that cannot be superimposed on one another are called enantiomers.
- 3. Recently Nobel prize in Chemistry has been awarded for enantiomerically selective catalysis using metal catalysts.

Which of the statements given above is/are correct?

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

**Q292.** Consider the following pairs

- 1. Tamor Pingla Wildlife Sanctuary - Odisha
- 2. Borhamdeo Wildlife Sanctuary –Madhya Pradesh
- 3. Guru Ghasidas National Park- Chattisgarh

Which of the pair/s given above is/are correct?

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

**Q293.** Consider the following statements regarding National Tiger Conservation Authority (NTCA)

- 1. The National Tiger Conservation Authority (NTCA) was constituted under the Wildlife (Protection) Act, 1972 along with the newly launched project tiger.
- 2. The state government can notify or denotify a tiger reserve only with the approval of NTCA.

Which of the statements given above is/are correct?

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

**Q294.** Consider the following statements

- 1. Countries that have achieved at least 2 consecutive years of zero indigenous cases of malaria are declared malaria-free countries by WHO.
- 2. India aims to eliminate malaria by 2025.
- 3. Newly launched Malaria vaccine Mosquirix provides against malaria caused by the parasite *Plasmodium falciparum* and *P.Vivax*.

Which of the statements given above is/are correct?

- (a) 1 and 2
- (b) 2 and 3
- (c) 1 and 3
- (d) None

**Q295.** Consider the following statements regarding National Investigation Agency (NIA)

- 1. Under the constitution of India, law and order is a state subject
- 2. National Investigation Agency (NIA) can't enter any state without permission from the state government.
- 3. NIA has the power to investigate scheduled offenses committed outside India,

Which of the statements given above is/are correct?

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

**Q296.** Which of the following are tributaries of Brahmaputra

- 1. Dhansiri
- 2. Sankosh
- 3. Kopilli
- 4. Jiabharali

Select the correct code from below:

- (a) 1,2 and 3
- (b) 1,3 and 4
- (c) 2 and 4
- (d) 1,2, 3 and 4

**Q297.** Consider the following statements regarding Artemis accords

- 1. Launched by the UN , It aims to establish guidelines, and best practices to enhance the governance of the civil exploration and use of outer space.
- 2. India has recently joined Artemis accords
- 3. This accord specifies the areas in space where civil space activities are allowed

Which of the statements given above is/are correct?

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

**Q298.** Why India is facing a severe coal shortage recently. Which of the following is/are the reason for the coal shortage?

- (a) Decreased buying from Coal India
- (b) Sharp rise in imports of high priced coal
- (c) Continuous rainfall in coal-bearing areas
- (d) All of the above



**Q299.** Recently “swecha Programme” was launched by Andhra Pradesh Government . It is-

- (a) Awareness drive on Menstruation
- (b) Mass Afforestation of trees by aerial seeding
- (c) Awareness drive on malnutrition
- (d) Investigative drive to curb illegal wildlife trade

**Q300.** “ Reach Zero Forum “ some times seen in news is about-

- (a) Achieving net zero emission target by 2050
- (b) Making railways carbon neutral by 2030
- (c) Achieving zero malaria incidence in the country
- (d) Achieving 100% gross enrolment in 2030 under new education policy 2020

**Q301.** Consider the following statements

1. India’s textiles industry contributes 20% to the GDP and it is the second employment generating sector in India after agriculture
2. India has built a strong ecosystem in cotton apparel but is lagging in man-made fibre (MMF) apparel manufacturing
3. The PLI scheme for textiles aims to promote the production of high-value Man-Made Fibre (MMF) fabrics, jute and technical textiles.

Which of the statements given above is/are correct?

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

**Q302.** Consider the following statements regarding the PM MITRA scheme

1. Under this scheme, only Greenfield Integrated Textile Regions and Greenfield Apparel parks would be built.
2. The state governments will have the onus to establish a special purpose vehicle on PPP mode for this scheme.
3. The anchor investors will be provided monetary support in the form of grants

Which of the statements given above is/are correct?

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

**Q303.** State of Climate Services report 2021 was recently released by the-

- (a) World Meteorological Organization (WMO)
- (b) United Nations Environment Programme UNEP
- (c) Intergovernmental Panel on Climate Change (IPCC)
- (d) Green Peace

**Q304.** Ethanol biofuel can be produced from-

- 1. Hemp
- 2. Cassava
- 3. Corn
- 4. Wheat
- 5. Rotten fruits

Select the correct code from below:

- (a) 2,3 and 5
- (b) 1,3,4 and 5
- (c) 2,3,4 and 5
- (d) 1,2,3,4 and 5

**Q305.** Swadesh Darshan Scheme is a central sector scheme; i.e. - 100% funded launched by the Ministry of Tourism with an aim to promote, develop and harness the potential of tourism in India. Which of the following theme-based tourism site called as “circuit is correct paired with the corresponding state concerned-

- (a) Eco-Circuit-kerala
- (b) Ecotourism Circuit-Uttarakhand
- (c) Buddhist circuit-Bihar
- (d) Tribal Circuit-Madhya Pradesh

**Q306.** Consider the following PAIRS

1. Vaishali-Buddha spent twenty-four rainy seasons here at the Jetavan monastery
2. Khushinagar-Budha achieved the Mahaparinivana
3. Sravasti- Budha gave his last sermon

Which of the pair/s given above is/are correct?

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

**Q307.** Consider the following statements regarding Central Asian Flyway (CAF)

1. The Central Asian Flyway Range Countries aims to provide conservation of migratory birds along the Central Asian Flyway.
2. Central Asian Flyway (CAF) covers an area of Eurasia between the Arctic and Indian Oceans.
3. India is currently not a part of Central Asian Flyway Range Countries

Which of the statements given above is/are correct?

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

**Q308.** The Purchasing Managers’ Index (PMI) is released by?

- (a) Department for Promotion of Industry and Internal Trade (DPIIT)
- (b) IHS Markit
- (c) RBI
- (d) Ministry of Finance

**Q309.** Consider the following statements regarding Bonn Convention

1. It is an international agreement that aims to prohibit transboundary movement of toxic and hazardous chemicals
2. The Agreement was signed under the auspices of the United Nations Environment Programme in 1992.
3. India had never convened Bonn convention as a host country

Which of the statements given above is/are correct?

- (a) 1 and 2
- (b) 2 and 3
- (c) 1,2 and 3
- (d) None



**Q321.** Which of the following statements regarding the National Level River Ranching program is correct?

- (a) It aims to uplift the depleted fish stock in the rivers, coastal areas, and estuaries and promote the sustainable conservation of fishery resources
- (b) The Khadi and Village Industries Commission is the nodal agency of this Scheme
- (c) The Phase-I program of NFDB will target the major river systems namely the Ganges and its tributaries, Brahmaputra, Barak river tributaries only.
- (d) This scheme has been launched under the Blue revolution mission

**Q322.** Consider the following statements

- 1. India is the 2nd largest fish producing and third-largest aquaculture nation in the world
- 2. Inland fish production in India is currently more than that of the marine fish production in the country
- 3. Pradhan Mantri Matsya Sampada Yojana (PMMSY) is a centrally sponsored scheme

Which of the statements given above is/are correct?

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

**Q323.** Consider the following statements regarding National Dairy Development Board (NDDB)

- 1. The National Dairy Development Board (NDDB) is an autonomous institution made by an executive resolution
- 2. NDDB was instrumental in establishing the first Embryo Transfer Technology project in the country in 1987.
- 3. It works under the Ministry of Agriculture and Farmers Welfare

Which of the statements given above is/are correct?

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

**Q324.** Consider the following statements

- 1. The Trojan asteroids are leftovers of the primordial material from which Jupiter and the other outer planets were formed.
- 2. Lucy mission sent by NASA is the first space mission to study Trojan asteroids at a larger scale.
- 3. The Trojan asteroids are said to orbit in the same path as of the earth

Which of the statements given above is/are not correct?

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

**Q325.** Sometimes “Yokohama strategy” is seen in the news. It is-

- (a) An international convention that specifies the guidelines on the safe access and movement of genetically modified organisms.
- (b) The UN-mandated guidelines for natural disaster prevention, preparedness and mitigation and its plan of action,
- (c) A set of guidelines to be adopted and plans to be implemented to support the sustainable development of small islands developing countries and utilization of their marine and coastal resources
- (d) A UN-mandated Set of guidelines to be adopted for preserving indigenous and tribal languages

**Q326.** Consider the following statements regarding Guduchi or Tinospora cordifolia

- 1. It is a herb that can be found throughout the Himalayan regions of India
- 2. It is used in traditional medicinal system practices

Which of the statements given above is/are correct?

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

**Q327.** Consider the following statements regarding the Department of Investment and Public Asset Management (DIPAM)

- 1. DIPAM deals with all the matters related to the disinvestment of Central Government equity in Central Public Sector Undertakings.
- 2. DIPAM works under the aegis of the Ministry of corporate affairs

Which of the statements given above is/are correct?

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

**Q328.** Athirappilly hydroelectric project sometimes seen in the news is located on which of the river-

- (a) Pamba River
- (b) Periyar River
- (c) Chalakudy river
- (d) Bharatpuzha river

**Q329.** Consider the following statements

- 1. The right to a clean environment was rooted in the 1972 Stockholm Declaration
- 2. The right to a clean, healthy and sustainable environment was recognized as a human right by UN Human Rights Council.
- 3. Article 48 of the constitution says that “the state shall endeavor to protect and improve the environment and to safeguard the forests and wildlife of the country”.

Which of the statements given above is/are correct?

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

**Q330.** The Two Pillar Solution, sometimes seen in the news is associated with-

- (a) World bank (b) OECD  
(c) WTO (d) UNHCR

**Q331.** Consider the following statements

1. Nobel prize in the economics award was established in the will of Alfred Nobel.
2. The First noble prize in economics was given in 1969
3. The Nobel prize in economics for 2021 was awarded for integrating climate change into long-run macroeconomic analysis"

Which of the statements given above is/are correct?

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

**Q332.** Consider the following statements

1. Article 46 of the directive principles of the state policy puts the obligation on the state to promote the educational and economic interests of the economically weaker sections
2. To provide reservation to the economically weaker section One Hundred and Twenty-third Amendment Bill was presented
3. The income limit is decided by the national cost of living by the central government as applicable in different states.

Which of the statements given above is/are correct?

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

**Q333.** Consider the following statements

1. The foremost objective of the monetary policy of the RBI is to keep inflation in control despite the fluctuating GDP rate.
2. RBI conducts long-duration foreign currency Swap auctions to suck liquidity in the market

Which of the statements given above is/are correct?

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

**Q334.** Consider the following statements regarding Market-Based Economic Despatch (MBED)

1. MBED will ensure that the cheapest natural gas generating resources across the country are dispatched to meet the overall household demand in the economy.
2. The Ministry of Petroleum and Natural Gas will be the nodal agency of the MBED

Which of the statements given above is/are correct?

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

**Q335.** Consider the following statements regarding All-India Quarterly Establishment-based Employment Survey (AQEES)

1. AQEES is released by Labour Bureau to provide frequent updates about the employment and related variables of establishments, in both organised and unorganised segments
2. QES provides demand and supply-side picture of the labour market.
3. AQEES provides the employment data for all the establishments employing 20 or more workers

Which of the statements given above is/are correct?

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

**Q336.** Consider the following statements regarding The Multidimensional Poverty Index (MPI)

1. It is released by the World bank.
2. MPI uses three dimensions namely Education, health and Per capita income

Which of the statements given above is/are correct?

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

**Q337.** Consider the following statements regarding Pusa Decomposer

1. It retains the organic carbon content which is present in the stubble and fixes back to the soil.
2. Pusa decomposer is made of mixed strains of Algae
3. It is useful for decomposing crops that grow at high temperatures like paddy

Which of the statements given above is/are correct?

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

**Q338.** Consider the following statements

1. Kongka pass is located in Sikkim
2. Hot Springs is located on the banks of Chang Chenmo River valley in Ladakh
3. Chang Chenmo River is a tributary of the Zaskar river

Which of the statements given above is/are correct?

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

**Q339.** Recently BepiColombo a joint mission of the European Space Agency (ESA) and the Japan Aerospace Exploration Agency (JAXA) was seen in the news it was launched to explore-

- (a) Kuiper Belt (b) Mercury  
(c) North pole of the moon (d) Venus

**Q340.** Lukha river recent seen in news flows through which of the following states?

- (a) Sikkim (b) Assam  
(c) Meghalaya (d) Arunachal Pradesh





**Q351.** Consider the following statements regarding  
 1. Intermediate-mass black holes are formed only when a single massive star undergoes a supernova explosion.  
 2. A gravitational wave could be formed when two big stars orbit each other.

Which of the statements given above is/are correct?

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

**Q352.** Consider the following statements

1. Centre for Development of Telematics (C-DOT ) is an autonomous body working under the aegis of the Ministry of Science and technology.  
 2. C-DOT has recently become the first organization in India to offer a complete portfolio of indigenous Quantum Secure telecom products and solutions to the defense sector in India

Which of the statements given above is/are correct?

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

**Q353.** Consider the following statements

1. Alber Einstein suggested that light was emitted in small, discrete “packages” named quanta.  
 2. Quantum communication involves encoding information in quantum states, called qubits  
 3. The communication networks based on Quantum key distribution (QKD) are fully safe and are immune to Trojan horse attacks

Which of the statements given above is/are correct?

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

**Q354.** Consider the following statements regarding The National Green Tribunal

1. NGT does not have the power to make Suo moto action just like the Supreme court  
 2. The Tribunal has its own rules inherently distinct from civil suits or writ petitions.  
 3. the Tribunal is bound by the procedure under the Code of Civil Procedure, 1908, and the Indian Evidence Act, 1872.  
 4. The Tribunal is mandated to dispose off the complaints within 6 months of its filling

Which of the statements given above are correct?

- (a) 1 and 2 (b) 2,3 and 4  
 (c) 2 and 4 (d) 1,2 and 3

**Q355.** The Digne resolution of UNESCO recently seen in news is associated with-

- (a) It is a formal programme to protect endangered languages around the world  
 (b) It is a formal programme promoting a global network of geoheritage sites.  
 (c) It is a formal programme promoting Non-violence for children against the world  
 (d) It is a formal programme Promoting the establishment of museums for cultural dialogue with migrant populations

**Q356.** Quantum key distribution (QKD) technology can be utilized in

1. Detecting Earthquakes  
 2. Detecting Volcanic eruption  
 3. Making Superconductors

Select the correct code from below:

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

**Q357.** Consider the following statements

1. The Graded Response Action Plan is are institutional measures that are to be adopted when the air quality deteriorates in Delhi and all the states having boundaries with it.  
 2. The Graded Response Action Plan is evoked any time whenever Particulate Matter PM 10 and PM 2.5 go beyond the “moderate” Air Quality Index.

Which of the statements given above is/are correct?

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

**Q358.** Which among the following statements regarding the recently launched Climate Resilience Information System and Planning (CRISP-M) tool is incorrect?

- (a) This tool is launched by the ministry of earth sciences  
 (b) with the launch of this CRISP-M tool, the integration of climate information in GIS-based watershed planning under MNREGA will be possible  
 (c) Both (a) and (b) are correct  
 (d) Neither (a) nor (b) is correct

**Q359.** Consider the following statements regarding ePLI bonds

1. ePLI bond has been launched to raise public debt to finance different projects under a production-linked incentive scheme.  
 2. ePLI bonds have been launched by RBI on behalf of the Ministry of Finance.

Which of the statements given above is/are correct?

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

**Q360.** Consider the following statements

1. Cicadas are hemipteran insects known for their loud, complex, and species-specific acoustic signals or songs.  
 2. The generic diversity of cicadas in India is the highest in the world  
 3. Recently a new species of cicada namely *Platyomia kohimaensis* has been found in Sikkim

Which of the statements given above is/are correct?

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







**Q393.** Consider the following statements regarding Sir Syed Ahmad Khan

1. He founded the Scientific Society in 1863.
2. He published a pamphlet *The Causes of the Indian Revolt*
3. He was Critical of the Indian national congress and asked for greater representation of Muslims.
4. He supported the two-nation theory

Which of the statements given above is/are correct?

- (a) 1,2 and 3 (b) 2 and 3  
(c) 2,3 and 4 (d) 1,2,3 and 4

**Q394.** Waste Electrical and Electronic Equipment Directive Directive many times seen in the news, is a set of rules and regulations focussing on recycling of e-waste. The WEEE directive is an initiative of-

- (a) European Union (b) UNEP  
(c) G-20 (d) UNDP

**Q395.** The Clean Development Mechanism (CDM) is a United Nations-run carbon offset scheme allowing countries to fund greenhouse gas emissions-reducing projects in other countries and claim the saved emissions as part of their own efforts to meet international emissions targets. It was first defined in-

- (a) Kyoto Protocol (b) Montreal Protocol  
(c) Rio Summit (d) Paris summit 2015

**Q396.** Allium negianum recently seen in the news is-

- (a) A newly discovered Comet in the Kuiper Belt  
(b) A newly discovered onion species from the Himalayas  
(c) A newly discovered Butterfly species from Uttarakhand  
(d) A newly discovered oil-eating bacteria

**Q397.** Consider the following statements regarding the Earth shot Prize

1. It is given for providing innovative solutions to the climate change
2. Earthshot prize is given by the UN environment programme every year.

Which of the statements given above is/are correct?

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

**Q398.** Consider the following statements regarding Anticipatory bail

1. Anticipatory bail is a direction to release a person on bail, issued even before the person is arrested.
2. It is only issued by the High Court.
3. No time limit can be set while granting anticipatory Bail and it can continue even until the end of the trial

Which of the statements given above is/are correct?

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

**Q399.** Mudumalai Tiger Reserve is situated at the trijunction of three states. Which of the following are one those-

1. Karnataka
2. Tamilnadu
3. Andhra Pradesh

Select the correct code from below:

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

**Q400.** Which of the following can reduce the Urban Heat Island Effect?

1. Using impermeable materials for construction
2. Promoting Vertical gardening
3. Build the vertical structure of buildings

Which of the statements given above is/are correct?

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

**Q401.** Consider the following statements

1. The first synchronous decennial census was conducted in 1872
2. Between 1872-1931, every census collected caste-based data and included questions on various castes in India.
3. The 1865 census of the Bengal Province is frequently referred to as the first proper census in India

Which of the statements given above is/are correct?

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

**Q402.** Consider the following statements regarding Madhav Gadgil Committee on western ghats ecology

1. The panel recommended a National-level authority, Western Ghats Ecology Authority (WGEA).
2. The panel had classified the Western Ghats into Ecologically Sensitive Zones (ESZ) 1, 2, and 3 of which ESZ-3 was Of the highest priority, restricting almost all developmental activities in it.
3. The panel sought to bring just 37% of the Western Ghats under the Ecologically Sensitive Area (ESA) zones

Which of the statements given above is/are correct?

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

**Q403.** The Brundtland Commission is sometimes seen in the news. Which among the following is correct about it?

- (a) It was established by the UN environment program to keep a check on transboundary movement of Toxic waste and Genetic microorganisms
- (b) It was established to promote fair trade practices by the WTO members
- (c) It was established to propose long-term environmental strategies for achieving sustainable development Goals and deal effectively with environmental concerns
- (d) It was established to define criteria for the Global Multidimensional Poverty Index prepared by the World Bank

**Q404.** Recently, the Climate Transparency Report was released by Climate Transparency to provide a comprehensive overview of emissions, climate policies and Progress achieved so far regarding the net zero-emission of the

- (a) G7 countries (b) G-20 countries  
(c) APEC Block (d) BRICS countries

**Q405.** Consider the following statements regarding Global Food Security (GFS) Index 2021

1. Global Food Security (GFS) Index 2021 is released by the Food and Agriculture Organization FAO.
2. The GFSI 2021 noted that global food security progress has consistently improved in the past decade.

Which of the statements given above is/are correct?

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

**Q406.** Consider the following statements regarding the One Sun, One World, One Grid" (OSOWOG) initiative

1. It aims the connect all regional solar power systems into one electricity transmission system spanning the whole globe.
2. OSOWOG initiative is financed by World Bank
3. The OSOWOG initiative aims to mobilize the \$1 trillion Solar Investment Roadmap for 2030

Which of the statements given above is/are correct?

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

**Q407.** The Fugitive Economic Offenders Act, 2018 defines fugitive economic offenders charged in the offenses measuring over

- (a) 150 crore (b) 200 crore  
(c) 100 crore (d) 500 crore

**Q408.** Consider the following statements regarding Enforcement Directorate

1. The Directorate of Enforcement is an independent body working under the Administrative control of the Ministry of Home affairs.

2. **ED is responsible for enforcement of the Foreign Exchange Management Act, 1999 (FEMA)**, and certain provisions under the Prevention of Money Laundering Act (PMLA).

Which of the statements given above is/are correct?

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

**Q409.** Consider the following statements regarding Phyto-Pharma Plant Mission

1. Phyto-Pharma Plant Mission is about harnessing the commercial and medicinal potential of the Aromatic plants found in Western ghats.
2. Ministry of Ayush is the nodal agency for the implementation of this scheme

Which of the statements given above is/are correct?

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

**Q410.** Which among the following has recently released the Geographical Information System (GIS) Energy Map of India?

- (a) Geological Survey of India  
(b) Ministry of Power  
(c) Ministry of Science and technology  
(d) NITI Ayog

**Q411.** Consider the following statements regarding SDR basket of IMF

1. The SDR is an international reserve asset, created by the IMF in 1969 to supplement its member countries' official reserves.
2. The SDR is the official currency of the IMF.
3. The value of the SDR is determined fortnightly based on market exchange rates.

Which of the statements given above is/are correct?

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

**Q412.** Consider the following Pairs

1. Sarnath- Enlightenment of Buddha.
2. Kushinagar- Dhammachakkappavattana
3. Bodhgaya-Mahaparinirvana

Which of the pair/s given above is/are correct?

- (a) 1 and 2 (b) 2 and 3  
(c) 1 and 3 (d) None

**Q413.** Consider the following statements regarding Bhaskaravarman

1. Bhaskaravarman was crowned ruler of the Ahom kingdom.
2. He was a contemporary of the Indian ruler Harshavardhana
3. Recently Assam government has decided to use Bhaskarabda as the official calendar of the state.

Which of the statements given above is/are correct?

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



**Q414.** Consider the following statements regarding The Anglo-Manipur War 1891

1. It was fought between British troops and the Manipur kingdom in response to the encroachment of tribal rights of the state tribes.
2. As a result of the war, Manipur became a princely state under the rule of the British empire.

Which of the statements given above is/are correct?

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

**Q415.** A Currency is included in the SDR basket only if-

- (a) if its issuer is an IMF member or a monetary union that includes IMF members, which is one of the top five world exporters  
(b) The currency issued is freely tradable  
(c) Both (a) and (b)  
(d) Neither (a) nor (b)

**Q416.** Consider the following statements regarding Brent and West Texas intermediate WTI

1. Brent is oil that is drilled out of the North Sea adjoining the UK and Norway while West Texas Intermediate (WTI) Crude is extracted in the US
2. The Indian basket of Crude Oil is primarily made of WTI crude
3. WTI crude oil reflects better the core price of oil than Brent crude

Which of the statements given above is/are correct?

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

**Q417.** Consider the following statements

1. Deputy Speaker in the state assembly must be elected within a month of the new session started after the assembly elections
2. Deputy Speaker must vacate its office as the state legislative assembly is dissolved
3. In Lok Sabha, the election of Deputy Speaker is governed by Rule 8 of The Rules of Procedure and Conduct of Business in Lok Sabha.

Which of the statements given above is/are correct?

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

**Q418.** Recently the term “Middle-Eastern Quad “ was seen in the news. Which of the following are members of the Middle-Eastern Quad?

- (a) India, Saudi Arabia, UAE, and the US,  
(b) India, Israel, Saudi Arabia, and the US,  
(c) India, Israel, Qatar, and the US,  
(d) India, Israel, UAE, and the US,

**Q419.** Consider the following statements regarding James Webb telescope

1. It is a collaboration effort between the American space agency, the European Space Agency (ESA), and the Canadian Space Agency (CSA).
2. It aims to count the number of stars that exist in the Universe.
3. It will replace the Hubble telescope and orbit the earth

Which of the statements given above is/are correct?

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

**Q420.** SONIA, EONIA and SOFR terms some times are seen in the economic context are actually-

- (a) A trade settlement mechanism for Brent Crude  
(b) a secure and standardised method of sending or receiving money from banks anywhere in the world.  
(c) The alternative benchmark interest rate for dollar-denominated derivatives Replacing LIBOR  
(d) It is an international arbitrage settlement mechanism for the Global depository receipts

**Q421.** Consider the following statements regarding Diammonium phosphate DAP

1. DAP is classified as Mixed fertilizer.
2. DAP fertilizer is most commonly used in India in croplands

Which of the statements given above is/are correct?

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

**Q422.** Consider the following statements regarding the Production gap report

1. It measures the gap between governments’ planned production of fossil fuels and the global production levels, to meet the Paris Agreement temperature limits.
2. Production gap report is published by Intergovernmental Panel on Climate Change (IPCC)

Which of the statements given above is/are correct?

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

**Q423.** Consider the following statements

1. Sustainable Development Goal 5 is about "clean water and sanitation for all".
2. Recently WMO has endorsed water declaration to address challenges related to water stress and water-related hazards prevailing across the Globe.
3. The Total groundwater on earth is more than the water present in the rivers and lakes

Which of the statements given above is/are correct?

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



**Q424.** Black sea is bounded by-

1. Georgia
2. Turkey
3. Romania
4. Moldova

Select the correct code from below:

- (a) 1,2 and 3                      (b) 2,3 and 4  
(c) 1,3 and 4                      (d) 1,2,3 and 4

**Q425.** Consider the following statements regarding the Financial Action Task Force

1. The Financial Action Task Force (FATF) is an inter-governmental body established in 1989 by the G20 Group
2. Non-Cooperative Countries or Territories (NCCTs) are the countries that are put in the Greylist.
3. CBI is India's officially designated single point of contact for liaison with Interpol an agency of FATF

Which of the statements given above is/are correct?

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

**Q426.** Recently Debrigarh wildlife sanctuary was seen in the news. It is located in-

- (a) West Bengal                      (b) Odisha  
(c) Uttrakhand                      (d) Assam

**Q427.** SDN1 and SDN2 Technology recently seen in the news in the context of-

- (a) Clonal propagation of crop plants
- (b) Developing genetically modified crop plants
- (c) Production of plant growth substances
- (d) Production of biofertilizers

**Q428.** Hashing Algorithm sometimes seen in the news has its applications in-

1. Filtering fake IDs used for E-voting
2. Bitcoin Mining
3. Creating digital signature

Select the correct code from below:

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

**Q429.** Which among the following is commonly called gardeners of the tropical forests?

- (a) HornBill                      (b) Vultures  
(c) White Bellied Woodpecker   (d) Bengal Florican

**Q430.** Which among the following has recently launched Water and Climate Coalition and Hydrology Action Plan?

- (a) IPCC
- (b) UNEP
- (c) WMO
- (d) International maritime Organisation

**Q431.** The landscape of this national park consists of exposed sandbars, riverine flood-formed lakes known as, beels, and elevated regions known as, chapories, which provide retreats and shelter for animals during floods. Located on the edge of the Eastern Himalaya biodiversity hotspot, and a declared Birdlife international area having elephants, wild water buffalo, and swamp deer beyond the large population of Rhino, It is classified as-

- (a) Manas National Park
- (b) Dibru saikhowa national Park
- (c) Namphda National park
- (d) Kaziranga National Park

**Q432.** Consider the following statements regarding Sovereign Gold Bond Scheme

1. The scheme was launched in 2015 with an objective to reduce the demand for physical gold
2. The bonds are denominated in multiples of gram (s) of gold with a basic unit of 1 gram.
3. The gold bonds can be purchased from small finance banks.
4. The price of the bond is fixed in Indian rupees by the National Commodity & Derivatives Exchange Limited

Which of the statements given above is/are correct?

- (a) 1,2 and 3                      (b) 2,3 and 4  
(c) 1, and 2                      (d) 1,2,3 and 4

**Q433.** Consider the following statements

1. Mount Harriet is the highest peak in the Andaman and Nicobar Islands
2. The picture on the backside of the ₹ 20 note is taken from Mount Harriet National Park
3. Mount Harriet national park is a butterfly hotspot

Which of the statements given above is/are correct?

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

**Q434.** Consider the following statements regarding CBI

1. Only Supreme Court and not High Courts can order CBI to investigate such a crime anywhere in the country without the consent of the State.
2. CBI does not have the power to take suo moto action against any crime in any state or UT and must seek permission for investigating any crime
3. CBI derives its legal powers to investigate crime from the Prevention of Corruption Act, 1988

Which of the statements given above is/are correct?

- (a) 1 and 2                      (b) 2 and 3  
(c) 1 and 3                      (d) None

**Q435.** CBI has the power to investigate which of the following types of crimes-

1. Large-scale smuggling of narcotics and contraband
2. Import export & foreign exchange violations
3. Corruption and fraud committed by public servants
4. Acts of terrorism

select the correct code from below:

- (a) 2 and 4                      (b) 2 only  
(c) 1,2 and 3                      (d) 1,2,3 and 4



**Q448.** Consider the following statements regarding Green Growth Equity Fund (GGEF)

1. It is India's first sovereign investment fund seeking to create green infrastructure in the country.
2. This fund is managed by NITI Ayog

Which of the statements given above is/are correct?

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

**Q449.** Turkey shares its border with which of the following countries-

1. Greece
2. Syria
3. Armenia
4. Azerbaijan
5. Iran

Select the correct code from below:

- (a) 1,2,3 and 5 (b) 2,3,4 and 5  
(c) 1,3,4 and 5 (d) 1,2,3,4 and 5

**Q450.** Konkan Shakti, the first tri-service exercise is conducted between India and which of the following nation?

- (a) USA (b) United Kingdom  
(c) Japan (d) Russia

**Q451.** Consider the following statements

1. A white dwarf is a star that has exhausted their nuclear fuel
2. TW Pictoris is a newly discovered white dwarf star.
3. The accretion disk is the material transferred by the white dwarf to the orbiting star in a binary system

Which of the statements given above is/are correct?

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

**Q452.** Consider the following statements

1. Mullaperiyar dam is located at the confluence of Mullayar river and Pamba river.
2. Mullaperiyar dam lies at the borders of Kerala and Tamil Nadu

Which of the statements given above is/are correct?

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

**Q453.** Which among the following statement is incorrect about the Inter-State River Water Disputes Amendment Bill, 2019?

- (a) It amends the Inter-State River Water Disputes Act, 1956, and provides adjudication of disputes relating to waters of inter-state rivers and river valleys.
- (b) Disputes Resolution Committee (DRC) set up under this would adjudication of the dispute amicably within a time frame of 1 year
- (c) Under the Act, the central government maintains a data bank and information system at the national level for each river basin.
- (d) the Inter-State River Water Disputes Tribunal must give its decision within three years, which may be extended by two years.

**Q454.** Consider the following statements regarding Sakharov Prize

1. This award is conferred by the European parliament for the Freedom of Thought to the individuals.
2. The first recipient of the Sakharov Prize was Nelson Madela

Which of the statements given above is/are correct?

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

**Q455.** "Adjusted gross revenue (AGR) " Term is frequently seen in the news, in the context of-

- (a) The total amount of surcharge and cess accumulated in the consolidated fund of India
- (b) Retrospective tax charged on deals executed involving the transfer of shares in a foreign entity which had assets in India
- (c) Usage and licensing fee charged from telecom operators in India
- (d) Tax evasion by shell companies

**Q456.** Consider the following statements regarding the Telecom Regulatory Authority of India (TRAI)

1. It is an independent autonomous non-statutory telecom regulatory body in India
2. TRAI regulates the tariffs of broadband internet connections in India

Which of the statements given above is/are correct?

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

**Q457.** Balfour Declaration sometimes seen in the news is about-

- (a) Trade agreement between Asean and six free-trade countries
- (b) Declaration to reach consensus related to dispute on agriculture subsidies in WTO.
- (c) Rehabilitation of Jewish people in Palestine
- (d) Peace agreement to end Columbian war

**Q458.** Consider the following statements regarding Dadasaheb Phalke Award

1. Dadasaheb Phalke Awards was first originated in 1955.
2. It is presented annually at the National Film Awards ceremony by the ministry of information and broadcasting.
3. Prithviraj Kapoor was the first awardee of the Dadasaheb Phalke Award

Which of the statements given above is/are correct?

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

**Q459.** Consider the following statements regarding Telecom Disputes Settlement and Appellate Tribunal (TDSAT)

1. The Tribunal consists of a Chairperson and two Members appointed by the Central Government
2. The Chairperson should be or should have been a Judge of the Supreme Court or retired judge of the supreme court

Which of the statements given above is/are correct?

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

**Q460.** ABHYAS –HEAT recently seen in the news, is a –

- (a) Nuke capable ballistic missile
- (b) India’s first nuclear-missile tracking ship
- (c) Fully autonomous aerial vehicle to evaluate target capability of various missile systems.
- (d) Artillery guns

**Q461.** Consider the following statements regarding NIPUN Bharat Abhiyan

1. This scheme has been launched under the aegis of the centrally sponsored scheme Sarv Shiksha Abhiyan
2. NIPUN Bharat aims to cover the learning needs of children in the age group of 3 to 6 years
3. It aims that every child in the country should necessarily attain foundational literacy and numeracy by the end of Grade 3, by 2026-27.

Which of the statements given above is/are correct?

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

**Q462.** Consider the following statements regarding the Asian Infrastructure Investment Bank (AIIB)

1. The membership of AIIB is currently open for Asian countries only.
2. Japan holds the highest amount of voting share with the AIIB followed by China

Which of the statements given above is/are correct?

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

**Q463.** Arrange the following from North to the south-

1. Taiwan strait
2. Scarborough Islands
3. Parcel Islands
4. Spratley islands

Select the correct code from below:

- (a) 1-3-2-4 (b) 3-2-1-4  
(c) 4-3-2-1 (d) 2-3-4-1

**Q464.** Consider the following statements regarding Net Zero emission

1. Achieving Net zero emissions target means the complete omission of carbon emissions in that particular country.

2. India has committed to achieving a net-zero carbon emission target by 2050 as per the nationally determined contributions set by the Paris climate summit

Which of the statements given above is/are correct?

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

**Q465.** Consider the following statements regarding Extra Neutral Alcohol (ENA) is the primary raw material for making

1. It contains over 70 percent alcohol by volume.
2. Extra Neutral Alcohol (ENA) is the primary raw material for making alcoholic beverages.

Which of the statements given above is/are correct?

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

**Q466.** Uighur”, an ethnic group in China belongs to which of the ethnicity-

- (a) Tibeto-Burmese (b) Indo Aryan  
(c) Turkish (d) Mongloids

**Q467.** Trigonopterus corona a newly discovered species of \_\_\_\_\_ has been recently found on the Indonesian island of Sulawesi

- (a) Beetles (b) Butterflies  
(c) Insectivorous plant (d) Sea Cow

**Q468.** Consider the following statements

1. The first fertilizer factory in India opened at Ranipet Uttarpradesh.
2. Urea accounts for 82 percent of the total consumption of straight N fertilizers.
3. Di-ammonium phosphate DAP accounts for the highest percentage of total phosphate consumption in the fertilizer industry in India

Which of the statements given above is/are correct?

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

**Q469.** Mahari is a ritualistic dance form of

- (a) Madhya Pradesh (b) Odisha  
(c) Tamilnadu (d) kerala

**Q470.** Recently seen in news Climate Vulnerability Index, has been released by-

- (a) UNEP (b) UNFCCC  
(c) World economic forum (d) None of the above

**Q471.** Consider the following statements

1. The East Asia Summit (EAS) is the Indo-Pacific’s premier forum for strategic dialogue between ASEAN and Six associated Free trade countries.
2. India has never hosted the East Asia summit.

Which of the statements given above is/are **incorrect**?

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



**Q482.** Consider the following statements regarding Swachh Survekshan

1. The Ministry of Urban Development, Government of India takes up the Swachh Survekshan in urban areas and the Ministry of rural development in rural areas.
2. The NITI ayog has been commissioned the responsibility of carrying out the assessment.

Which of the statements given above is/are correct?

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

**Q483.** Consider the following pairs

GI Tag- State

1. Sohrai – Khovar Painting-Jharkhand
2. Chokuwa Rice- Manipur
3. rice wine Judima- Mizoram

Which of the pair/s given above is/are correct?

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

**Q484.** Consider the following statements regarding Speaker of the Lok Sabha

1. As per the constitution Speaker is “the principal spokesman of the House”
2. The lok Sabha presides over the joint sittings of the two Houses of Parliament.
3. Lok Sabha speaker must be elected with 2 weeks of the reassembly of the parliament after the conclusion of the general elections.

Which of the statements given above is/are correct?

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

**Q485.** Consider the following statements regarding Intercontinental ballistic missiles or ICBMs

1. Agni V is India’s most advanced ICBM.
2. ICBMs have a minimum range of 5,500 km, with maximum ranges varying from 7,000 to 16,000 km
3. ICBM can carry conventional, chemical, or biological weapons but not nuclear warheads

Which of the statements given above are correct?

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

**Q486.** Consider the following statements

1. Buddha asked his followers to practice strict abstinence and asceticism.
2. Buddha’s teachings were written down in Pali.
3. The Abhidhamma Pitaka consists of the main teaching or Dhamma of Buddha.

Which of the statements given above is/are correct?

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

**Q487.** Consider the following statements regarding off-budget borrowing

1. Off-budget borrowings are loans that are taken by the Centre directly through the international markets and financial organization
2. The loan taken under off-budget borrowing is not included in the national fiscal deficit.
3. Fertilizer subsidy is the major expenditure of the Centre for which govt heeds for off-budget borrowing.

Which of the statements given above is/are correct?

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

**Q488.** “Tamenglong orange”, recently received GI tag belongs to:

- (a) Nagaland (b) Manipur  
(c) Mizoram (d) Tripura

**Q489.** Kathaprasangam, seen recently in news, is a performing art of:

- (a) Tamil Nadu (b) Andhra Pradesh  
(c) Telangana (d) Kerala

**Q490.** Consider the following statements regarding SAUBHAGYA Scheme

1. It aims to substitute the use of Kerosene for cooking purposes resulting in a reduction in indoor pollution thereby saving people from health hazards.
2. This scheme was launched by the ministry of petroleum and natural gas.

Which of the statements given above is/are correct?

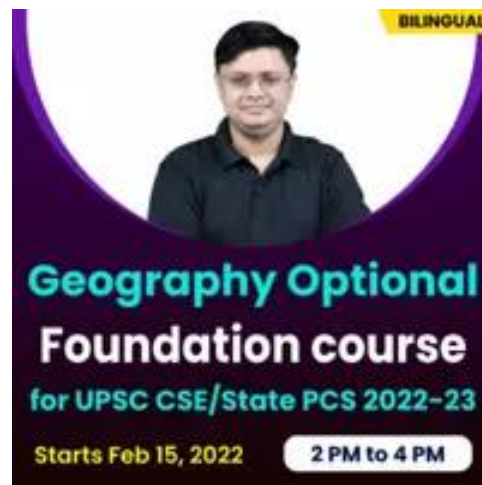
- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

**Q491.** Consider the following statements

1. Donations given to registered parties are not exempted from Income tax.
2. EC has the power to register parties under the Representation of the People Act, 1950.
3. Currently, EC does not have the power to deregister parties that are inactive.

Which of the statements given above is/are correct?

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



**Q492.** Who among the following stated “It is easy to kill individuals but you cannot kill the ideas. Great empires crumbled, while the ideas survived”

- (a) Ram Prasad Bismil (b) Shaheed Bhagat Singh  
(c) Mahatma Gandhi (d) Dr.B R Ambedkar

**Q493.** Consider the following statements regarding National Disaster Management Authority (NDMA)

1. It is a statutory body.
2. It is the nodal agency to tackle bioterrorism attack in India.
3. It is chaired by the Cabinet secretary

Which of the statements given above is/are correct?

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

**Q494.** Consider the following statements

1. The Akash Prime is a medium-range mobile surface-to-air missile (SAM) system developed by the DRDO
2. Akash Missile has an operational range of 27-30 km
3. The Akash system is fully mobile and capable of protecting a moving convoy of vehicles.

Which of the statements given above is/are correct?

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

**Q495.** Consider the following statements

1. Imazethapyr is a herbicide that is effective against weeds but can't be used on normal paddy.
2. Recently launched Pusa Basmati 1979 and Pusa Basmati 1985 varieties are genetically modified rice varieties that can work with Imazethapyr herbicide

Which of the statements given above is/are correct?

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

**Q496.** Which of the following action/s do/does not qualify for disqualifications on the ground of defection?

1. If a member elected on the ticket of a party voluntarily gives up membership of the party or votes in the House against the party's wishes

2. When a legislator who has won his or her seat as an independent candidate joins a political party after the election

3. If a nominated member joins a party during the first six months of his/her nomination

Which of the statements given above is/are correct?

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

**Q497.** Which of the following factors are considered favorable for the formation of tropical cyclones?

1. Warm Sea surface temperature
2. High-level positive vorticity
3. Large convective instability

Select the correct code from below:

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

**Q498.** Consider the following statements

1. COVAX is a global initiative co-led by Coalition for Epidemic Preparedness Innovations (CEPI), GAVI Alliance.WHO and UNICEF

2. Maharashtra is the first state to join Covax Facility

Which of the statements given above is/are correct?

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

**Q499.** Consider the following statements regarding International Criminal Court

1. It is a primary judicial branch of the United Nations.
2. It consists of a panel of 10 judges elected by the UN General Assembly and Security Council.
3. It derives its authority from Rome Statute.

Which of the statements given above is/are correct?

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

**Q500.** Consider the following pairs

1. Chagos Islands: Indonesia
2. Agalega Island: Mauritius

Which of the pair/s given above is/are correct?

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

## Solutions

**S1. Ans.(b)**

**Sol.** The Unique Identification Authority of India (UIDAI) is a statutory authority established in 2016 by the Government of India under the jurisdiction of the Ministry of Electronics and Information Technology, following the provisions of the Aadhaar Act 2016.

The UIDAI is mandated to assign a 12-digit unique identification (UID) number (Aadhaar) to all the residents of India.

The UIDAI was initially set up by the Government of India in January 2009, as an attached office under the aegis of the Planning Commission.

Source:

<https://www.thehindu.com/news/national/inaccessible-uidai-system-leaves-aadhaar-users-in-lurch/article36125632.ece>

**S2. Ans.(a)**

**Sol.** Pneumococcal disease is a name for any infection caused by bacteria called *Streptococcus pneumoniae* or pneumococcus.

In 2020, India's first fully indigenously developed pneumococcal conjugate vaccine "Pneumosil" was launched. It prevents pneumococcal disease. It can protect both children and adults from pneumococcal disease.

Source:

<https://www.cdc.gov/pneumococcal/about/index.html>

Source:

<https://www.thehindu.com/news/national/andhra-pradesh/chief-minister-launches-pcv-immunisation-drive-for-infants/article36109145.ece>

**S3. Ans.(a)**

**Sol.** 1. The first factory Commission **was set up in 1879** to study the problems of workers. In 1891, the first factory act- The Indian factory Act was passed but it remained ineffective. The Second Factory Commission was formed in 1884 to which a memorandum signed by Narayan Meghji Lokhande along with 5300 workers was submitted

2. **All India Trade Union Congress (AITUC), the first national-level trade union in India was formed in 1920** just after the formation of ILO in 1919.

3. Lala Lajpat Rai was elected as its first president who later also attended the ILO Conference **in Geneva in 1926**.

4. Other national-level trade unions were also formed subsequently. The most notable among these was the Indian National Trade Unions Congress (INTUC) in 1947, the Hind Mazdoor Sabha (HMS) in 1948, **Bharatiya Mazdoor Sangh in 1955**, and the Centre of Indian Trade Unions (CITU) in 1970.

Source: <https://www.statecraft.co.in/article/a-history-of-trade-unions-in-india>

<https://www.thehindu.com/news/national/rss-affiliated-trade-union-slams-monetisation-plan/article36105908.ece>

**S4. Ans.(a)**

**Sol.** The Arctic Council was created with the signing of the Ottawa Declaration in 1996 in Canada.

India got the observer status at the Kiruna Ministerial Meeting in 2013. As per the Ottawa declaration, the following 8 countries from the Arctic States: Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, and the United States

Source: <https://www.thehindu.com/opinion/op-ed/climate-change-a-catalyst-for-arctic-cooperation/article36088202.ece>

**S5. Ans.(a)**

**Sol.** The Group of Seven is an inter-governmental political forum consisting of Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States.

The G7 does not have a formal constitution or a fixed headquarters. The decisions taken by leaders during annual summits are non-binding.

Source:

<https://www.thehindu.com/news/international/g7-agreed-taliban-must-allow-people-to-leave-after-august-31-says-johnson/article36086990.ece>

**S6. Ans.(a)**

**Sol.** Originally from Africa, the virus has spread in Europe, Asia, and North America and recently Russian top health agency has warned about the significant increase in West Nile virus in the country too.

It is mainly transmitted through mosquito bites and can lead to fatal neurological disease in humans, although most people infected never develop any symptoms.

There are no vaccines to prevent or medications to treat the West Nile virus in people.

Source: <https://www.livemint.com/science/news/what-is-west-nile-virus-russia-warns-of-increase-in-cases-11630320544215.html>

**S7. Ans.(a)**

**Sol.** The conditions favorable for the formation and intensification of tropical cyclones are:

1. Large sea surface with a temperature higher than 27° C
2. Presence of the Coriolis force
3. Small variations in the vertical wind speed
4. A pre-existing weak low-pressure area or low-level-cyclonic circulation

Upper divergence above the sea level system

Source: <https://www.thehindu.com/opinion/op-ed/tauktae-yaas-and-planning-for-the-next/article36067714.ece>

**S8. Ans.(a)**

**Sol.** Context: The Reserve Bank of India has recently received two new applications under the Guidelines for 'on tap' Licensing of Small Finance Banks

The guidelines for 'on tap' licensing of universal banks and SFBs in the private sector were issued on August 1, 2016, and December 5, 2019, respectively. As per the guidelines, the initial minimum paid-up voting equity capital for a universal bank should be 500 crores. Thereafter, the bank should have a minimum net worth of Rs 500 crore at all times. The minimum paid-up voting capital/net worth for SFBs should be Rs 200 crore.

Source: <https://www.cnbcvt18.com/finance/on-tap-licences-rbi-receives-2-applications-to-start-small-finance-banks-10548211.htm>



**S9. Ans.(d)**

**Sol.** Context: The Supreme Court has recently held that the power of the State to pass an externment order or a direction barring certain people entry to specified areas should be exercised only in “exceptional cases

**Article 19** of the Indian constitution mentions six freedoms that are available to the citizens of India:

- (a) Freedom of speech and expression
- (b) Freedom to assemble peacefully and without arms
- (c) Freedom to form Associations and Unions

**(d) Freedom to move freely throughout the territory of India**

**(e) Freedom to reside and settle in any part of India**

(f) Freedom to practice any profession or to carry on any occupation, trade, or business.

Source: <https://www.indiatoday.in/fyi/story/suoreme-court-right-to-privacy-indian-constitution-fundamental-rights-1031155-2017-08-24>

<https://www.thehindu.com/news/cities/Delhi/externment-orders-must-be-used-only-in-exceptional-cases-sc/article36188413.ece>

**S10. Ans.(d)**

**Sol.** The Sambhar Salt Lake, India's largest inland salt lake is located in Rajasthan. It surrounds the historical Sambhar Lake Town. It is the source of most of Rajasthan's salt production.

Source:

<https://www.thehindu.com/news/national/other-states/sambhar-lake-needs-faster-restoration-says-expert-study/article36129890.ece>

**S11. Ans.(a)**

**Sol.** The Yongbyon is North Korea's main nuclear complex.

Recently the UN atomic agency has observed that North Korea might have resumed its plutonium-producing reprocessing reactor.

Natanz is a nuclear facility in Iran which frequently remains in the news as Iran has recently started increasing the enrichment of uranium.

Source: <https://www.reuters.com/world/middle-east/iran-accelerates-enrichment-uranium-near-weapons-grade-iaea-says-2021-08-17/>

<https://www.bbc.com/news/world-asia-58380547>

**S12. Ans.(b)**

**Sol.** The Partnership for Clean Fuels and Vehicles (PCFV) is the leading global public-private initiative to promote cleaner fuels and vehicles in developing and transition countries. Th

The PCFV provides a range of technical, financial, and networking support for governments and other stakeholders to reduce vehicle emissions, namely fine particulate matter, carbon monoxide, black carbon, and nitrogen oxides, and improve fuel economy.

In 2002, the Partnership for Clean Fuels and Vehicles (PCFV) was set up at the World Summit on Sustainable Development. UNEP hosted the Secretariat with the aim of eliminating leaded petrol and reducing sulphur in fuels globally.

Source: <https://www.unep.org/news-and-stories/press-release/era-leaded-petrol-over-eliminating-major-threat-human-and-planetary>  
[https://climateinitiativesplatform.org/index.php/UNEP\\_Partnership\\_for\\_Clean\\_Fuels\\_and\\_Vehicles\\_\(PCFV\)](https://climateinitiativesplatform.org/index.php/UNEP_Partnership_for_Clean_Fuels_and_Vehicles_(PCFV))

**S13. Ans.(d)**

**Sol.** SGBs are government securities denominated in grams of gold. They are substitutes for holding physical gold. Investors have to pay the issue price in cash and the bonds will be redeemed in cash on maturity. The Bond is issued by Reserve Bank on behalf of the Government of India

An investor/trust can buy 4 Kg/20 Kg worth of gold every year as the ceiling has been fixed on a fiscal year (April-March) basis.

Bonds are sold through offices or branches of Nationalised Banks, Scheduled Private Banks, Scheduled Foreign Banks, designated Post Offices, Stock Holding Corporation of India Ltd. (SHCIL), and the authorized stock exchanges either directly or through their agents.

The tenor of the Bond will be for a period of 8 years with an exit option in the 5th, 6th, and 7th years, to be exercised on the interest payment dates.

Source:

<https://m.rbi.org.in/scripts/FAQView.aspx?Id=109>  
[www.thehindu.com/business/Economy/rbi-unveils-series-vi-gold-bond-scheme/article36142557.ece](https://www.thehindu.com/business/Economy/rbi-unveils-series-vi-gold-bond-scheme/article36142557.ece)

**S14. Ans.(b)**

**Sol.** The government has recently unveiled a four-year National Monetisation Pipeline (NMP) worth an estimated Rs 6 lakh crore. It aims to unlock value in brownfield projects by engaging the private sector, transferring to them revenue rights and not ownership in the projects, and using the funds so generated for infrastructure creation across the country.

The NMP will run a co-terminus with the National Infrastructure Pipeline of Rs 100 lakh crore

In a monetization transaction, the government is basically transferring revenue rights to private parties for a specified transaction period in return for upfront money, a revenue share, and commitment of investments in the assets.

Monetization models which will be used on PPP (Public Private Partnership) basis under this includes Operate Maintain Transfer (OMT), Toll Operate Transfer (TOT), and Operations, Maintenance & Development (OMD).

**OMT and TOT have been used in the highways sector while OMD is being deployed in the case of airports.**

Source:

<https://indianexpress.com/article/explained/explain-ed-what-is-the-governments-plan-with-the-national-monetisation-pipeline-7468258/>

**S15. Ans.(d)**

**Sol.** The Fukutoku-Okanoba volcano is situated about 25 meters (80 feet) below the sea five kilometers north of Japan's **South Iwo Jima Island**, exploded recently sending a thick plume of smoke into the sky. It is an underwater volcano that exploded in the Pacific Ocean.

Remember the location of Iwo Jima islands

Source: <https://www.downtoearth.org.in/news/natural-disasters/japan-volcano-that-exploded-in-mid-august-poses-risk-to-ships-planes-78737>

**S16. Ans.(d)**

**Sol.** As per the recent Asian and Pacific Centre for the Development of Disaster Information Management (APDIM) report *Sand and Dust Storms Risk Assessment in Asia and the Pacific*, Dust deposition impacted large portions of farmland in Turkmenistan (71 percent), Pakistan (49 percent) and Uzbekistan (44 percent). Much of this dust is characterized by high salt content, making it toxic for plants. **It reduces yield, posing a significant threat to the production of irrigated cotton and other crops.**

The deposition of dust on glaciers induces a **warming effect, increasing the melting of ice**, with direct and indirect impacts on society through numerous issues, including food security, energy production, agriculture, water stress, and flood regimes

The impacts of dust storms are not all negative. They can increase the nutrient content in the areas of deposition and benefit vegetation. Dust deposited on water bodies can alter their chemical characteristics, triggering both positive as well as adverse outcomes. Dust particles that carry iron can enrich parts of oceans, **improving the phytoplankton balance** and impacting marine food webs.

Source:

<https://www.downtoearth.org.in/news/pollution/sand-and-dust-storms-impact-over-500-million-in-india-study-78736>

**S17. Ans.(c)**

**Sol.** Dara Shukoh, was the eldest son and heir-apparent of the Mughal emperor Shah Jahan.

His most important works, Majma-ul-Bahrain (Mingling of Two Oceans) and Sirr-i-Akbar (Great Mystery) are devoted to the cause of establishing connections between Hinduism and Islam. He not only discovered commonalities but even said that the foundation of the two religions is the same, which is the belief, "One Reality and One God". As a talented architect, he designed the beautiful Pari Mahal Garden Palace in Srinagar and many other monuments.

Source:

<https://indianexpress.com/article/opinion/columns/dara-shikoh-never-became-emperor-but-he-was-a-true-child-of-india-7479100/>

**S18. Ans.(d)**

**Sol.** The first shipments on a newly-launched railway line from the Myanmar border to the key commercial hub of Chengdu in western China, that provides China a new road-rail transportation channel to the Indian Ocean, were delivered recently.

China-Myanmar Economic Corridor (CMEC) is a number of infrastructure projects supporting connectivity between Myanmar and China. It is an economic corridor of the Belt and Road Initiative.

The infrastructure development plan calls for building road and rail transportation from Yunnan Province in China through Muse and Mandalay to Kyaukpadaung in Rakhine State.

This passage connects the logistics lines of Singapore, Myanmar, and China, and is currently the most convenient land and sea channel linking the Indian Ocean with southwest China,

Source:

<https://www.thehindu.com/news/international/china-opens-first-road-rail-transport-link-to-indian-ocean/article36210663.ece>

**S19. Ans.(a)**

**Sol.**



**S20. Ans.(c)**

**Sol.** Supreme court has recently rolled out a new scheme called 'FASTER' or 'Fast and Secure Transmission of Electronic Records' by which the court would instantly, directly, securely, and electronically transmit bail and other orders to the jail authorities, district courts, and the High Courts.

Source: <https://www.thehindu.com/news/national/just-too-much-that-people-given-bail-by-courts-have-to-wait-for-days-to-be-freed-says-cji/article35358194.ece>

**S21. Ans.(b)**

**Sol.** Special Drawing Rights (SDRs) are an asset, though not money in the classic sense because they can't be used to buy things. The value of an SDR is based on a basket of the world's five leading currencies – the US dollar, euro, yuan, yen, and the UK pound.

The SDR is neither a currency nor a claim on the IMF. Rather, it is a potential claim on the freely usable currencies of IMF members.

Countries can exchange their SDRs for hard currencies with other IMF members. They can also use their SDRs in a range of operations with other countries or to settle financial obligations to the Fund.

SDR allocations are distributed in proportion to countries' participation in the IMF capital, which in turn closely relate to the size of their economies.

**The SDR basket is reviewed every five years, or earlier if warranted, to ensure that the basket reflects the relative importance of currencies in the world's trading and financial systems.**

Source:

<https://www.imf.org/en/About/Factsheets/Sheets/2016/08/01/14/51/Special-Drawing-Right-SDR>

<https://www.imf.org/en/Topics/special-drawing-right/seven-things-you-need-to-know-about-sdr-allocations>

### S22. Ans.(b)

**Sol.** The SAARC was founded in Dhaka on 8 December 1985. Its secretariat is based in Kathmandu, Nepal.

Its member states are Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan, and Sri Lanka. (Myanmar is not part of SAARC but it has observer status) The South Asian Free Trade Area (SAFTA) is an agreement reached on January 6, 2004, at the 12th SAARC summit in Islamabad, Pakistan. It created a free-trade area of 1.6 billion people in Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan, and Sri Lanka to reduce customs duties of all traded goods to zero by the year 2016. The SAFTA agreement came into force on January 1, 2006.

The SAARC maintains permanent diplomatic relations at the United Nations as an observer.

### S23. Ans.(b)

**Sol.** The Black-necked Crane (*Grus nigricollis*) is a medium-sized crane in Asia that breeds on the Tibetan Plateau and remote parts of India and Bhutan.

The black-necked crane is evaluated as Near Threatened on the IUCN Red List of Threatened Species.[1] It is listed on Appendix I of CITES.

Ladakh has recently adopted two endangered species, snow leopard and black-necked crane, as State animal and State bird, two years after it was carved out as a separate Union Territory (UT) from the erstwhile State of J&K.

Source:

<https://www.thehindu.com/news/national/other-states/ladakh-adopts-state-animal-and-bird/article36239008.ece>

### S24. Ans.(c)

**Sol.** Around 30 percent of the 557 raptor species around the world are threatened by extinction to some degree, according to a new study.

The threats to the birds are a result of habitat loss, pollution, human-wildlife conflicts, and climate change, according to the paper. Indonesia had the most raptor species, followed by Colombia, Ecuador, and Peru.

[Raptors prey on a wide range of vertebrates](#) and thus, facilitate long-distance seed dispersal. This indirectly increases seed production and pest control.

The Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia (a.k.a. the Raptors MoU) is an international, legally non-binding agreement to protect migratory birds of prey.

The Raptor MoU covers 76 species of birds of prey, of which over 50 occur in India, including the critically endangered vulture.

India (54th member) signed this MoU on 9 March 2016.

Source: <https://www.livemint.com/>

<https://www.downtoearth.org.in/news/wildlife-biodiversity/raptor-attention-160-species-of-birds-of-prey-endangered-worldwide-78772>

### S25. Ans.(c)

**Sol.** India and Russia are expecting to conclude the bilateral logistics agreement, Reciprocal Exchange of Logistics Agreement (RELOS), and a Navy-to-Navy cooperation memorandum of understanding (MoU) when Russian Defence Minister Gen. Sergei Shoigu visits India later this year. The two sides are also looking at expanding cooperation in Central Asia and the possibility of supplementing bilateral exercises with trilateral and multilateral ones.

Source:

<https://www.thehindu.com/news/national/india-russia-to-expand-cooperation-in-central-asia-says-envoy/article36166715.ece>

### S26. Ans.(d)

**Sol.** The Irrawaddy dolphin (*Orcaella brevirostris*) is a euryhaline (varied saline concentration) species of oceanic dolphin found in discontinuous subpopulations near sea coasts and in estuaries and rivers in parts of the Bay of Bengal and Southeast Asia.

At present, the Irrawaddy dolphins are only found between Chilika and Indonesia in Asia.

Irrawaddy dolphins fall under Schedule I of the Indian Wildlife (Protection) Act, 1972, and are mentioned in the International Union for the Conservation of Nature (IUCN) Red List of Endangered Species.

Source: <https://www.downtoearth.org.in/news/wildlife-biodiversity/irrawaddy-dolphin-found-dead-in-chilika-78777>

**S27. Ans.(a)**

**Sol.** It was on October 14, 1919, full six months after the Jallianwala Bagh massacre, that the Government of India, with approval of the Secretary of State for India, Edwin Montagu, instituted a committee to investigate not only the Jallianwala Bagh incident at Amritsar but also the disturbances which took place in Bombay, Delhi, and Punjab. Accordingly, the Disorders Inquiry Committee (popularly known as Hunter Commission) was set up with Lord William Hunter, a former Solicitor General of Scotland as the president with seven members. These included Justice G C Rankin, Judge of the High Court at Calcutta, W F Rice, ICS, Additional Secretary to the Government of India, Home Department, Major General Sir George Barrow, Commanding the Peshawar Division, Pandit Jagat Narayan, Member of the Legislative Council of the Lieutenant Governor of the United Provinces, Thomas Smith, Member of the Legislative Council of the Lieutenant Governor of the United Provinces, Sir Chimanlal Harilal Setalvad, Advocate of the High Court of Bombay and Sahibzada Sultan Ahmad Khan, Bar-At-Law, Member of Appeals, Gwalior State.

Source:

<https://indianexpress.com/article/explained/explained-what-went-through-the-mind-of-brig-gen-dyer-on-fateful-day-of-jallianwala-bagh-massacre-7474431/>  
<https://www.thehindu.com/news/national/india-brought-back-people-holy-books-from-afghanistan-modi/article36154482.ece>

**S28. Ans.(b)**

**Sol.** Ladakh has recently adopted two endangered species, snow leopard and black-necked crane, as State animal and State bird, two years after it was carved out as a separate Union Territory (UT) from the erstwhile State of J&K. Snow leopard, whose numbers are dwindling worldwide, has been categorized as “vulnerable” in the International Union for Conservation of Nature Red List.

Source:

<https://www.thehindu.com/news/national/other-states/ladakh-adopts-state-animal-and-bird/article36239008.ece>

**S29. Ans.(b)**

**Sol.** Context: The Meghalaya government has “scrapped” an agreement with private power developers to execute the proposed 210 MW Umngot hydroelectric project following protests.

The Umngot River acts as a natural divide between Jhantia and Khasi hills, before finally flowing into Bangladesh. They say that the water of the river is so clear that the boats floating on it look as if they are on a crystal glass surface.

The water of this river is so clear that one can get the clear view of the bottom of the river even from a distance, due to its transparency, the shadows of the boats fall on the bottom of the river, which makes the viewer feel that boats are floating in the air.

Source:

<http://iwai.nic.in/sites/default/files/6209652848NW-106%20Final%20FSR%20Umngot%20River.pdf>  
<https://www.thehindu.com/news/national/other-states/after-protests-meghalaya-dam-project-scrapped/article36219044.ece>

**S30. Ans.(d)**

**Sol.** The "World Social Protection Report 2020-22" released by ILO assesses recent developments in social protection systems worldwide

People in Europe and Central Asia are among the best covered, with 84 percent of their populations having access to at least one benefit.

In Asia and the Pacific as well as the Arab States, just under half of the people are covered while in Africa, only 17.4 percent have access to at least one benefit. Most children around the globe had no social protection, the ILO found. Only one in four children worldwide receive a social protection benefit and only 45 percent of women with newborns get a cash maternity benefit

Source: <https://frontline.thehindu.com/dispatches/over-half-of-the-global-population-lack-social-protection-says-ilo-report/article36245648.ece>

**S31. Ans.(b)**

**Sol.** The Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 were notified on February 25, 2021. The Rules have been notified under the Information Technology Act, 2000. The Act provides for the regulation of electronic transactions and cybercrime. The 2021 Rules replace the Information Technology (Intermediaries Guidelines) Rules, 2011.

**Code of Ethics for online news, OTT platforms and digital media:**

**Norms of Journalistic Conduct of the Press Council of India and the Programme Code under the Cable Television Networks Regulation Act** thereby providing a level playing field between the offline (Print, TV) and digital media.

A **three-level grievance redressal mechanism** has been established under the rules **with different levels of self-regulation**.

Level-I: Self-regulation by the publishers;

Level-II: Self-regulation by the self-regulating bodies of the publishers;

Level-III: Oversight mechanism.

As part of the oversight mechanism, the Ministry of Information and Broadcasting (MIB) will establish an Inter-Departmental Committee to hear grievances not addressed by self-regulatory bodies and also oversee adherence to the code of ethics.

**Blocking of content in case of emergency:** In case of emergencies, the authorised officers may examine digital media content and the Secretary, MIB may pass an interim direction for blocking of such content. The final order for blocking content will be passed only after the approval by the Inter-Departmental Committee. In case of non-approval from the Committee, the content must be unblocked.

Source: <https://prsindia.org/billtrack/the-information-technology-intermediary-guidelines-and-digital-media-ethics-code-rules-2021>

### S32. Ans.(d)

**Sol.** A three-level grievance redressal mechanism has been established under the rules with different levels of self-regulation.

- o Level-I: Self-regulation by the publishers;
- o Level-II: Self-regulation by the self-regulating bodies of the publishers;
- o Level-III: Oversight mechanism

**Self-Regulatory Body:** There may be one or more self-regulatory bodies of publishers. Such a body shall be headed by a retired judge of the Supreme Court, a High Court or independent eminent person and have not more than six members. Such a body will have to register with the Ministry of Information and Broadcasting. This body will oversee the adherence by the publisher to the Code of Ethics and address grievances that have not to be resolved by the publisher within 15 days.

Source: <https://pib.gov.in/PressReleaseDetailm.aspx?PRID=1700749>

### S33. Ans.(b)

**Sol.** ILP is a document that Indian citizens from other states are required to possess in order to enter states like Arunachal Pradesh, Mizoram, Nagaland and Manipur. It is essentially a protective regime to shield the local populations from large-scale migration.

Source: <https://indianexpress.com/article/india/manipur-cm-launches-e-ilp-platform-to-regulate-entry-and-exit-7485452/>

### S34. Ans.(b)

**Sol.** Additional tier-1 bonds are unsecured bonds with no pre-determined maturity date. Here, tier 1 comprises a bank's core capital, disclosed reserves, and equity. AT1 bonds, clubbed under perpetual bonds, offer a call option which means their issuers; usually, banks, can repurchase them from you. Besides, if banks face bankruptcy or run short on capital, they can dismiss the principal amount and not pay interest.

Recently the Securities and Exchange Board of India (Sebi) has capped restrictions on mutual fund (MF) investments in additional tier-1 (AT1) bonds in the wake of the decision of the Reserve Bank of India (RBI) to allow a write-off of Rs 8,400 crore on AT1 bonds issued by Yes Bank Ltd after it was rescued by State Bank of India (SBI).

Source: <https://indianexpress.com/article/explained/explained-why-have-sebis-new-at1-bond-norms-raised-a-storm-among-mutual-funds-7226499/>

### S35. Ans.(d)

**Sol.** The ILP system came into effect in Manipur on January 1, 2020. ILP is a document that Indian citizens from other states are required to possess in order to enter states like Arunachal Pradesh, Mizoram, Nagaland and Manipur. It is essentially a protective regime to shield the local populations from large-scale migration.

Manipur Chief Minister N Biren Singh recently virtually launched the e-ILP platform for effective regulation of the Inner Line Permit (ILP) system in the state. The e-ILP platform will play a vital role in regulating the entry, exit and tracking of visitors who are overstaying beyond the permitted duration. The e-ILP tracking system had been developed to mend the loopholes in the procedures adopted to issue the permit and its tracking system.

Source: <https://indianexpress.com/article/india/manipur-cm-launches-e-ilp-platform-to-regulate-entry-and-exit-7485452/>

### S36. Ans.(c)

**Sol. Context:** The Finance Ministry has recently released an amount of Rs 13,385.70 crore to 25 states for providing grants to the Rural Local Bodies.

This Grant-in-aid is the 1st instalment of Tied grants of the year 2021-22. The grants have been released as per the recommendations of the 15th Finance Commission.

Tied grants are released to the Rural Local Bodies (RLBs) for improving two critical services namely Sanitation and maintenance of open-defecation free (ODF) status and supply of drinking water, rainwater harvesting and water recycling.

Source: <https://www.sify.com/finance/rs-1338570-crore-grant-in-aid-released-to-rural-local-bodies-news-economy-vjbfUdadcda.html>

### S37. Ans.(d)

**Sol. Context:** The Finance Ministry has recently released an amount of Rs 13,385.70 crore to 25 states for providing grants to the Rural Local Bodies

Tied grants are meant to ensure the availability of additional funds to the Rural local bodies over and above the funds allocated by the Centre and the State for sanitation and drinking water under the Centrally Sponsored Schemes.

Out of the total Grant-in-aid allocated for Panchayati Raj institutions, 60 per cent is 'Tied, Grant'. It's earmarked for national priorities like drinking water supply, rainwater harvesting and sanitation.

The remaining 40 per cent is 'Untied Grant' and is to be utilized at the discretion of the Panchayati Raj institutions for location-specific felt needs, except for payment of salaries.

Source: <https://www.zeebiz.com/india/news-finance-ministry-releases-rs-13386-cr-to-25-states-as-grant-to-rural-local-bodies-rlbs-164174>

### S38. Ans.(b)

**Sol.**Context: THE DELHI High Court recently asked the Centre to respond to a petition which stated that the position of Deputy Speaker of Lok Sabha has been vacant for more than two years.

Rule 8 of the Rules of Procedure and Conduct of Business in Lok Sabha casts a primary duty on the Speaker to fix the date for the election.

The Deputy Speaker of the Lok Sabha is not subordinate to the speaker of Lok Sabha, they are responsible for the Lok Sabha and they are the second-highest-ranking legislative officer of the Lok Sabha, the lower house of the Parliament of India. They act as the presiding officer in case of leave of absence caused by death or illness of the Speaker of the Lok Sabha. It is by convention that the position of Deputy Speaker is offered to the opposition party in India

#### Election of The Deputy Speaker :

The Deputy Speaker is elected in the first meeting of the Lok Sabha after the General elections for a term of 5 years from amongst the members of the Lok Sabha.

#### Removal of The Deputy Speaker :

They hold office until either they cease to be a member of the Lok Sabha or they resign. They can be removed from office by a resolution passed in the Lok Sabha by an effective majority of its members. The ineffective majority, majority should be 50% or more than 50% of the total strength of the house after removing the vacancies.

Source: <https://indianexpress.com/article/india/delhi-high-court-seeks-centre-response-on-plea-seeking-ls-dy-speaker-election-7483483/lite/>

### S39. Ans.(a)

**Sol.** Nelapattu Bird Sanctuary is a famous bird sanctuary located near pulicat lake in Andhra Pradesh.

Due to due increase in the storage levels in the reservoir in adjoining areas, there has been an increase in the numbers of migratory birds visiting Pulicat Lake.

Source: <https://www.thehindu.com/news/national/andhra-pradesh/migratory-birds-start-arriving-at-pulicat/article32883285.ece>

### S40. Ans.(a)

**Sol.** Context: Sequencing and analysis of the novel coronavirus, a crucial step in infection containment strategy, declined sharply in India, even as cases of the resultant disease continued to rise.

#### Indian SARS-cov-2 Consortium on Genomics (INSACOG):

The Indian SARS-cov-2 Consortium on Genomics (INSACOG) is a grouping of 10 National Laboratories that was established by the Ministry of Health and Family Welfare, Govt of India on 25/12/2020. INSACOG is since then carrying out genomic sequencing and analysis of circulating COVID-19 viruses, and correlating epidemiological trends with genomic variants. Genomic variants of various viruses are a natural phenomenon and are found in almost all countries.

Source:

<https://pib.gov.in/pressreleaseiframepage.aspx?PRID=1707177>

### S41. Ans.(b)

**Sol.** The newly signed Karbi Anglong accord promises to ensure the greater devolution of autonomy to the Karbi Anglong Autonomous Council, protection of identity, language, culture, etc. of Karbi people, and focuses the development of the Council area, without affecting the territorial and administrative integrity of Assam.

Recently many indigenous and ethnic groups in Karbi-Anglong have come out against the accord saying that their demand remains for the creation of an 'autonomous state' under the provision of Article 244(A) of the Constitution.

The 22<sup>nd</sup> Amendment of the Constitution Act, 1969, inserted new article 244A in the Constitution to empower Parliament to enact a law for constituting an autonomous State within the State of Assam and also to provide the autonomous State with Legislature or a Council of Ministers or both with such powers and functions as may be defined by that law.

#### All other options:

1. 4<sup>th</sup> constitutional amendment Restrictions on property rights and inclusion of related bills in Schedule 9 of the constitution.
2. 21<sup>st</sup> constitutional amendment -Include Sindhi as an official language.
3. 36<sup>th</sup> constitutional amendment - Formation of Sikkim as a State within the Indian Union

Source:

<https://www.news18.com/news/explainers/explained-what-is-the-karbi-anglong-peace-accord-and-how-does-it-help-cause-of-peace-in-assam-4171187.html>  
<https://indianexpress.com/article/opinion/editorials/assam-government-karbi-anglong-insurgent-groups-7493013/>

S42. Ans.(b)

**Sol.** Hycean worlds are exoplanets that are composed of water-rich interiors with massive oceans underlying hydrogen-rich atmospheres; with densities between those of rocky super-Earths and larger mini-Neptunes.

**These exoplanets can be optimal candidates in the search for exoplanetary habitability.**

**Recently a study** found that in certain conditions these planets could support life.

These planets can be up to 2.6 times larger than Earth and have atmospheric temperatures up to nearly 200 degrees Celsius, but their oceanic conditions could be similar to those conducive for microbial life in Earth's oceans.

Such planets also include tidally locked 'dark' Hycean worlds that may have habitable conditions only on their permanent night sides, and 'cold' Hycean worlds that receive little radiation from their star.

Source: <http://www.sci-news.com/astronomy/hycean-worlds-10004.html>

<https://www.indiatoday.in/science/story/signs-of-life-beyond-the-solar-system-could-be-detected-within-two-to-three-years-1847084-2021-08-30>

S43. Ans.(b)

**Sol.** V.O. Chidambaram Pillai, popularly known as Tamilzhan, was an Indian freedom fighter born on 5 September 1872 in Ottapidaram, Tirunelveli district of Tamil Nadu State of India. He was a prominent lawyer and a trade union leader. He gets credit for launching the first indigenous Indian shipping service between Tuticorin and Colombo with the Swadeshi Steam Navigation Company, competing against British ships. He was an Indian National Congress (INC) member, later charged with sedition by the British government and sentenced to life imprisonment; his barrister license was stripped. He is also known as "Kappalottiya Tamilar".

He entered politics in 1905 following the partition of Bengal, joining the Indian National Congress and taking a hardliner stand. He also presided at the Salem District Congress session.

V.O.C., drawing inspiration from Ramakrishnananda, a disciple of Swami Vivekananda, **resorted to Swadeshi work. Following requests by local citizens, he initiated steps to break the monopoly of British shipping in the coastal trade with Ceylon.**

**On 12 November 1905, V.O.C. formed the Swadeshi Steam Navigation Company, by purchasing two steamships 'S.S. Gaelia' and 'S.S. Lawoe', thanks to the assistance and support of Lokamanya Bal Gangadhar Tilak and Aurobindo Ghose.** The ships commenced regular service between Tuticorin and Colombo (Srilanka), against the opposition of the British traders and the Imperial Government. V.O.C. was thus laying the foundation for comprehensive shipping industry in the country, more than just a commercial venture.

Until then the commerce between Tuticorin and Colombo was a monopoly enjoyed by the British India Steam Navigation Company (BISN). This was later to be merged with P&O lines and its Tuticorin agents, A & F. Harvey.

Source: <https://www.hindustantimes.com/india-news/tamil-nadu-honours-freedom-fighter-vo-chidambaram-pm-says-he-stood-for-selfreliance-101630866940290.html>

S44. Ans.(d)

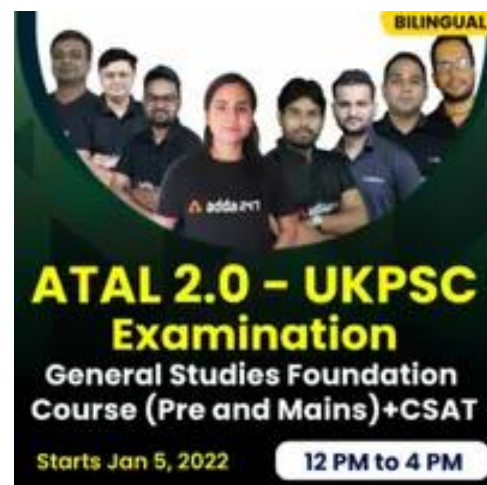
**Sol.** Context: Various pressure groups in Assam groups recently held a rally against the Assam Cattle Preservation Act, 2021, stating that the law was an assault on the farm economy in the name of religion.

What does the constitution say about cow slaughter?

After much debate, the Constitution's Drafting Committee agreed upon a compromise: prohibition of cow slaughter would find a place in the Constitution, but not as an enforceable fundamental right. It would be included as a "Directive Principle of State Policy", which was meant to guide the state in policymaking, but could not be enforced in any court.

Furthermore, in its final form, **this Directive Principle (Article 48 of the Constitution) carefully excluded the question of religious sentiments. Nor did it require the state to ban cow slaughter outright.** Instead, under the heading "Organisation of Agriculture and Animal Husbandry", Article 48 says the state shall "organize agriculture and animal husbandry on modern and scientific lines and shall, in particular, take steps for preserving and improving the breeds, and prohibiting the slaughter, of cows and calves **and other milch and draught cattle.**"

Source: <https://www.thehindu.com/opinion/lead/cow-slaughter-and-the-constitution/article18683942.ece>



**S45. Ans.(d)**

**Sol.** Context: Recently the National Bureau of Animal Genetic Resources (NBAGR) has recognized the Manda buffalo.

The National Bureau of Animal Genetic Resources (NBAGR) has already given recognition to the following breeds for their conservation as the below were about to get extinct in 2010.

Four breeds of cattle — Binjarpuri, Motu, Ghumusari, and Khariar

Breeds of buffalo — Chilika and Kalahandi

Breed of sheep, -Kendrapada

Source:

<https://www.thehindu.com/news/national/other-states/koraputs-manda-buffalo-gets-unique-indigenous-tag/article36319950.ece>

**S46. Ans.(c)**

**Sol.** The National Bureau of Animal Genetic Resources (NBAGR) has recently recognized the Manda buffalo, found in the Eastern Ghats and plateau of Koraput region of Odisha, as the 19th unique breed of buffaloes found in India.

1. The Manda are resistant to parasitic infections, less prone to diseases, and can live, produce and reproduce at low or nil input systems.

2. The body color of these buffaloes is ash grey and grey with copper-colored hairs. Some animals are silver-white in color.

3. Manda buffaloes get matured at around 3 years and drop the first calf at around 4 years. Every 1.5 to 2 years they give birth to a calf for the whole life of around 20 years

4. The average calving interval of these buffaloes is 18 months with a gestation period of 307 days.

5. These animals are famous for longevity, hard work, and length of working life.

Source:

[http://www.buffalopedia.cirb.res.in/index.php?option=com\\_content&view=article&id=78&Itemid=83&lang=en](http://www.buffalopedia.cirb.res.in/index.php?option=com_content&view=article&id=78&Itemid=83&lang=en)  
<https://www.thehindu.com/news/national/other-states/koraputs-manda-buffalo-gets-unique-indigenous-tag/article36319950.ece>

**S47. Ans.(c)**

**Sol.** The Indian Army contingent will participate in a two-week multinational military exercise named 'ZAPAD 2021' at Nizhny in Russia. It is one of the theatre-level exercises of the Russian Armed Forces and will focus primarily on operations against terrorists. Over a dozen countries from the Eurasian and South Asian Regions will participate in the exercise. Nine are Participating countries which include Mongolia, Armenia, Kazakhstan, Tajikistan, Kyrgyzstan, Serbia, Russia, India, and Belarus. Eight countries are Observers which include Pakistan, China, Vietnam, Malaysia, Bangladesh, Myanmar, Uzbekistan, and Sri Lanka. Source:

Source: <https://www.thehindu.com/news/national/200-army-personnel-to-take-part-in-multinational-exercise-zapad-2021-in-russia/article36236065.ece>

**S48. Ans.(c)**

**Sol. Context:** Dholavira, the archaeological site of a Harappan-era city, received the UNESCO world heritage site tag on Tuesday. While Dholavira became the fourth site from Gujarat and 40th from India to make the list, it is the first site of the ancient Indus Valley Civilisation (IVC) in India to get the tag.

Dholavira is located in the Great Rann of Kutch, which surrounds the Khadir island

Remains of a copper smelter indicate of Harappans, who lived in Dholavira, knew metallurgy. It is believed that traders of Dholavira used to source copper ore from present-day Rajasthan and Oman and UAE and export finished products. It was also a hub of manufacturing jewelry made of shells and semi-precious stones, like agate, and used to export timber.

Beads peculiar to the Harappan workmanship have been found in the royal graves of Mesopotamia, indicating Dholavira used to trade with the Mesopotamians. Its decline also coincided with the collapse of Mesopotamia, indicating the integration of economies

Source:

<https://indianexpress.com/article/explained/dholavira-gujarat-unesco-harappa-indus-valley-civilisation-7425543/>

**S49. Ans.(a)**

**Sol.** The Bill is set to replace the IBC Amendment Ordinance 2021 promulgated in April which introduced pre-packs as an insolvency resolution mechanism for micro, small and medium enterprises (MSMEs) with defaults up to Rs 1 crore.

Distressed corporate debtors are permitted to initiate a pre-packaged insolvency resolution process (PIRP) with the approval of two-thirds of their creditors to resolve their outstanding debt under the new mechanism. Cds are also required to submit a base resolution plan at the time of the initiation of the PIRP.

Unlike in the case of the corporate insolvency resolution process (CIRP), debtors remain in control of their distressed firm during the PIRP.

Source:

<https://www.livelaw.in/news-updates/ibc-amendment-bill-2021-passed-in-lok-sabha-178327>  
<https://indianexpress.com/article/business/insolvency-bill-on-pre-pack-resolution-of-msmes-tabled-7423793/>



**S50. Ans.(b)**

**Sol.** The National Medicinal Plants Board (NMPB), Ministry of AYUSH has launched a national campaign to promote the cultivation of medicinal plants in the country as part of the Azadi Ka Amrit Mahotsav.

This will help in increasing the income of farmers and realize the dream of Green India. Under this campaign, cultivation of medicinal plants will be done on 75,000 hectares of land in the next year across the country. The program has been started from Saharanpur in UP and Pune in Maharashtra

Source: <https://newsonair.com/2021/09/02/medicinal-plants-to-be-cultivated-on-75-thousand-hectares-of-land-in-the-country/>

**S51. Ans.(d)**

**Sol.** Recently the Tamil Nadu government tabled a Bill in the Legislative Assembly to amend the Tamil Nadu Shops and Establishments Act, 1947 by adding a subsection 22A for mandatorily providing seating facilities for the staff.

The proposed Section 22-A to the Act reads: "The premises of every establishment shall have suitable seating arrangements for all employees so that they may take advantage of any opportunity to sit which may occur in the course of their work and thereby avoid 'on their toes' situation throughout the working hours." The Bill said that persons employed in shops and establishments in the State "are made to stand throughout their duty time" resulting in varied health issues. "Considering the plight of the employees who are on their toes throughout their duty time, it is felt necessary to provide seating facility to all the employees of the shops and establishments,"

Source:

<https://www.thehindu.com/news/national/tamil-nadu/tn-tables-bill-mandating-establishments-to-provide-seating-for-employees/article36317057.ece>

**S52. Ans.(d)**

**Sol.** El Niño and La Niña, the two natural climate phenomena occurring across the tropical Pacific Ocean, influence the weather conditions all over the world.

While the El Niño period is characterised **by warming or increased sea surface temperatures in the central and eastern tropical Pacific Ocean**, a La Niña event **causes the water in the eastern Pacific Ocean to be colder than usual**. Together, they are called ENSO or El Niño-Southern Oscillation.

El Niño and La Niña disturb the temperature and rainfall patterns which can eventually affect weather, wildfires, ecosystems, and economies.

Source:

[https://www.nsf.gov/news/news\\_summ.jsp?cntn\\_id=296344](https://www.nsf.gov/news/news_summ.jsp?cntn_id=296344)

<https://indianexpress.com/article/explained/explained-supercomputer-simulates-what-will-happen-to-el-nino-la-nina-in-a-warmer-world-results-are-worrying-7489557/>

**S53. Ans.(a)**

**Sol.** National Clean Air Programme, a mid-term, five-year action plan was launched in 2019 by the Ministry of Environment, Forest and Climate Change.

NCAP aims to achieve a tentative national level target of a 20%-30% reduction of particulate matter (PM10 and PM2.5) concentration by 2024 across the country. Further, it aims to implement measures for the prevention, control, and abatement of air pollution

Source: <https://newsonair.com/2021/09/08/prana-portal-launched-to-regulate-air-pollution-in-132-cities/>

**S54. Ans.(a)**

**Sol.** Pollen grains are microscopic structures, which bear androecium – **a male reproductive organ of a flower**, but when inhaled by humans, they may strain the respiratory system and cause allergies. Pollen found suspended in air can cause widespread upper respiratory tract and nasobronchial allergy with manifestations like asthma, seasonal rhinitis, and bronchial irritation.

Pollen is considered a major outdoor airborne allergen responsible for allergic rhinitis, asthma, and atopic dermatitis in humans.

Pollen calendars are graphical representations of the time dynamics of airborne pollen taxa in a certain geographic area. They are location-specific, with concentrations strongly tied to the flora found in the area. They provide easy-to-understand visual information on diverse airborne pollen species that are present throughout the year, as well as their seasonality, in a single image.

Recently Chandigarh has released its first pollen calendar.

Source:

<https://indianexpress.com/article/explained/explained-what-is-a-pollen-calendar-and-how-will-it-help-prevent-allergies-7494591/>

**S55. Ans.(b)**

**Sol.** Goods and Services Tax Appellate Tribunal is the forum of the second appeal in GST laws and the first common forum of dispute resolution between Centre and States.

A person unhappy with the decision of the First Appellate Authority or the Revisional Authority can appeal against the decision to the National Bench of the Appellate Tribunal (Appellate Tribunal) or GSTAT.

It holds the same powers as the court and is deemed Civil Court for trying a case.

The National Bench of the Appellate Tribunal shall be situated at New Delhi. As per the new proposal According to the proposal which will be placed before the Council on July 21, three benches of the national appellate tribunal would be set up at Mumbai, Chennai and Kolkata.

GSTAT shall be presided over by its President and shall consist of one Technical Member (Centre) and one Technical Member (State).

Every appellant must pay – The full amount from the original order that he agrees to (including tax, interest, fine, fee and penalty) and 20% of the amount of tax in dispute.

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=1561067>

<https://cleartax.in/s/appeals-gst-national-appellate-tribunal>

[https://economictimes.indiatimes.com/news/economy/policy/national-gst-appellate-tribunal-on-anvil-council-to-decide-on-july-21/articleshow/65058659.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](https://economictimes.indiatimes.com/news/economy/policy/national-gst-appellate-tribunal-on-anvil-council-to-decide-on-july-21/articleshow/65058659.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst)

### S56. Ans.(a)

**Sol.** Goods & Services Tax Council is a constitutional body for making recommendations to the Union and State Government on issues related to Goods and Service Tax. Article 279A says that President shall by order constitute a Council to be called the Goods and Services Tax Council. Its Chairman is Union Finance Minister of India with ministers nominated by the state governments as its members.

The council is devised in such a way that the centre will have 1/3rd voting power and the states have 2/3rd. The decisions are taken by 3/4th majority.

Source: <https://www.thehindu.com/business/lack-of-gst-details-stumps-economists/article36261050.ece>

### S57. Ans.(c)

**Sol.** Bhogdoi is one of the south bank sub-tributaries of the mighty river Brahmaputra. Bhogdoi, known in its upper part as Disoi originates at Long Samtang of Mukokchung district of Naga Hills.

In Nagaland, the river has a hilly course in the Tertiary Naga-Patkai ranges (Mukokchung district). In Assam, it flows through the southern Brahmaputra plains of Jorhat District. The Bhogdoi basin enjoys a sub-tropical monsoon climate.

It was in news due to pollution in the flood basin.



Fig. 1. Location map of the study area

Source:

<https://www.indianjournals.com/ijor.aspx?target=ijor:ijrss&volume=4&issue=3&article=006>

<http://www.igs.org.in:8080/portal/igc-proceedings/igc-2019-surat-proceedings/TH13/TH13-40.pdf>

### S58. Ans.(c)

**Sol.** Context: Recently the Tamil Nadu State government has announced that a 500-sqkm dugong conservation reserve will soon be set up in Palk Bay.

#### Dugong (*Dugong dugon*):

1. The dugong (*Dugong dugon*), also called the sea cow, is a herbivorous mammal.
2. They are found in India in the Gulf of Mannar, Gulf of Kutch, Palk Bay, and the Andaman and Nicobar Islands.
3. Dugongs are listed as **Vulnerable** on the IUCN Red List of Threatened Species.
4. The loss of seagrass habitats, water pollution and degradation of the coastal ecosystem due to developmental activities have made life tough for these slow-moving animals. Dugongs are also victims of accidental entanglement in fishing nets and collision with boats, trawlers.
5. Internationally, dugongs are listed in Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which prohibits the trade of the species and its parts.

Source:

<https://indianexpress.com/article/technology/science/in-dias-first-dugong-conservation-reserve-7494506/>

### S59. Ans.(d)

**Sol.** PRANA or the Portal for Regulation of Air-pollution in Non-Attainment cities under the National Clean Air Programme (NCAP) would support tracking of the physical and financial status of city air action plan implementation. It would also disseminate information on air quality to the public while also providing comprehensive information related to NCAP programme details, progress, city action plans, implementation updates by city/state/ national level agencies, air quality data, and trends, etc.

Source: <https://newsonair.com/2021/09/08/prana-portal-launched-to-regulate-air-pollution-in-132-cities/>

### S60. Ans.(d)

**Sol.** The theme for the 13th BRICS (Brazil, Russia, India, China, South Africa) Summit under the chairmanship of India will be 'BRICS @ 15: Intra-BRICS cooperation for continuity, consolidation and consensus'. The summit this year coincides with the 15th anniversary of the BRICS.

Recently Bangladesh, the United Arab Emirates (UAE) and Uruguay have joined as the new members of the BRICS New Development Bank (NDB). So membership to NDB is not restricted to its members.

Source: <https://newsonair.com/2021/09/08/chinese-president-xi-jinping-to-attend-13th-brics-summit/>

**S61. Ans.(d)**

**Sol.** The National Commission for Women was set up as a statutory body in January 1992 under the National Commission for Women Act, 1990.

On 31st January 1992, the first commission was constituted and was chaired by Jayanti Patnaik. **The first male member in the NCW ( National Commission for women) was Alok Rawat IAS.**

The commission consists of a chairperson, a member secretary, and five other members. The chairperson of the NCW is nominated by the Central Government. The Central Government also nominates the member secretary.

The five members nominated by the Central Government should be individuals with ability, standing, and integrity. They should have experience in law, legislation, management, women's voluntary organizations, economic social development, and so on.

It provides the government with advice to make policies and laws that are more prone to protect and safeguard the rights of women. The commission also has the powers that are vested upon a civil court.

Source: <https://blog.ipleaders.in/national-commission-women-working-composition-functions/>  
<http://ncw.nic.in/commission/about-us/brief-history>

**S62. Ans.(b)**

**Sol.** The **Central Pollution Control Board (CPCB)**, the statutory organization, was constituted in September 1974 under the Water (Prevention and Control of Pollution) Act, 1974. Further, CPCB was entrusted with the powers and functions under the Air (Prevention and Control of Pollution) Act, 1981. It serves as a field formation and also provides technical services to the Ministry of Environment and Forests of the provisions of the Environment (Protection) Act, 1986

**Central Pollution Control Board** is executing a nationwide program of ambient air quality monitoring known as the National Air Quality Monitoring Programme (NAMP).

Source: <https://cpcb.nic.in/Introduction/>  
<https://cpcb.nic.in/about-namp/>  
<https://www.thehindu.com/news/national/air-quality-improved-in-104-cities-in-2020-says-environment-minister/article36345153.ece>

**S63. Ans.(b)**

**Sol.** National Clean Air Programme (NCAP) is a long-term, time-bound, national-level strategy to tackle the air pollution problem across the country in a comprehensive manner with targets to achieve 20% to 30% reduction in Particulate Matter concentrations **by 2024 in 122 cities, keeping 2017 as the base year for the comparison of concentration.** These are “non-attainment” cities as they didn’t meet ambient air quality standards under the National Air Quality Management Programme.

Source: <https://www.thehindu.com/news/national/air-quality-improved-in-104-cities-in-2020-says-environment-minister/article36345153.ece>  
<https://pib.gov.in/PressReleasePage.aspx?PRID=1655203>

**S64. Ans.(d)**

**Sol.** In 2015, Iran agreed on a long-term deal on its nuclear program with a group of world powers known as the P5+1 - the US, UK, France, China, Russia, and Germany.

Signed in 2015 by Iran and several world powers, including the United States, the JCPOA placed significant restrictions on Iran’s nuclear program in exchange for sanctions relief. President Trump withdrew the United States from the deal in 2018, claiming it failed to curtail Iran’s missile program and regional influence

In 2021, President Joe Biden said the United States will return to the deal if Iran comes back into compliance, though Iran’s leaders have insisted that Washington lift sanctions first.

Source: <https://www.cfr.org/backgrounder/what-iran-nuclear-deal>  
<https://www.bbc.com/news/world-middle-east-33521655>

**S65. Ans.(c)**

**Sol.** Recently Cabinet Committee on Economic Affairs (CCEA) chaired by the Hon'ble Prime Minister Shri Narendra Modi has approved the increase in the Minimum Support Prices (MSP) for all mandated Rabi crops for Rabi Marketing Season (RMS) 2022-23.

The increase in MSP for Rabi Crops for RMS 2022-23 is in line with the Union Budget 2018-19 announcement of fixing the MSPs at a level of at least 1.5 times of the all-India weighted average cost of production. The list of rabi crops on which MSP is announced as in the sequence of expected returns to farmers are-

**wheat and rapeseed & mustard (100% each), followed by lentil (79%); gram (74%); barley (60%); safflower (50%).**

*Ragi is a Kharif crop and MSP is not announced for areca nut.*

**Is MSP given for all crops?**

As of now, CACP recommends MSPs of **23 commodities**, which comprise 7 cereals (paddy, wheat, maize, sorghum, pearl millet, barley, and ragi), 5 pulses (gram, tur, moong, urad, lentil), 7 oilseeds (groundnut, rapeseed-mustard, soyabean, seasmum, sunflower, safflower, nigerseed), and 4 commercial crops (copra, sugarcane, raw cotton, and jute).

Source: <https://pib.gov.in/PressReleasePage.aspx?PRID=1753108>

**S66. Ans.(b)**

**Sol.** The Commission for Agricultural Costs & Prices (CACP) is an attached office of the Ministry of Agriculture and Farmers Welfare, Government of India. It came into existence in January as the Agricultural Prices Commission and was given its present name in 1985. It is an advisory body and its recommendations are not binding on Govt.

CACP recommends MSPs of 23 commodities, which comprise 7 cereals (paddy, wheat, maize, sorghum, pearl millet, barley, and ragi), 5 pulses (gram, tur, moong, urad, lentil), 7 oilseeds (groundnut, rapeseed-mustard, soyabean, seasmum, sunflower, safflower, nigerseed), and 4 commercial crops (copra, sugarcane, cotton and raw jute).

Source: <https://cacp.dacnet.nic.in/content.aspx?pid=32>

**S67. Ans.(b)**

**Sol.** The Cabinet Committee on Economic Affairs, chaired by Prime Minister announces MSP for various crops. The recommendations for deciding MSP prices are provided by The Commission for Agricultural Costs & Prices (CACP) is an attached office of the Ministry of Agriculture and Farmers Welfare

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=1725612>

**S68. Ans.(d)**

**Sol.** In 2015, the Russian energy major Gazprom and five other European firms decided to build Nord Stream 2 gas pipeline. The 1,200-km pipeline will run from Ust-Luga in Russia to Greifswald in Germany through the Baltic Sea and will carry 55 billion cubic meters of gas per year.

Source:

<https://indianexpress.com/article/explained/nord-stream-pipeline-us-germany-7417589/>

**S69. Ans.(c)**

**Sol.** Guillain-Barré syndrome (GBS) is a rare neurological disorder in which the body's immune system mistakenly attacks part of its peripheral nervous system—the network of nerves located outside of the brain and spinal cord.

The exact cause of GBS is not known. Researchers don't know why it strikes some people and not others. It is not contagious or inherited.

The affected person's immune system begins to attack the body itself. It is thought that, at least in some cases, this immune attack is initiated to fight infection and that some chemicals on infecting bacteria and viruses resemble those on nerve cells, which, in turn, also become targets of attack.

Since the body's own immune system does the damage, GBS is called an autoimmune disease ("auto" meaning "self"). Normally the immune system uses antibodies (molecules produced in an immune response) and special white blood cells to protect us by attacking infecting microorganisms (bacteria and viruses). In Guillain-Barré syndrome, however, the immune system mistakenly attacks the healthy nerves.

Recently, some countries worldwide reported an increased incidence of GBS following infection with the Zika virus.

Source: <https://www.ninds.nih.gov/Disorders/Patient-Caregiver-Education/Fact-Sheets/Guillain-Barr%C3%A9-Syndrome-Fact-Sheet>  
<https://ummid.com/news/2021/september/09.09.2021/guillain-barre-syndrome-is-rare-side-effect-of-astrazeneca-covid-shot.html>

**S70. Ans.(d)**

**Sol.** Natanz, Farad, and Arak all are nuclear facility places located in Iran

**Changes agreed under Iran deal to limit nuclear programme**



Source: <https://www.bbc.com/news/world-middle-east-33521655>

**S71. Ans.(a)**

**Sol.** Stubble burning is a significant contributor to atmospheric pollution, coming in 3rd after industrial and vehicular emissions. In Asian countries such as China, around 60 per cent of total biomass emissions come from stubble burning. At the same time, globally, it constitutes about one-fourth of the total biomass burning (inclusive of forest fires).

Burning stubble is detrimental to the soil's health, stripping it of essential nutrients such as nitrogen, phosphorus, and potassium (NPK). It raises soil temperature to about 42°C, thus displacing or killing important microorganisms up to a depth of about 2.5 cm. Stubble burning releases VOCs and NO<sub>x</sub> which combine to form ground-level ozone. Ozone is formed in the immediate atmosphere by the reaction of nitrogen oxide and volatile organic compounds in the presence of solar radiation. Ground-level ozone affects plant's metabolism, penetrates, and destroys leaves causing serious effects on crops in the northern parts of India.

Source:

<https://www.sciencedirect.com/science/article/pii/S2666765720300119>

<https://www.thehindubusinessline.com/opinion/from-waste-to-wealth-an-alternative-to-punjab-crop-stubble-burning/article36375696.ece>

**S72. Ans.(a)**

**Sol.** Section 29-A of the RPA Act 1950 was sought from all the political parties in the form of a memorandum that the rules and regulations of any such party shall bear true faith and allegiance to the Constitution of India and to the principles of Socialism, Secularism and Democracy and would also uphold the Sovereignty, Unity and integrity of India.

Recently a **faction** of Shiromani Akali Dal (Badal) has filed a petition to the high court in response to the alleged action of SAD to contest elections for the religious body Shiromani Gurdwara Parbandhak Committee (SGPC).

The petition says that it had submitted a memorandum to the Election Commission of India in the year 1989 in which they declared that they adopt the Constitution of Shiromani Akali Dal and declared that they shall adhere to the said provision of Section 29-A of the People Representation Act, 1950, whereas no such amendment was made in the original Constitution of Akali Dal which is not secular in nature.

Source: [https://indianexpress.com/article/india/punjab-bail-sad-sukhbir-badal-dual-constitution-case-7496852/?utm\\_source=Taboola\\_Recirculation&utm\\_medium=RC&utm\\_campaign=IE](https://indianexpress.com/article/india/punjab-bail-sad-sukhbir-badal-dual-constitution-case-7496852/?utm_source=Taboola_Recirculation&utm_medium=RC&utm_campaign=IE)

**S73. Ans.(d)**

**Sol.** National Statistical Office (NSO) has launched the Periodic Labour Force Survey (PLFS) in April 2017.

It presents a quarterly bulletin for revealing the unemployment rate in India

The unemployment rate for all ages in urban areas rose to 10.3 per cent in October-December 2020 as compared to 7.9 per cent in the corresponding months a year ago, showed a recently periodic labour force survey by the National Statistical Office (NSO).

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=1753531>

**S74. Ans.(b)**

**Sol.** The Periodic Labour Force Survey (PLFS) gives estimates of Key employment and unemployment Indicators like the Labour Force Participation Rates (LFPR), Worker Population Ratio (WPR), Unemployment Rate (UR), etc. These indicators and the and 'Current Weekly Status' are defined as follows:

**1. Labour Force Participation Rate (LFPR):** LFPR is defined as the percentage of persons in the labour force (i.e. working or seeking or available for work) in the population.

**2. Worker Population Ratio (WPR):** WPR is defined as the percentage of employed persons in the population.

**3. Unemployment Rate (UR):** UR is defined as the percentage of persons unemployed among the persons in the labour force.

**4. Activity Status- Current Weekly Status (CWS):** The activity status determined on the basis of a reference period of the last 7 days preceding the date of the survey is known as the current weekly status (CWS) of the person.

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=1753531>

**S75. Ans.(c)**

**Sol.** A group of researchers who went out to collect samples off the coast of Greenland recently found themselves on a tiny, uninhabited and previously unknown island. Measuring 60×30 metres and with a peak of three metres above sea level, it has now become the new northernmost piece of land on Earth. **Before this, Oodaaq was marked as the Earth's northernmost terrain.**

**LOCATION OF MOST NORTHERN ISLAND**

The northernmost island in the world has been discovered by accident, according to scientists who were collecting samples off coast of Greenland



Source:

<https://indianexpress.com/article/explained/new-island-near-greenland-qeqertaq-avannarleq-7497856/>

**S76. Ans.(a)**

**Sol.** India's first Dugong conservation reserve will be built in Tamil Nadu for the conservation of Dugong, a marine animal that has been enlisted vulnerable to extinction on a global scale by the World Conservation Union (IUCN). Government of Tamil Nadu will set up India's first Dugong Conservation Reserve in the Palk Bay."

Dugong or the sea cow is the State animal of Andaman & Nicobar Islands. This endangered marine species survive on seagrass and other aquatic vegetation found in the area. It is the only herbivorous mammal that is strictly marine and is the only extant species in the family Dugongidae.

Source: <https://newsonair.com/2021/09/09/first-dugong-conservation-reserve-to-be-built-in-india/>

**S77. Ans.(a)**

**Sol.** Dugongs occur in tropical and subtropical waters around the world.

Distributed in shallow tropical waters in the Indo-Pacific region, in India, they are found in the Gulf of Kutch, Gulf of Mannar, Palk Bay, and Andaman & Nicobar Islands.

Source: <https://newsonair.com/2021/09/09/first-dugong-conservation-reserve-to-be-built-in-india/>

**S78. Ans.(c)**

**Sol.** The Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) scheme aims to cover six crore people in rural areas to be digitally literate.

Minister of State for Electronics and IT Rajeev Chandrasekhar recently launched the drive under PMGDISHA and announced the campaign for 100 per cent digital literacy at all digital villages at an event organised by CSC SPV under 'Azadi Ka Amrit Mahotsav' celebrations.

Source: <https://telecom.economictimes.indiatimes.com/news/csc-pushes-for-covering-entire-digital-village-under-pmgdisha/86068982>

**S79. Ans.(b)**

**Sol.** TRIPS came into force in 1995, as part of the agreement that established the World Trade Organisation (WTO). It is applicable to all WTO members.

TRIPS establishes minimum standards for the availability, scope, and use of seven forms of intellectual property namely, trademarks, copyrights, geographical indications, patents, industrial designs, layout designs for integrated circuits, and undisclosed information or trade secrets.

It applies basic international trade principles regarding intellectual property to member states.

The TRIPS Agreement is also described as a “Berne and Paris-plus” Agreement.

Source: <https://www.thehindu.com/business/Industry/india-urges-early-trips-waiver-ruling-on-covid-shots-at-wto/article36296399.ece>

**S80. Ans.(c)**

**Sol.** NSO launched PLFS in April 2017. On the basis of Periodic labour force survey PLFS, a quarterly bulletin is brought out giving estimates of labour force indicators namely UR, Worker Population Ratio (WPR), Labour Force Participation Rate (LFPR), distribution of workers by broad status in employment and industry of work in **Current Weekly Status (CWS)**.

**Important Points:**

The estimates of unemployed persons in CWS give an average picture of unemployment in a short period of seven days during the survey period. In the CWS approach, a person is considered unemployed if he/she did not work **even for one hour on any day** during the week but sought or was available for work at least for one hour on any day during the period.

Source: <https://www.freepressjournal.in/business/unemployment-rate-rises-to-103-in-october-december-2020-nso-survey>

**S81. Ans.(b)**

**Sol.** The MS/Sinosoar-Etechwin a Chinese joint venture (JV) was awarded the contract to install a hybrid renewable energy system on Nainativu, Delft, and Analaitivu islands off the Jaffna Peninsula in Palk strait. The contract is implemented by the Ceylon Electricity Board and funded by the Asian Development Bank (ADB). Reportedly, India had offered a \$12 million grant to execute the same project. Citing security concerns as the project site's proximity lies close to the Indian coastline, India has registered a protest over the selection of the Chinese company to execute the project.

Delft Island is one of the closest points to India from northern Sri Lanka. The three islands, where the energy systems are coming up, are home to a few thousand people. Several families residing in these islands fled the civil war and crossed over to Tamil Nadu



Source: <https://www.idsa.in/issuebrief/issues-in-india-sri-lanka-ties-gsultana-190321>  
<https://www.thehindu.com/news/international/sri-lanka-clears-chinese-energy-project-50-km-off-tamil-nadu/article33785609.ece>

**S82. Ans.(a)**

**Sol.** Recently a US-based lab Beta Analytic studied the organic materials like paddy and soil that was found in an urn, discovered during an archeological excavation near Thamirabarani river in Thoothukudi district's Sivakalai, Tamilnadu. The finding has established that the Porunai River (Thamirabarani) civilization dates back to 3,200 years ago, the later part of the Indus Valley Civilisation. Adichanallur, Korkai, and Sivakalai are all sites on the banks of the ancient Porunai (Thamirabarani river) presently in the Thoothukudi district of Tamil Nadu.

The port of Musiri, now known as Pattanam in Kerala is located on the Malabar coast not on the banks of Thamirabarani river.

Source:

<https://www.thenewsminute.com/article/carbon-dating-reveals-thamirabarani-civilisation-3200-years-old-155069>

<https://www.indiatimes.com/explainers/news/explain-d-thamirabarani-river-civilization-in-tamil-nadu-dating-back-3200-years-549173.html>

**S83. Ans.(a)**

**Sol.** Katchatheevu islet frequently remains in news due to fisherman issues. Since 1994, both countries agreed to adopt a humanitarian approach on the issue of fishermen and to refrain from taking kinetic actions against fishermen illegally entering into each other's territorial waters. But the issue still remains to pop up,



Source: <https://www.idsa.in/issuebrief/issues-in-india-sri-lanka-ties-gsultana-190321>

**S84. Ans.(a)**

**Sol.** UDAN(Ude Desh Ka Aam Nagrik) is the Government's initiative to make air travel to India's tier II and tier III cities affordable to the aam aadmi.

UDAN is an innovative scheme to develop the regional aviation market. It is a market-based mechanism in which airlines bid for seat subsidies. This first-of-its-kind scheme globally will create affordable yet economically viable and profitable flights on regional routes so that flying becomes affordable to the common man even in small towns.

The scheme UDAN envisages providing connectivity to un-served and under-served airports of the country through the revival of existing airstrips and airports.

Under the scheme, the Government offers incentives to airlines to flag off new flights to neglected smaller cities and towns by providing Viability Gap Funding to make these operations profitable.

**Hon'ble Prime Minister Flagged off the first UDAN flight under Regional Connectivity Scheme (RCS) on the route from Shimla - Delhi**

Source: <https://www.aai.aero/en/rcsudan>  
<https://www.thehindubusinessline.com/opinion/columns/slate/all-you-want-to-know-about-indias-udan-scheme/article22563182.ece>

<https://pib.gov.in/newsite/printrelease.aspx?relid=151850>

**S85. Ans.(c)**

**Sol.** The committee headed by finance secretary Subhash Chandra Garg has proposed a draft bill "Banning of Cryptocurrency & Regulation of Official Digital Currency Bill, 2019

SC Garg Committee recommendations (2019):

Ban anybody who mines, hold, transact or deal with cryptocurrencies in any form. It recommends a jail term of one to 10 years for exchange or trading in digital currency. It proposed a monetary penalty of up to three times the loss caused to the exchequer or gains made by the cryptocurrency user whichever is higher.

The committee has, however, taken a lenient view on the government launching an official digital currency, asking it to keep an open mind on the matter.

Source:

<https://www.livemint.com/industry/banking/government-panel-suggests-ban-on-private-cryptocurrencies-1563796292369.html>

**S86. Ans.(c)**

**Sol.** Context: The ancient port city of Korkai located in Tamilnadu is all set to be excavated after 52 years again.

Korkai was popularly known for its pearl fishery and has a long history to cherish finding its name in Tamil Sangam literature and also noted as "Colchis" in Periplus of the Erythrean Sea which is a maritime traders' guide belongs to the mid-first century and "Kolkhoi" by Ptolemy who visited the southern peninsula in the second century.

The historians say Korkai was once a major port during the Pandyan era who had a thick maritime trade with the Roman empire and overseas countries. "The researchers have found Roman ware and rouletted ware from Korkai. The villagers still find a huge number of chunks and oysters shells and coins of different ages when they dig a few feet down the earth",

Korkai has been referred to in various ancient Tamil literature including Silapathikaram, Kalithogai, Akananuru, and Aingurunuru.

Source:

<https://www.newindianexpress.com/states/tamil-nadu/2021/mar/06/52-years-on-ancient-port-city-of-korkai-to-be-excavated-2272939.html>

<https://www.livehistoryindia.com/story/amazing-india/korkai-indias-pearl-port/>

**S87. Ans.(b)**

**Sol.** Context: Ornithology researchers at Deakin University in a new report, [published in Trends in Ecology and Evolution](#) had reported the “widespread evidence of ‘shape-shifting’ ” among birds and mammals throughout Australia, as a “response to climate change and its associated climatic warming,

**Allen’s rule**” in evolutionary biology supports their findings, which hold true that animal species in **warm climates tend to grow larger body parts as an adaptation to help dissipate body heat.**

Researchers have found that the bills of Australian parrots have grown 4% to 10% since 1871 — at a time when greenhouse gas emissions [were just ramping up](#). They also found that the ears, tails, legs, wings, beaks, and so on of some Australian species had grown relatively larger, even since the 1950s.

Source: <https://nypost.com/2021/09/08/climate-change-is-forcing-animals-to-shape-shift-fast-study/>

**S88. Ans.(b)**

**Sol.** In February 2019, the Department of Commerce had introduced ‘Transport and Marketing Assistance (TMA) for Specified Agriculture Products Scheme’ to provide assistance for the international component of freight, to mitigate the disadvantage of higher freight costs faced by the Indian exporters of agriculture products.

The scheme was initially applicable for exports affected during the period from March 01, 2019, to March 31, 2020, and was later extended for exports affected up to March 31, 2021.

Dairy products, which were not covered under the earlier scheme, will be eligible for assistance.

Note that:

The **Ministry of Commerce and Industry** administers two departments, the Department of Commerce and the Department for Promotion of Industry & Internal Trade (formerly the Department of Industrial Policy & Promotion).

Source: <https://www.zeebiz.com/india/news-modi-government-revises-transport-and-marketing-assistance-tma-scheme-for-specified-agriculture-products-dairy-products-included-164900>

**S89. Ans.(c)**

**Sol.** The Houthis, a group of Zaidi Shia Muslims who ruled a kingdom there for nearly 1,000 years, used widespread anger against President Hadi’s decision to postpone long-awaited elections and his stalled negotiations over a new constitution.

The Houthi movement Houthis is an Islamist political and armed movement that emerged from Saada in north Yemen in the 1990s. The Houthi movement is a predominately Zaidi Shia force, whose leadership is drawn largely from the Houthi tribe.

Source:

<https://www.thehindu.com/news/international/saudi-arabia-intercepts-houthi-drones/article36315039.ece>

**S90. Ans.(c)**

**Sol.** In Odisha, Nuakhai, an important agrarian festival in the State is being celebrated. As per the customary practice, people offer the new grains of crops to the deities before their own consumption. It is also a festival of social cohesion as all the members of the family come together to celebrate Nuakhai.

Source: <https://newsonair.com/2021/09/11/odisha-agrarian-festival-nuakhai-being-celebrated-in-the-state-today/>

**S91. Ans.(d)**

**Sol.** The PDO is a long-term fluctuation of the Pacific Ocean that waxes and wanes between cool and warm phases approximately every five to 20 years. The change in rainfall to sea surface temperatures over the subtropical Pacific Ocean, which varies in a cycle and each phase of which lasts a decade. The peak comes every 20 years.

The PDO is detected as warm or cool surface waters in the Pacific Ocean, north of 20°N.

Recently A *Journal of Climate* research paper from 2016 also found that PDO is being influenced by global warming as it decreases the difference of temperatures among the layers of the ocean. It said the peak of PDO will change from 20 to 12 years, which may have an impact on the monsoon rainfall in North East India.

Source: <https://www.downtoearth.org.in/news/climate-change/climate-crisis-in-north-east-india-why-are-rainfall-patterns-changing-78879>

<https://lompocrecord.com/news/local/when-will-the-first-rain-of-the-year-arrive-john-lindsey/article-22e3b82b-14ae-53ff-ab00-6f582a48ac8e.html>

<https://www.climate.gov/news-features/blogs/enso/going-out-ice-cream-first-date-pacific-decadal-oscillation>

**S92. Ans.(b)**

**Sol.** Recently Researchers at UC San Diego revealed they have used advancements in CRISPR-based genetic engineering to create a system restraining populations of mosquitoes that infect millions each year with debilitating diseases. The new precision-guided sterile insect technique, or pgSIT, alters genes linked to male fertility — creating sterile offspring — and female flight in *Aedes aegypti*, the mosquito species responsible for spreading wide-ranging diseases including dengue fever, chikungunya, and Zika.

Source:

<https://indianexpress.com/article/explained/new-tech-based-on-crispr-to-control-growth-of-mosquitoes-7504710/>



**S93. Ans.(b)**

**Sol.** C. Subramania Bharati, known as Mahakavi Bharati to Tamil-speakers for his outstanding contributions to Tamil literature, died exactly 100 years ago, on September 11, 1921.

His songs on nationalism and freedom of India helped to rally the masses to support the Indian Independence Movement in Tamil Nadu. Literary works: "Kannan Pattu" "Nilavum Vanminum Katrum" "Panchali Sabatam" "Kuyil Pattu". He published the sensational "Sudesa Geethangal" in 1908.

He was against the caste system. He declared that there were only two castes-men and women and nothing more than that. Above all, he himself had removed his sacred thread. He condemned certain Shastras that denigrated women. He believed in the equality of humankind and criticized many preachers for mixing their personal prejudices while teaching the Gita and the Vedas.

Source: <https://thewire.in/culture/subramania-bharati-one-hundred-years-of-revolution>

<https://www.thehindu.com/books/amshan-kumar-translates-mahakavi-bharatiyar/article36397262.ece>

**S94. Ans.(c)**

**Sol.** In November 1938 Select Committee was appointed to consider amendments to the Indian Income Tax Act, 1922, which, inter-alia, recommended the establishment of a Tribunal as an independent appellate Authority for hearing appeals arising from the decision of the Appellate Assistant Commissioner. As a consequence, ITAT was constituted on 25/01/1941 by virtue of section 5A of the Income Tax Act, 1922.

ITAT is a quasi-judicial institution that was finally set up in January 1941. It specializes in dealing with appeals under the Direct Taxes Acts. The orders passed by the ITAT are final, an appeal lies to the High Court only if a substantial question of law arises for determination

It is a second appellate authority under direct taxes and the first independent forum in its appellate hierarchy.

With a view to ensuring the highest degree of independence of the ITAT, it functions under the Department of Legal Affairs in the Ministry of Law and Justice and is kept away from any kind of control by the Ministry of Finance.

Source: <https://itat.gov.in/page/content/about-tribunal>

<https://www.hindustantimes.com/india-news/centre-clears-appointments-to-national-company-law-tribunal-income-tax-appellate-tribunal-101631383689636.html>

**S95. Ans.(c)**

**Sol. Battle of Saragarhi:**

September 12, 2021, marks the 124th anniversary of the Battle of Saragarhi.

Saragarhi was the communication tower between Fort Lockhart and Fort Gulistan in the northwest Frontier Province (NWFP). Two forts, now in Pakistan, were built by Maharaja Ranjit Singh but renamed by the British.

Battle of Saragarhi was a last-stand battle fought between the British Raj and Afghan tribesmen (Afridi and Orakzai) in 1897. During the Battle, 21 soldiers of 36th Sikhs (now 4 Sikh), led by Havildar Ishar Singh, along with a non-combatant called Daad were pitted against over 8,000 tribals but they managed to hold the fort for 7 hours. Queen Victoria awarded to these 21 soldiers the Indian Order of Merit posthumously along with 2 'Barabas' (50 acres) and Rs 500 each.

Source:

<https://indianexpress.com/article/explained/battle-of-saragarhi-explained-when-21-men-fought-thousands-7503623/>

**S96. Ans.(c)**

**Sol.** The Panjshir Valley (literally Valley of the Five Lions) is a valley in north-central Afghanistan, near the Hindu Kush mountain range.

It is divided by the Panjshir River. The valley is home to more than 100,000 people, including Afghanistan's largest concentration of ethnic Tajiks.

The Valley has repeatedly played a decisive role in Afghanistan's military history, as its geographical position almost completely closes it off from the rest of the country.



Source:

<https://www.thehindu.com/news/international/taliban-opposition-battle-for-panjshir/article36296038.ece>

**S97. Ans.(b)**

**Sol.** Widely referred to as Acharya Vinoba Bhave, he is most known as the originator of the Bhoodan Movement. He began publishing Maharashtra Dharma in 1923. It was initially a monthly magazine detailing the teachings of Upanishads. Between the 20s and 30s, Bhave got arrested multiple times for engaging in a non-violence resistance against the British Raj. He was in jail during the 40s for five years. He would stay in one of the huts of Sabarmati Ashram known as 'Vinoba Kutir' and from there give discourses on Gita. In 1940, Bhave was selected as the 'First Individual Satyagrahi' against the British Raj by Gandhi in India. Bhave played an important role in the Quit India Movement. The Bhoodan Movement grew in a village known as Bhoodan Pochampally in Telangana.

His literary works:

*Bhoodan Ganga*, *Swarajya Shastra*, *Geetai*, *Sthitapragnya Darshan*, and *Vichar Pothi*

Source: <https://www.news18.com/news/lifestyle/vinoba-bhave-birth-anniversary-2021-lesser-known-facts-about-the-national-teacher-of-india-4189706.html>  
<https://www.thehindu.com/news/national/acharya-vinoba-bhave-swami-vivekananda-have-a-lot-to-teach-humanity-pm-modi/article32578411.ece>

### S98. Ans.(d)

**Sol.** NATGRID is conceptualized as a seamless and secure database for information on terrorists, economic crimes, and similar incidents to help bolster India's capabilities. The NATGRID has been envisaged as a robust mechanism to track suspects and prevent terrorist attacks with real-time data and access to classified information like immigration, banking, individual taxpayers, air and train travels.

The necessity for the NATGRID came after the 2008 Mumbai terror attacks exposed the deficiency that security agencies had no mechanism to look for vital information on a real-time basis. Currently the chairman of NATGRID is headed by IPS officer Ashish Gupta as CEO. Although NATGRID works under the aegis of MHA yet there is no Chairman position as of now.

Source:

<https://www.moneycontrol.com/news/india/explained-what-is-natgrid-indias-counter-terrorism-platform-7459611.html>

### S99. Ans.(a)

**Sol.** Subansiri Lower Hydroelectric Project (SLHEP), is an under-construction gravity dam on the Subansiri river along the border of Assam and Arunachal Pradesh. Subansiri River (gold river), originates in the Tibet Plateau and enters India through Miri hills in Arunachal Pradesh. It is the largest tributary of the Brahmaputra River. The project is being developed by the state-run National Hydro Power Corporation (NHPC).

Source: <https://www.firstpost.com/india/assams-lower-subansiri-hydel-project-can-learn-lessons-from-tapovan-vishnugad-disaster-8601411.html>

### S100. Ans.(c)

**Sol.** The United Nations Convention against Transnational Organized Crime (UNTOC, also called the Palermo Convention) is a 2000 United Nations-sponsored multilateral treaty against transnational organized crime, trafficking of human beings, and terrorism.

UNTOC's three supplementary protocols (the Palermo Protocols) are:

Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children.

Protocol against the Smuggling of Migrants by Land, Sea, and Air.

Protocol against the Illicit Manufacturing and Trafficking in Firearms

The United Nations Office on Drugs and Crime (UNODC) acts as custodian of the UNTOC and its protocols

### S101. Ans.(d)

**Sol.** The Shanghai Cooperation Organisation (SCO) is a permanent intergovernmental international organization, the creation of which was announced on 15 June 2001 in Shanghai (China) by the Republic of Kazakhstan, the People's Republic of China, the Kyrgyz Republic, the Russian Federation, the Republic of Tajikistan, and the Republic of Uzbekistan. It was preceded by the **Shanghai Five mechanism**.

The Shanghai Cooperation Organisation Charter was signed during the St.Petersburg SCO Heads of State meeting in June 2002 and entered into force on 19 September 2003

The Heads of State Council (HSC) is the supreme decision-making body in the SCO.

the SCO counts four observer states, namely the Islamic Republic of Afghanistan, the Republic of Belarus, the Islamic Republic of Iran, and Mongolia;

Source: [http://eng.sectsc.org/about\\_sco/](http://eng.sectsc.org/about_sco/)

### S102. Ans.(b)

**Sol.** A private placement is a sale of securities to a pre-selected number of individuals and institutions.

A qualified institutional placement (QIP) is a way for listed companies to raise capital without having to submit legal paperwork to market regulators. Qualified institutional placements (QIPs) are a way to issue **shares to the public** (not restricted to some individuals without going through standard regulatory compliance.

It is common in India and other Southeast Asian countries. The [Securities and Exchange Board of India \(SEBI\)](#) created the rule to avoid the dependence of companies on foreign capital resources.

Source: <https://www.investopedia.com/terms/q/qip.asp>

<https://www.investopedia.com/terms/p/privateplacement.asp>

<https://indianexpress.com/article/business/banking-and-finance/finsecy-govt-will-privatise-most-psbs-eventually/>

### S103. Ans.(a)

**Sol.** Ministry of Coal has recently constituted 2 Committees, one to oversee the program and another of experts to give guidance to the Ministry. This is aimed at contributing to the agenda of a hydrogen-based economy in a clean manner.

**The Task Force was constituted under the Chairmanship of Shri Vinod Kumar Tiwari, Additional Secretary Coal.**

Further, the Expert Committee under the chairmanship of Shri R.K. Malhotra, Director General (FIPI)/ Former Chairman IOCL was constituted

Additional info:

TSR Subramaniam committee: Education Policy

Madhav Chitale committee: For Desiltation of Ganga

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=1752915>

**S104. Ans.(d)**

**Sol. Who was Raja Mahendra Pratap Singh?**

Born [into](#) a royal family in the Hathras district of Uttar Pradesh in 1886, Singh was a social reformer, freedom fighter, and Marxist revolutionary. An alumnus of the Muhammadan Anglo-Oriental Collegiate School later called Aligarh Muslim University (AMU), he was active in the political arena from a young age.

Influenced by the speeches of Dadabhai Naoroji and Bal Gangadhar Tilak, Singh became deeply involved with the Swadeshi movement.

The [freedom fighter](#) set up the first Provisional Government of India at Bagh-e-Babur in Afghanistan in 1915, declaring himself as the President. He also declared a jihad against colonial rule, leading to the British announcing a bounty on his head. Singh later fled to Japan, where he established the Executive Board of India in Japan in 1940.

A firm believer in Mahatma Gandhi's policy of non-violence, Singh also set up the Prem Maha Vidyalaya, a polytechnic institution in his palace in Vrindavan.

In 1929, Mahendra Pratap launched the World Federation in Berlin. He was nominated for the 1932 Nobel Peace Prize by the Swedish doctor N A Nilsson, who was a member of the Commission of the Permanent International Peace Bureau.

The nomination described the Raja as a "Hindu patriot", "editor of the World Federation", and "unofficial envoy of Afghanistan"

Source:

<https://indianexpress.com/article/explained/legacy-of-raja-mahendra-pratap-singh-contribution-to-building-of-amu-7508315/>

<https://www.firstpost.com/india/pm-lays-foundation-stone-of-raja-mahendra-pratap-singh-university-in-aligarh-all-you-need-to-know-about-jat-icon-9961301.html>

**S105. Ans.(b)**

**Sol. The National Financial Reporting Authority (NFRA) is a body constituted under the provisions of Section 132 of the Companies Act, 2013. The constitution of this authority is effective from 1st October 2018.**

Prior to the constitution of this authority, the Central Government would prescribe accounting standards on the recommendation of ICAI. The ICAI would prescribe the same only after consulting with the National Advisory Committee on Accounting Standards who will provide their recommendations. The ICAI will now have to consult with the NFRA and examine its recommendations in this regard. **Thus the National Advisory Committee on Accounting Standards is effectively replaced by the NFRA.**

The NFRA can investigate the matters of professional or other misconduct committed by a prescribed class of CA firms or CAs. No other authority can initiate or continue proceedings where the NFRA has initiated an investigation. Such an investigation can be initiated either suo moto (by itself) or on a reference made by the Central Government. **It has the same powers as a Civil Court under the Code of Criminal Procedure, 1908**

Source: <https://cleartax.in/s/nfra>

**S106. Ans.(d)**

**Sol.** The Union Government set up the National Commission for Minorities (NCM) under the National Commission for Minorities Act, 1992. (So it is an extra-constitutional body)

Initially five religious communities, viz., Muslims, Christians, Sikhs, Buddhists, and Zoroastrians (Parsis) were notified as minority communities by the Union Government. Further, vide notification dated **27th January 2014, Jains were also notified as another minority community.**

The Commission consists of a <sup>1</sup> [Chairperson, a Vice-Chairperson, and five Members] to be nominated by the Central Government from amongst persons of eminence, ability, and integrity, **provided that five Members including the Chairperson shall be from amongst the minority communities.**

**What is meant by a Non-Constitutional or Extra Constitutional body?**

A non-constitutional or Extra Constitutional body is an organization or institution which is not mentioned in the Constitution of India. Unlike a Constitutional Body, a non-constitutional body does not derive its powers from the Indian Constitution. Usually, a non-constitutional body derives its powers from corresponding laws passed by the Indian Parliament.

Source:

[https://minorityaffairs.gov.in/sites/default/files/ncm\\_act\\_1992.pdf](https://minorityaffairs.gov.in/sites/default/files/ncm_act_1992.pdf)

[https://www.indiacode.nic.in/show-data?actid=AC\\_CEN\\_41\\_69\\_00001\\_199219\\_15178073229\\_44&sectionId=24657&sectionno=3&orderno=3](https://www.indiacode.nic.in/show-data?actid=AC_CEN_41_69_00001_199219_15178073229_44&sectionId=24657&sectionno=3&orderno=3)  
<http://ncm.nic.in/homepage/homepage.php>

**S107. Ans.(d)**

**Sol.** The Corporate Insolvency Resolution Process (CIRP) shall mandatorily be completed within a period of 330 days from the insolvency commencement date, including any extension of the period of corporate insolvency resolution process granted under section 12 of the Insolvency Code.

This is to discourage the practice of Corporate Debtors of filing appeals, revisions, and writ petitions to delay CIRP.

Source:

<https://www.taxmann.com/post/blog/conducting-corporate-insolvency-resolution-process/>

**S108. Ans.(a)**

**Sol.** The Lok Sabha had passed the Insolvency and Bankruptcy Code (Amendment) Bill 2021, making into law amendments made to the IBC, 2016. The latest amendments allow the use of “pre-packs” to resolve insolvency proceedings involving micro, small and medium-scale enterprises.

The current law limits the pre-pack resolution mechanism to **defaults not exceeding Rs. 1 crore**.

A pre-pack is a way of resolving the troubles of creditors and owners of a distressed business. Under a pre-pack resolution, creditors and owners of a business agree to sell the business to an interested buyer before going to the court to sanction the agreement. The buyer may be a third party or someone related to the business. The pre-pack insolvency resolution process (PIRP) is in contrast to the corporate insolvency resolution process (CIRP) that has been used under the IBC to sell or liquidate troubled businesses till now.

Source: <https://www.thehindu.com/business/Explained-will-pre-packaged-bankruptcy-terms-help-small-businesses/article35645131.ece>

**S109. Ans.(b)**

**Sol.** Securities and Exchange Board of India (SEBI) has offered a T+1 settlement system for stock market exchanges. If the stock exchange agrees to the proposal, investors will get money for shares they sold or bought in their accounts faster, and in a safer and risk-free environment. **What Are T+1 (T+2, T+3) cycles?**

T+1 (T+2, T+3) are abbreviations that refer to the settlement date of security transactions. The “T” stands for transaction date, which is the day the transaction takes place. The numbers 1, 2, or 3 denote how many days after the transaction date the settlement—or the transfer of money and security ownership—takes place. Stocks and mutual funds are usually T+1 and bonds and money market funds vary among T+1, T+2, and T+3.

Source: <https://indianexpress.com/article/explained/t1-settlement-system-how-it-works-and-how-it-will-help-investors-7506987/>

**S110. Ans.(c)**

**Sol.** The Thamirabarani civilization in Tamil Nadu is at least 3,200 years old, reveals carbon dating done on organic material retrieved from archeological excavations in Sivakalai, Thoothukudi district.

The shortest river in the state (Tamil Nadu), the Thamirabarani river starts in Pothigai hills of the Western Ghats in the Ambasamudram taluk, flows through Tirunelveli and Thoothukudi districts, and empties at Korkai (Tirunelveli district) into the Gulf of Mannar (Bay of Bengal).

Source:

<https://www.thehindu.com/news/national/tamil-nadu/carbon-dating-establishes-that-thamirabarani-civilization-is-3200-years-old-says-tn-cm-stalin/article36375882.ece>

**S111. Ans.(c)**

**Sol.** The World Bank’s updated Groundswell report was released recently. The report had stated that Climate change can force some 216 million people in six world regions to move within their own countries by 2050. By 2050, sub-Saharan Africa could see as many as 86 million internal climate migrants; east Asia and the Pacific, 49 million; south Asia, 40 million; north Africa, 19 million; Latin America, 17 million and eastern Europe and Central Asia, five million.

It also found that immediate and concerted action to reduce global emissions and support green, inclusive, and resilient development, could reduce the scale of climate migration by as much as 80 percent.

Source: <https://www.downtoearth.org.in/news/climate-change/climate-change-can-force-216-million-people-to-migrate-within-their-own-countries-by-2050-79002>

**S112. Ans.(c)**

**Sol.** Black hydrogen is produced by the use of fossil fuel

Pink hydrogen is generated through electrolysis powered by nuclear energy. Nuclear-produced hydrogen can also be referred to as purple hydrogen or red hydrogen.

Grey hydrogen is created from natural gas, or methane, using steam methane reformation but without capturing the **greenhouse gases** made in the process.

Yellow hydrogen is a relatively new phrase for hydrogen made through electrolysis using **solar power**.

Source:

<https://www.nationalgrid.com/stories/energy-explained/hydrogen-colour-spectrum>  
<https://www.thehindu.com/opinion/op-ed/green-hydrogen-a-new-ally-for-a-zero-carbon-future/article36369777.ece>

**S113. Ans.(c)**

**Sol.** Article 371C of the Constitution provides separate schemes for the administration of the hill areas in Manipur through HAC and district councils.

Gopinath Bordoloi Committee, a sub-committee of the Constituent Assembly that sought to accommodate the distinctive identity, culture, and way of life of tribal groups in the Northeast by envisioning 'self-rule'.

the primary objective of the Go to Hills 2.0 is to deliver the welfare schemes under different departments such as PMAY, CMHT, PMJAY, livelihood support scheme affected by COVID-19, etc. to the right deserving beneficiaries

Source: <https://www.thehindu.com/opinion/op-ed/in-manipur-a-case-for-asymmetric-federalism/article36440300.ece>  
<https://indianexpress.com/article/north-east-india/manipur/no-change-to-special-provision-granted-to-hill-areas-manipur-biren-singh-7492954/>

**S114. Ans.(d)**

**Sol. Exclusive economic zone**

The exclusive economic zone can be defined as a belt of water that extends up to 200 nautical miles from the baseline of the coastal state. Thus it includes both territorial sea and contiguous zone. The exclusive economic zone provides the coastal state control over all economic resources such as fishing, mining, oil exploration, and marine research. The coastal state also has jurisdiction regarding the protection and preservation of natural resources and the marine environment but the exploitation of natural resources can occur only in the area under exclusive economic zone which is a part of the continental shelf.(See the figure below)

**Continental shelf:**

*Under the continental shelf, defined as the area whose outer limit shall not exceed 350 nautical miles from the baseline or shall not exceed 100 nautical miles from the 2500 meters isobath. The coastal state has exclusive rights for exploring and exploiting its natural resources and also has the exclusive rights to authorize and regulate drilling on the shelf for all purposes.*

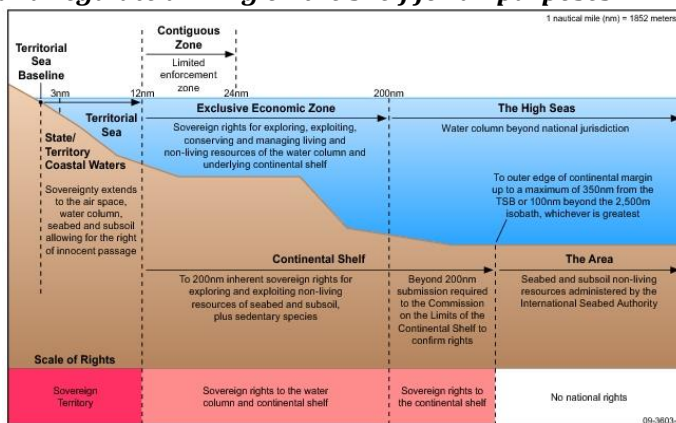


Figure 1: Offshore extent of the maritime zones recognized under international law

Source: <https://www.marineinsight.com/maritime-law/5-terms-every-mariner-should-know-under-unclos/>

**S115. Ans.(c)**

**Sol.** Climate Action and Finance Mobilisation Dialogue (CAFMD) is recently launched under the India-US Climate Clean Energy Agenda 2030,

Through the finance mobilization pillar, the United States will collaborate in attracting capital and enhancing the enabling environment to deploy 450 GW of renewable energy capacity and demonstrate and scale innovative clean energy technologies and promote bilateral clean energy investment and trade.

Source: <https://indianexpress.com/article/india/john-kerry-discusses-climate-change-energy-transition-with-union-ministers-bhupender-yadav-rk-singh-7506202/>

**S116. Ans.(a)**

**Sol.** Drugs Technical Advisory Board is a statutory body constituted under the Drugs and Cosmetics Act, 1940.

The function of DTAB is to advise the Central Government and State government on technical matters related to drugs and cosmetics.

The Central Government, after consultation with the Drugs Technical Advisory Board (DTAB), specifies the devices intended for use in human beings or animals as drugs.

Source:

<https://www.thehindu.com/news/national/panel-to-frame-new-drugs-cosmetics-and-medical-device-laws/article36362455.ece>

**S117. Ans.(d)**

**Sol.** Originally, the strength of the Supreme Court was fixed at eight (one chief justice and seven other judges). At present, the Supreme Court consists of thirty-four judges (one chief justice and thirty-three other judges).

The power to increase the number of judges in the Supreme Court vests with the Parliament of India.

The Parliament has increased this number of other judges progressively to ten in 1956, to thirteen in 1960, to seventeen in 1977, to twenty-five in 1986, to thirty in 2008, and to thirty-three in 2019 [through Supreme Court (Number of Judges) Amendment Act, 2019].

Source: <https://www.thehindu.com/todays-paper/tp-national/centre-can-extend-ed-directors-term-says-sc/article36373341.ece>

**S118. Ans.(b)**

**Sol.** A Unified Payment Interface (UPI) is a smartphone application that allows users to transfer money between bank accounts. It is a single-window mobile payment system developed by the National Payments Corporation of India (NPCI). The pilot system was launched in India on April 11, 2016. Banks across the country started to upload their interface in August 2016.

It eliminates the need to enter bank details or other sensitive information each time a customer initiates a transaction. The Unified Payment Interface is a real-time payment system. It is designed to enable peer-to-peer inter-bank transfers through a single two-click factor authentication process

Source: <https://www.investopedia.com/terms/u/unified-payment-interface-upi.asp>  
[https://www.business-standard.com/article/finance/india-and-singapore-to-link-their-digital-payment-systems-says-rbi-121091400326\\_1.html](https://www.business-standard.com/article/finance/india-and-singapore-to-link-their-digital-payment-systems-says-rbi-121091400326_1.html)

**S119. Ans.(c)**

**Sol.** The Panchmuli lake, also known as 'Dyke-3' of the Sardar Sarovar Dam, was developed for tourists visiting the Statue of Unity, Gujrat. It is a major tourist attraction but also has a large number of crocodiles that pose a threat to visitors. As many as 194 crocodiles have been relocated from a lake recently for the safety of the tourists.

Source: <https://www.thehindu.com/news/national/194-crocodiles-relocated-from-lake-near-statue-of-unity-for-safety-of-tourists/article35131251.ece>

**S120. Ans.(a)**

**Sol.** Every four years, the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) hosts the United Nations World Geospatial Information Congress (UNWGIC), with the goal of improving international collaboration in geospatial information management and capacity among the member states and all the concerned stakeholders. China 2018 hosted the UNWGIC for the first time in October.

India will host the second United Nations World Geospatial Information Congress (UNWGIC) in October 2022, at Hyderabad, and the theme decided for the next year is- "Towards Geo-enabling the Global Village."

Source: <https://newsonair.com/2021/08/18/india-to-host-second-unwgic-next-year/>

**S121. Ans.(b)**

**Sol.** The Supreme Court of India had held on 10 Jan 2020 that access to information via the Internet is a fundamental right under the Indian Constitution. This was in the case of Anuradha Bhasin vs Union of India, where the top court also ruled that any restriction on Internet access by the Government must be temporary, limited in scope, lawful, necessary and proportionate. The Court reiterated that the Government's orders restricting Internet access are subject to review by Courts.

Source: <https://www.legalserviceindia.com/legal/article-3164-anuradha-bhasin-v-s-union-of-india.html>  
<https://www.thehindu.com/opinion/op-ed/behind-the-great-indian-internet-shutdown/article36462640.ece>

**S122. Ans.(c)**

**Sol.** Following the Indian Ocean tsunami, India, Japan, Australia, and the US created an informal alliance to collaborate on disaster relief efforts. In 2007, then PM of Japan, Shinzo Abe, formalised the alliance, as the Quadrilateral Security Dialogue or the Quad.

In 2017, faced again with the rising threat of China, the four countries revived the Quad, broadening its objectives and creating a mechanism that aimed to slowly establish a rules-based international order.

However, despite its lofty ambitions, the Quad is not structured like a typical multilateral organisation and lacks a secretariat and any permanent decision-making body.

In 2020, the trilateral India-US-Japan Malabar naval exercises expanded to include Australia, marking the first official grouping of the Quad since its resurgence in 2017 and the first joint military exercises among the four countries in over a decade.

China initially opposed the formation of the Quad and in the 13 years since Beijing's position has not changed

**S123. Ans.(c)**

**Sol.** In the case of Index of Industrial Production India, **IIP data is compiled and published by CSO every month.** CSO or Central Statistical Organisation operates under the Ministry of Statistics and Programme Implementation (MoSPI).

Electricity, crude oil, coal, cement, steel, refinery products, natural gas, and fertilisers are the eight core industries that comprise **about 40 per cent of the** weight of items included in the Index of Industrial Production. Mining, manufacturing, and electricity are the three broad sectors in which IIP constituents fall.

IIP index is currently calculated using **2011-2012 as the base year.**

Source: <https://www.financialexpress.com/what-is/index-of-industrial-production-iip-meaning/1616261/>

**S124. Ans.(c)**

**Sol.** The ASI is used to track the health of the industrial activity in the economy over a longer period. The index is compiled out of a much larger sample of industries compared to IIP.

While the IIP is a monthly indicator, the Annual Survey of Industries (ASI) is the prime source of long-term industrial statistics.

The ministry of statistics and programme implementation released the provisional data of the Annual Survey of Industries (ASI) for 2018-19, which shows that the number of factories grew 2% in the year to 242,395.

Source:

<https://www.hindustantimes.com/business/total-factories-in-india-grew-by-2-in-201819-101614975574813.html>

**S125. Ans.(a)**

**Sol.** The relationship between GVA and GDP is defined as:  
 $GVA = GDP + \text{Subsidies on products} - \text{Taxes on products}$   
 GVA is used for measuring the contribution to GDP made by an individual producer, industry or sector. GVA is a very important measure because it is used to determine the gross domestic product (GDP). Gross value added is used for measuring gross regional domestic product and other measures of the output of entities smaller than a whole economy.

Gross value added is the value of output minus the value of intermediate consumption;

Source:

- <https://www.hindustantimes.com/business/total-factories-in-india-grew-by-2-in-201819-101614975574813.html>
- [https://en.wikipedia.org/wiki/Gross\\_value\\_added](https://en.wikipedia.org/wiki/Gross_value_added)

**S126. Ans.(b)**

**Sol.** The researchers at NCBS teamed up with tiger experts nationally and in other countries have recently found that the pseudomelanistic or false coat of Black tigers in Simlipal Tiger reserve has come down due to the genes.

They found that the black tigers are mutants and are Bengal tigers with a single base mutation.

The drastic change in patterning and colouring of the black tigers' coat is caused by just one change in the genetic material DNA Alphabet from C (Cytosine) to T (Thymine) in position 1360 of the Taqpep gene sequence. Further genetic analyses and comparisons with a total of 395 captive and wild Indian tiger populations indicate that the mutation in Similipal tigers is very rare.

The only other black tigers outside of Similipal in India exist at the Nandankanan Zoological Park in Bhubaneswar, Ranchi Zoo and Chennai's Arignar Anna Zoological Park, where they were born in captivity.

Source:

- <https://indianexpress.com/article/india/scientists-unravel-mystery-behind-odishas-black-tigers-7508798/>



**S127. Ans.(b)**

**Sol.** Context: Australia will support India's 'Gaganyaan' mission by tracking it through Cocos Keeling island located in the Indian ocean.

There are blind spots due to which there is a possibility of not receiving signals. The data relay satellite tracking from Cocos Keeling island is expected to help address the issue.



- Source: <https://www.news18.com/news/india/australia-to-support-indias-gaganyaan-mission-by-tracking-it-through-cocos-keeling-island-aus-space-agency-4199441.html>

**S128. Ans.(d)**

**Sol.** Government think tank Niti Aayog and Rocky Mountain Institute (RMI) has recently launched an initiative to promote zero-pollution delivery vehicles by working with consumers and industry named as Shoonya Campaign.

The campaign, Shoonya, aims to accelerate the adoption of electric vehicles (EVs) in the urban deliveries segment and create consumer awareness about the benefits of zero-pollution delivery.

Source:

- <https://www.newindianexpress.com/business/2021/sep/15/niti-aayog-launches-shoonya-programme-to-promote-zero-pollution-delivery-vehicles-2359195.html>

**S129. Ans.(b)**

**Sol. Exercise PEACEFUL MISSION:**

Joint Counter Terrorism Exercise PEACEFUL MISSION is a Multilateral Exercise, which is conducted biennially as part of military diplomacy between Shanghai Cooperation Organisation (SCO) member states. The 6th edition of Exercise PEACEFUL MISSION is being hosted by Russia in the Orenburg Region of South-West Russia from 13 to 25 September 2021.

Source:

- <https://www.aninews.in/news/world/asia/russian-army-welcomes-indian-contingent-at-scops-peaceful-mission-exercise20210916150214/>

**S130. Ans.(a)**

**Sol.** 16th September is observed as International Day for the Preservation of the Ozone Layer or World Ozone Day. In order to keep in check on substances that deplete the Ozone layer, a deal named Montreal Protocol was signed by almost every country in the year 1987 and subsequently, in 1994, the UN General Assembly proclaimed this day as the World Ozone Day.

The theme for 2021 for International Day for the Preservation of the Ozone Layer is 'Montreal Protocol - Keeping us, our food and vaccines cool.'

Source: <https://newsonair.com/2021/09/16/world-ozone-day-2021-keeping-us-our-food-vaccines-cool/>

**S131. Ans.(d)**

**Sol.** Context: Recent formation of the AUKUS alliance there has been steep apprehensions that this alliance may lead to the sidelining of the five eyes intelligence alliance. The Five Eyes is an intelligence alliance comprising Australia, Canada, New Zealand, the United Kingdom, and the United States.

These countries are parties to the multilateral UKUSA Agreement, a treaty for joint cooperation in signals intelligence signed in 1941.

Source: <https://www.theweek.in/news/world/2021/09/16/as-us-uk-australia-form-new-aukus-grouping-questions-on-quad-future-and-miffed-france.html>

**S132. Ans.(b)**

**Sol.** AUKUS is a new trilateral security partnership for the Indo-Pacific, between Australia, the U.K. and the U.S. (AUKUS). As part of this, Australia will acquire nuclear-powered submarines with help from the U.K. and the U.S.

Source: <https://www.thehindu.com/news/international/us-uk-australia-form-new-partnership/article36486642.ece>

**S133. Ans.(c)**

**Sol. What is National Asset Reconstruction Company Limited (NARCL)?**

NARCL is incorporated under the Companies Act and has applied to the Reserve Bank of India for the license as an Asset Reconstruction Company (ARC). NARCL has been set up by banks to aggregate and consolidates stressed assets for their subsequent resolution.

1. Public Sector Banks (PSBs) will retain 51 per cent ownership in NARCL.
2. The NARCL will take bad loans from lenders worth Rs 2 lakh crore, of which Rs 90,000 crore will be transferred in the first phase.
3. NARCL will pay 15 per cent of the agreed value for the loan in cash and the remaining 85 per cent will be a government-guaranteed security receipt.

4. The NARCL will acquire the assets by making an offer to the lead bank. Once the proposal of NARCL is accepted, IDRCL will be engaged for management and value addition

Source: <https://newsonair.com/2021/09/17/govt-sets-up-narcl-big-boost-for-banking-sector/>

**S134. Ans.(a)**

**Sol. What is India Debt Resolution Company Ltd. (IDRCL)?**

IDRCL is a service company/operational entity that will manage the asset and engage market professionals and turnaround experts.

Public Sector Banks (PSBs) and public FIs will have a maximum stake of 49 per cent and the rest will be with private-sector lenders.

The NARCL will acquire the assets by making an offer to the lead bank. Once the proposal of NARCL is accepted, IDRCL will be engaged for management and value addition.

Source: <https://newsonair.com/2021/09/17/govt-sets-up-narcl-big-boost-for-banking-sector/>

**S135. Ans.(d)**

**Sol.** Idu Mishmi Textiles of Arunachal Pradesh was granted GI tag in 2020

**Hathei Chilly & Tamenglong orange:**

Recently 2 (two) products of Manipur viz Hathei Chilly & Tamenglong orange have been granted GI tag.

Tamenglong orange is a unique fruit crop found mostly in the Tamenglong district which contributes over 50% of the state's annual production. It is famous especially for its well-blended sweetness and acidic taste.

On the other hand, Hathei chilli, one of the best varieties of chillies with a distinct flavour and colour, grows in Sirarakhong village in the Ukhrul district.

Manipur has been promoting this two produce by celebrating the Orange Festival every December and Sirarakhong Hathei festival every August

Additional info:

**Manipur black rice**, scented glutinous rice which has been cultivated in the state over centuries and it is characterised by its special aroma, bagged GI tag in May 2020.

Source: <https://www.hindustantimes.com/india-news/manipurs-special-oranges-chillis-get-gitag-101631877624952.html>

**S136. Ans.(c)**

**Sol.** The X-ray Polarimeter Satellite (XPoSat) is a planned space observatory to study the polarisation of cosmic X-rays. It is planned to be launched in Q2 2022.

The telescope is being developed by the Indian Space Research Organisation (ISRO) and the Raman Research Institute.



It is a country's second space observatory aimed at helping astronomers study cosmic sources such as pulsars and supernovas,

Xposat will be the other purely scientific mission that the space agency will undertake next year. It will be launched aboard a small satellite launch vehicle, which is currently in the development phase.

Source: <https://www.hindustantimes.com/india-news/indias-first-solar-mission-likely-to-launch-next-year-isro-101631860455183.html>

**S137. Ans.(c)**

**Sol.** Sufficiency economy is the name of a Thai development approach attributed to the late King Bhumibol Adulyadej's "sufficiency economy philosophy" (SEP).

Three interrelated components and two underlying conditions are central to SEP's application. The three components are reasonableness (or wisdom), moderation, and prudence. Two essential underlying conditions are knowledge and morality. In contrast to the concept that the primary duty of a company is to maximize profits for the benefit of shareholders, SEP emphasizes maximizing the interests of all stakeholders and having a greater focus on long-term profitability as opposed to short-term success.

Source: <https://www.thehindu.com/brandhub/thailands-approach-for-sustainable-development-and-building-back-better/article36471227.ece>

**S138. Ans.(b)**

**Sol.** The World Bank Group said on September 16 it has decided to discontinue publication of its 'Doing Business' rankings of country business climates after a review of data irregularities in the 2018 and 2020 reports.

The irregularities in Doing Business reports had affected four countries: China; Saudi Arabia; United Arab Emirates; and Azerbaijan. A probe of data irregularities cited "undue pressure" by top bank officials, including then-Chief Executive Kristalina Georgieva, to boost China's ranking in 2017. This raised ethical matters involving former bank staff and board officials.

Source: <https://www.thehindu.com/business/Economy/world-bank-discontinues-doing-business-report-after-ethics-review/article36501799.ece>  
<https://economictimes.indiatimes.com/news/international/business/world-bank-kills-business-climate-report-after-ethics-probe-cites-undue-pressure-on-rankings/articleshow/86281313.cms>

**S139. Ans.(a)**

**Sol.** Tajikistan is the only member of CSTO that shares its border with Afghanistan

**About Collective Security Treaty Organization:**

It is an intergovernmental military alliance (six countries) that came into effect in 2002. Its' origin can be traced to the Collective Security Treaty, 1992 (Tashkent Treaty). The headquarter is located in the Russian capital of Moscow.

Current CSTO members are Armenia, Belarus, Kazakhstan, Kyrgyzstan, the Russian Federation and Tajikistan. Afghanistan and Serbia hold observer status in the CSTO.

Uzbekistan is not a member of CSTO.

Source: <https://economictimes.indiatimes.com/news/international/world-news/announcement-on-afghan-govt-soon-taliban/articleshow/85572898.cms>  
<https://en.odkb-csto.org/25years/>

**S140. Ans.(a)**

**Sol.** Any person who is not satisfied with the order of the NFRA can then make an appeal to the Appellate Authority.

**National Financial Reporting Authority (NFRA):**

NFRA was envisaged in the Companies Act of 2013, but it was set up only in October 2018 when India was rocked by the ₹12,000 crores Punjab National Bank scam. Till then, the Institute of Chartered Accountants of India had been predominantly handling disciplinary matters of auditors as a self-regulator. NFRA has taken strong enforcement action, including a hefty penalty, and has debarred professionals in certain cases.

Recently National Financial Reporting Authority (NFRA) Chairperson has pitched for a 'standalone legislation' for the regulator in the interests of autonomy.

Source: <https://cleartax.in/s/nfra>  
<https://www.livemint.com/>  
<https://www.thehindubusinessline.com/money-and-banking/nfra-eyes-larger-role-wants-to-be-regulator-for-entire-gamut-of-financial-reporting/article36436652.ece>

**S141. Ans.(a)**

**Sol.** The UNESCO September 15, 2021, designated Mura-Drava-Danube (MDD) as the world's first 'five-country biosphere reserve', according to a statement by the World Wide Fund (WWF) for Nature. The biosphere reserve covers 700 kilometers of the Mura, Drava, and Danube rivers and stretches across Austria, Slovenia, Croatia, Hungary, and Serbia. The total area of the reserve — a million hectares — in the so-called 'Amazon of Europe', makes it the largest riverine protected area on the continent.

Source: <https://www.downtoearth.org.in/news/wildlife-biodiversity/unesco-declares-world-s-first-5-country-biosphere-reserve-in-amazon-of-europe--79056>

**S142. Ans.(b)**

**Sol.** The host country for the recently concluded 15<sup>th</sup> East Asia summit 2021 was Brunei.

The East Asia Summit is a premier forum in the Asia-Pacific region dealing with issues relating to security and defense. Since its inception in 2005, it has been playing a significant role in the strategic, geopolitical, and economic evolution of East Asia.

It is a regional forum held annually by leaders of, initially, 16 countries in the East Asian, Southeast Asian, South Asian, and Oceanian regions, based on the ASEAN Plus Six mechanism. Membership **expanded to 18 countries including Russia and the United States at the Sixth EAS in 2011.** Since its establishment, ASEAN has held a central role and leadership in the forum.

At the East Asia Summit in Bangkok in 2019, Prime Minister Narendra Modi proposed setting up the Indo-Pacific Ocean's Initiative (IPOI) to conserve and sustainably use the maritime domain and to make meaningful efforts to create a safe and secure maritime domain. The concept is gaining traction with Japan already agreeing to be the lead partner in the connectivity pillar of the IPOI.

Source:

- <https://india.highcommission.gov.au/ndli/AIIPPOIP.html>
- <https://www.thehindu.com/news/national/east-asia-summit-2020-india-expresses-concern-over-actions-that-erode-trust-in-south-china-sea/article33100778.ece>
- <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1755433>

**S143. Ans.(c)**

**Sol.** the Archaeological Survey of India (ASI) discovered remains of an ancient temple dating back to the Gupta period (5th century) in Bilsarh site in a village in Uttar Pradesh's Etah district. The stairs of the temple had 'shankhalipi' inscriptions, which were deciphered by the archaeologists as saying, 'Sri Mahendraditya', the title of Kumaragupta I of the Gupta dynasty.

**Kumaragupta I :**

Chandragupta II was succeeded by his son Kumaragupta I. Known as the Mahendraditya in 414 AD. Kumaragupta I was succeeded by Skandagupta.

**Important Stone inscriptions of Kumaragupta I :**

1. Mandasor Inscription of Kumaragupta I
2. Bilsad Pillar Inscription (Very important site . it is located in UP)
3. Gadhwa Stone Inscription of Kumaragupta I
4. Mankuwar Image Inscription
5. Mathura Jain Inscription
6. Tumain Fragmentary Inscription of the Time of Kumaragupta I
7. Damodarpur Copper-plate Inscription of the Time of Kumaragupta I

Source: [https://www.jatland.com/home/Kumaragupta\\_I](https://www.jatland.com/home/Kumaragupta_I)  
<https://indianexpress.com/article/explained/gupta-dynasty-temple-etah-shankhalipi-inscriptions-explained-7512236/>

**S144. Ans.(d)**

**Sol.** Shankhalipi or "shell-script" is a term used by scholars to describe ornate spiral characters assumed to be Brahmi derivatives that look like conch shells or shankhas. They are found in inscriptions across north-central India and date to between the 4th and 8th centuries.

The script was discovered in 1836 on a brass trident in Uttarakhand's Barahat by English scholar James Prinsep, who was the founding editor of the Journal of the Asiatic Society of Bengal.

The first detailed study of shell inscriptions was undertaken by Richard Salomon.[4] The script is assumed to be a Brāhmī derivative, but Salomon observed that if this is the case, the shell script has diverged so far from the normal pattern as to be effectively a new script family.[5] Salomon determined that there are a sufficient number of shell characters to represent the syllables of the Sanskrit language.

No such inscriptions with dates or numbers have been reported so far even as their chronology can be determined by the objects on which they are written.

Source:

<https://indianexpress.com/article/explained/gupta-dynasty-temple-etah-shankhalipi-inscriptions-explained-7512236/>

**S145. Ans.(a)**

**Sol.** The islanders usually kill up to 1,000 sea mammals each year. Last year, they only killed 35 white-sided dolphins as a part of their 400-year-old new year tradition. These the small North Atlantic islands belong to Denmark



**S146. Ans.(b)**

**Sol.** Khadi and Village Industries Commission (KVIC) has recently launched a unique Scheme called SPIN (Strengthening the Potential of India) and set up a pottery cluster under SFURTI Scheme in Varanasi to empower over 1100 people of the marginalized potters' community. Unlike Kumhar Sashaktikaran Yojana, which is a subsidy-based program, the SPIN Scheme enables the registered potters to get a direct loan from the banks under Pradhan Mantri Shishu Mudra Yojana. Under the SPIN Scheme, KVIC is acting as a facilitator for financial aid to potters through RBL bank and also providing training to the artisans, opting for this scheme.

Under this scheme, there will be no financial burden on the exchequer and the loan will be repaid by the potter in easy installments. The SPIN scheme, thus, aims at infusing self-sustainability in the Indian pottery sector.

Source: <https://www.dailypioneer.com/2021/india/kvic-launches-spin-scheme-for-potters---community-in-varanasi.html>

**S147. Ans.(a)**

**Sol.** The G33 (or the Friends of Special Products in agriculture) is a coalition of **developing countries**, that have coordinated during the Doha Round of World Trade Organization negotiations, specifically in regard to agriculture.

Dominated by India, the group has "defensive" concerns regarding agriculture in relation to World Trade Organization negotiations and seeks to limit the degree of market opening required of developing countries.

**AoA:**

One of the Uruguay Round agreements was signed by governments in 1994 in Marrakech. The AoA established rules for agricultural trade for all WTO members. The AoA's core objective "is to establish a fair and market-oriented agricultural trading system." Its implementation period was six years for developed countries and nine for developing countries, starting with the date the agreement came into effect: January 1, 1995. The AoA built in a provision for its own review and renewal. That renegotiation is now underway, under the terms set at the fourth WTO ministerial conference in Doha and the Framework Decision agreed at the WTO General Council on August 1, 2004.

Source: [https://www.indiaonline.com/article/news-sector-agriculture/wto-agreement-on-agriculture-tilted-against-developing-countries-piyush-goyal-121091700438\\_1.html](https://www.indiaonline.com/article/news-sector-agriculture/wto-agreement-on-agriculture-tilted-against-developing-countries-piyush-goyal-121091700438_1.html)

[https://www.iatp.org/sites/default/files/451\\_2\\_37606.pdf](https://www.iatp.org/sites/default/files/451_2_37606.pdf)

**S148. Ans.(a)**

**Sol.** *Strophodus jaisalmerensis* is the new species of Hybodont Shark (currently extinct) belonging to the Jurassic age. The teeth of the new species were recently discovered by a team from the Geological Survey of India (GSI) in Jaisalmer, Rajasthan. The specimen is estimated to be 160-168 million years old. With this discovery, the genus *Strophodus* is discovered for the first time in the Indian subcontinent. It is only the third such discovery from Asia after Japan and Thailand. Hybodont Sharks dominated both marine and fluvial environments during the Triassic and early Jurassic times. They became extinct by the end of the Cretaceous period.

**S149. Ans.(b)**

**Sol.** Context: India recently decided to ratify a Kigali amendment to the 1989 ozone-saving Montreal protocol

**Kigali amendment :**

The 1989 Montreal Protocol is not a climate agreement. It is instead aimed at protecting the earth from ozone-destroying chemicals like chlorofluorocarbons, or CFCs, that were earlier used in the air-conditioning and refrigerant industry.

The Montreal Protocol led to the replacement of CFCs with HFCs which do not destroy the Ozone layer. But they were later found to be extremely potent in causing global warming.

But these could not be eliminated under the original provisions of the Montreal Protocol which was meant to phase out ozone-destroying chemicals only. The Kigali Amendment enabled the Montreal Protocol to mandate the elimination of HFCs as well.

The Kigali Amendment to the Montreal Protocol aims to gradually reduce the consumption and production of hydrofluorocarbons (HFCs). **It is a legally binding agreement designed to create rights and obligations in international law.**

**India has currently not ratified the Kigali amendment.**

**Additional Info:**

Under the Kigali amendment, the countries are divided into separate groups of countries, with different time schedules to phase out their HFCs and replace them with climate-friendly alternatives. India has to reduce its HFC use by 80 percent by the year 2047, while China and the United States have to achieve the same target by the years 2045 and 2034 respectively.

**Source:**

<https://indianexpress.com/article/india/india-decides-to-ratify-kigali-amendment-to-montreal-protocol-7460521/>

**S150. Ans.(c)**

**Sol.** Baijayant Panda Committee:

It is a committee constituted by the Ministry of Defence that constituted a High-Level Expert Committee for a comprehensive review of the National Cadet Corps (NCC). Objectives of the Committee: Committee is to suggest measures to empower NCC cadets to contribute more effectively towards nation-building. To propose ways for gainful engagement of NCC Alumni for the betterment of the organization.

**S151. Ans.(b)**

**Sol.** The Ministry of Social Justice & Empowerment had recently organized meetings with officials and other stakeholders of Jammu & Kashmir and Ladakh for the implementation of National Trust

**The National Trust:**

The National Trust is a **statutory** body of the Ministry of Social Justice and Empowerment, Government of India, set up under the “National Trust for the Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities” Act (Act 44 of 1999).

**What is the Nirmaya scheme?**

The objective of the Niramaya scheme is to provide affordable Health Insurance to persons with Autism, Cerebral Palsy, Mental Retardation, and Multiple Disabilities

**Objectives**

1. To enable and empower persons with disabilities to live as independently and as fully as possible within and as close to their community as possible;
2. **To facilitate the realization of equal opportunities, protection of rights, and full participation of persons with disabilities;**
3. To extend support to its registered organizations to provide need-based services, and to evolve procedures for appointments of guardians and trustees for persons with disabilities.

Source:

- <https://www.thenationaltrust.gov.in/content/innerpage/introduction.php>  
<https://pib.gov.in/PressReleaseDetailm.aspx?PRID=1750790>

**S152. Ans.(a)**

**Sol. De-extinction** (also known as **resurrection biology**, or **species revivalism**) is the process of generating an organism that either resembles or is an extinct species. There are several ways to carry out the process of de-extinction like selective breeding or genome editing by the use of CRISPR Cas 9 Technology,

Recently there has been debate among the scientific community to carry De-extinction for woolly mammoths which can help to restore this ecosystem by trampling shrubs, knocking over trees, and fertilizing grasses with their feces.

The reintroduction of extinct species could have a negative impact on extant species and their ecosystem. The extinct species' ecological niche may have been filled in its former habitat, making it an invasive species. This could lead to the extinction of other species due to competition for food or **by competitive exclusion/ Gause's law.**

In ecology, the competitive exclusion principle, or Gause's law, is a proposition that two species competing for the same limited resource cannot coexist at constant population values. When one species has even the slightest advantage over another, the one with the advantage will dominate in the long term. This leads either to the extinction of the weaker competitor or to an evolutionary or behavioral shift toward a different ecological niche. The principle has been paraphrased in the maxim "complete competitors can not coexist"

Source: <https://www.downtoearth.org.in/blog/climate-change/bringing-woolly-mammoths-back-from-extinction-might-not-be-such-a-bad-idea-ethicists-explain-79038>

**S153. Ans.(d)**

**Sol.** Agriculture Infrastructure Fund (AIF) scheme :

1. It is a pan India **Central Sector Scheme** for providing financing facility under the Agriculture Infrastructure Fund (AIF) of Rs. 1 Lakh Crore.
2. NABARD Manages Agriculture Infrastructure Fund (AIF).
3. The objective of the Agriculture Infrastructure Fund (AIF) scheme is to mobilize a medium - long term debt financing facility for investment in viable projects **for post-harvest management Infrastructure(Not Pre-harvest)** and community farming assets through incentives and financial support in order to improve agriculture infrastructure in the country.
4. The scheme provides financial assistance in the form of interest subvention and credit guarantee for setting Post Harvest Management (PHM) projects which will help better **post-harvest management and reduction in wastage.**

**What is the difference between a central sector scheme and a centrally sponsored scheme?**

The central welfare schemes at the state level fall into two broad categories. The first category is centrally sponsored schemes, and the second is the central sector schemes. While the Union government fully funds the central sector schemes, centrally sponsored schemes are jointly funded by the Centre and states.

Source:

- <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1743350>  
<https://www.news18.com/news/india/nabard-sanctions-rs-1568-crore-worth-of-proposals-under-agriculture-infrastructure-fund-2879219.html>

**S154. Ans.(a)**

**Sol.** Recently DRDO has created a near isothermal forging technology to produce aero-engine components using its unique 2000 MT isothermal forge press

**What is isothermal forging technology?**

In metallurgy, the process of Forging is termed as shaping metal and increasing its strength by hammering or pressing. Forging has different types, among them is isothermal forging technology. In Isothermal forging, the die and the workpiece are maintained at the same temperature throughout the forging cycle. This technology is widely used to forge titanium-based alloys. That is why this technology is best suited for the high-pressure compressors (HPC) discs that are used in aero-engines.

The fighter jet engine needs components with the highest precision, as a small deformity can lead to huge damage. The isothermal forging technology provides the components with the highest precision.

Source: <https://newsonair.com/2021/05/31/india-joins-the-elite-group-of-global-aero-engine-developers/>

**S155. Ans.(b)**

**Sol. Context:** The Indian Coast Guard and the Tamil Nadu Forest Department recently recovered almost two tonnes of sea cucumber that was suspected to be smuggled to Sri Lanka via Indian waters.

**Sea cucumbers :**

1. Sea cucumbers are echinoderms from the class Holothuroidea.
2. Sea cucumber is in high demand in China and South-East Asia, where it is consumed as a delicacy.
3. Sea cucumber is a marine species that helps keep up a balance in the marine ecosystem. India treats sea cucumber as an endangered species and has listed it in the Wildlife Protection Act, 1972.
4. In 2020, the Indian government created the world's first sea cucumber conservation area, the [Dr. KK Mohammed Koya Sea Cucumber Conservation Reserve](#), in Lakshadweep to protect the sea cucumber species. In India, the commercial harvesting and transportation of sea cucumbers are banned.

Source: <https://food.ndtv.com/news/sea-cucumber-worth-inr-8-crore-seized-in-tamil-nadus-mandapam-2546918>

[https://en.wikipedia.org/wiki/Sea\\_cucumber#Conservation](https://en.wikipedia.org/wiki/Sea_cucumber#Conservation)

**S156. Ans.(d)**

**Sol. Context:** . DRDO developed Quantum Key Distribution (QKD) technology recently underwent trials in Hyderabad between two DRDO labs, Defence Research and Development Laboratory (DRDL) and Research Centre Imarat (RCI), to show secure communication.

**Quantum Key Distribution :**

The Quantum Key Distribution underpins Quantum Communication technology that basically ensures unconditional data security. This communication is considered extremely secure as two parties produce a shared random secret key, which only they have knowledge of and can be used to encrypt or decrypt messages. The communication technology is considered to be extremely secure as it is possible for the two communication parties to detect the presence of any intruders trying to gain knowledge of the key.

Furthermore, this technology is also considered future-proof as it is unlikely for any future advancements in computational power to be able to break the quantum cryptosystem. "The conventional cryptosystems used for data-encryption rely on the complexity of mathematical algorithms, whereas the security offered by quantum communication is based on the laws of Physics

Source: <https://www.dqindia.com/isro-like-drdo-achieves-quantum-communication-quantum-key-distribution/>

**S157. Ans.(d)**

**Sol.** Disadvantages of de-extinction:

1. The reintroduction of extinct species could have a negative impact on extant species and their ecosystem. The extinct species' ecological niche may have been filled in its former habitat, making it an invasive species. This could lead to the extinction of other species due to competition for food or other competitive exclusion. It could also lead to the extinction of prey species if they have more predators in an environment that had few predators before the reintroduction of an extinct species
2. If a species has been extinct for a long period of time the environment they are introduced to could be wildly different from the one that they can survive in. The changes in the environment due to human development could mean that the species may not survive if reintroduced into that ecosystem.
3. A species could also become extinct again after de-extinction if the reasons for its extinction are still a threat. The woolly mammoth would be hunted by poachers just like elephants for their ivory and could go extinct again if this were to happen. Or, if a species is reintroduced into an environment with the disease it has no immunity to the reintroduced species could be wiped out by a disease that current species can survive.
4. De-extinction is a very expensive process. Bringing back one species can cost millions of dollars. The money for de-extinction would most likely come from current conservation efforts. These efforts could be weakened if funding is taken from conservation and put into de-extinction. This would mean that critically endangered species would start to go extinct faster because there are no longer resources that are needed to maintain their populations

**S158. Ans.(c)**

**Sol.** The Atomic Minerals Directorate for Exploration and Research, Hyderabad under the Department of Atomic Energy has decided to “shelve” the project to drill boreholes in the Amrabad Tiger Reserve to prospect for the yellowcake, a form of uranium ore. Uranium is used as the basic fuel to generate nuclear power. In 2019, an expert panel on forests of the Ministry of Environment, Forest and Climate Change had recommended in-principle approval for a proposal by the Department of Atomic Energy for survey and exploration of uranium over 83 sq km in the tiger reserve.

Source: <https://scroll.in/article/991850/saved-by-a-whisker-plans-to-mine-a-telangana-tiger-reserve-for-uranium-have-been-shelved>

**S159. Ans.(a)**

**Sol.** The decennial Census of India has been conducted 15 times, as of 2011. While it has been undertaken every 10 years, beginning in 1872 under British Viceroy Lord Mayo, the first complete census was taken in 1881.[1] Post-1949, it has been conducted by the Registrar General and Census Commissioner of India under the Ministry of Home Affairs, Government of India. All the censuses since 1951 were conducted under the 1948 Census of India Act. Every Census in independent India from 1951 to 2011 has published data on Scheduled Castes and Scheduled Tribes, but not on other castes. Before that, every Census until 1931 had data on caste.

**Important Point :**

The individual data collected in Census under the Census Act, 1948, are not made public as per the provisions contained in the Act. The individual data are not used for the preparation of any other database, including the National Register of Citizens.

Source:

<https://www.thehindu.com/news/national/census-activities-put-off-due-to-covid-19-minister-tells-lok-sabha/article35844318.ece>

**S160. Ans.(d)**

**Sol.** West Africa’s first case of the extremely contagious and deadly Marburg virus was confirmed in Guinea on August 9, 2021, according to the World Health Organization. The virus causes hemorrhagic fever and belongs to the same family as the Ebola virus.

The common symptoms of a Marburg infection are fever, headache, fatigue, abdominal pain, and gingival hemorrhage

Marburg is transmitted to people from fruit bats. The contagion spreads among humans through direct contact with the bodily fluids of the patient, surfaces, and materials

There are no approved vaccines or antiviral treatments for the virus yet

Source:

<https://www.downtoearth.org.in/news/africa/west-africa-records-1st-death-from-highly-infectious-marburg-virus-78381>

**S161. Ans.(b)**

**Sol.** In 1999, in the wake of the 1997 economic crisis, the G7 Finance Ministers announced the creation of the “Group of 20”, aimed at including other countries in their discussions related to global economics and finance. The first official meeting of the G20 was held in Berlin in December that same year.

The G20 is the international forum that brings together the world’s major economies. Its members account for more than 80% of world GDP, 75% of global trade and 60% of the population of the planet.

The G20 does not have a permanent secretariat and currently, the Headquarters of OECD is used by G-20 For its session.

A “Troika”, represented by the country that holds the Presidency, its predecessor and its successor, works to ensure continuity within the G20. The Troika countries are currently Saudi Arabia, Italy and Indonesia.

Saudi Arabia held its presidency in 2020.

Italy holds Presidency for 2021, Indonesia for 2022 and India for 2023.

Source: <https://www.g20.org/about-the-g20.html>

<https://www.thehindu.com/news/national/higher-investment-required-in-agriculture-rd-india-says-at-g20-agriculture-meet/article36535108.ece>

**S162. Ans.(a)**

**Sol.** The 2021 Global Innovation Index report by World Intellectual Property Organization was released recently.

India has improved its ranking in the latest Global Innovation Index (GII), moving up two positions to 46, the 2021 report.

Switzerland topped the league table, followed by Sweden, the US and the UK, said the report by the World Intellectual Property Organization (WIPO).

Source: <https://www.hindustantimes.com/india-news/india-jumps-to-46th-spot-in-2021-global-innovation-index-101632167227888.html>

**S163. Ans.(c)**

**Sol. Context:** As many as 12 folk varieties of Indian rice examined by researchers can supplement the nutritional demand of important fatty acids in undernourished mothers, a recent study has claimed.

High-yield hybrids pushed out indigenous rice varieties and many of these varieties, called landraces are nearing extinction in India.

**1. Tilak Chandan** is thick, small-grained rice famous for its fragrance and cultivated in **Uttar Pradesh’s Bijnore and Rampur.**

2. Bindli, a once-famous rice variety of Uttar Pradesh is now virtually out of cultivation, with only a few farmers cultivating it in the plains of Pauri district, Uttarakhand. It can be cultivated under rain-fed, irrigated as well as waterlogged conditions.

3. **Kalanamak**, a scented rice variety grown in **Uttar Pradesh**, is fast going out of cultivation.

4. The first export consignment of **Bao-dhaan (red rice) from Assam** was sent to the US in March 2021. The iron-rich red rice is grown in the Brahmaputra valley of Assam, without the use of any chemical fertilizer.

Source:

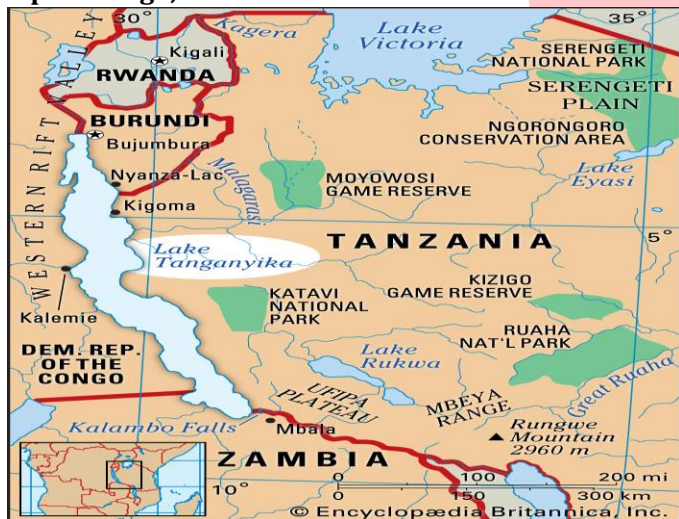
<https://www.downtoearth.org.in/news/food/folk-rice-researchers-spot-dozen-indian-paddy-varieties-that-can-boost-nourishment-79027>

**S164. Ans.(d)**

**Sol.** Climate shocks, mainly the rapid and significant rise of Lake Tanganyika, caused at least 84 per cent internal migration in East Africa's Burundi in the recent years, according to Save the Children, a global independent organisation for children.

Lake Tanganyika is an African Great Lake. It is the second-oldest freshwater lake in the world, the second-largest by volume, and the second-deepest, in all cases after Lake Baikal in Siberia. It is the world's longest freshwater lake.

**It is bordered by four countries- Burundi, Democratic Rep. of Congo, Tanzania and Zambia.**



Source: <https://www.downtoearth.org.in/news/climate-change/most-internal-displacement-in-east-africa-s-burundi-due-to-rise-of-lake-tanganyika-79106>

**S165. Ans.(b)**

**Sol.** After nearly two years of work, the merger of the Lok Sabha TV and the Rajya Sabha TV has been finalised and will be replaced by a single entity Sansad TV.

Provisionally, the channel will have about 35 themes on which programmes will be aired, and the programmes will be similar, but in two languages: English and Hindi.

In November 2019, after deliberations between Lok Sabha Speaker Om Birla and Rajya Sabha Chairman Venkaiah Naidu, a committee headed by former Prasar Bharati Chairman Surya Prakash was set up.

The Lok Sabha TV has been in operation since 2006. It was the first Parliamentary channel of India.

The LSTV, which was the brainchild of former Speaker Somnath Chatterjee, has been functioning for 15 years and the RSTV for 10 years providing live coverage of the proceedings.

When Parliament is in session, both channels will continue to operate as before bringing in the live telecast. But when it is in recess, only Sansad TV will be telecast.

Source:

<https://www.thehindu.com/news/national/sansad-tv-launched-modi-calls-it-new-voice-of-parliament/article36483067.ece>

**S166. Ans.(a)**

**Sol.** Context: Paytm's stock has risen from ₹11,500 to ₹21,000 in four days in the grey market.

**What is the IPO grey market?**

An IPO grey market is one where a company's shares are bid and offered by traders unofficially. This takes place before the shares are even issued by the company in an **Initial Public Offering (IPO)**.

Since this is an unofficial market, there are no rules and regulations. Market regulators like the Securities and Exchange Board of India (SEBI) are not involved in these transactions. The regulator doesn't endorse this either. Traders are interested in grey market stocks because it can be a way of taking advantage of movements in the company's share price before it has actually been listed.

Grey markets are generally run by a small set of individuals. All deals are based on mutual trust. Grey market stocks are traded over-the-counter (OTC), which means that they are not offered by a stock exchange, but only by brokers and trading provider

Source: <https://www.livemint.com/market/stock-market-news/paytm-shares-go-past-rs21-000-in-grey-market-11622539621703.html>  
<https://www.ig.com/en-ch/glossary-trading-terms/grey-market-definition>

**S167. Ans.(c)**

**Sol.** The UNESCO September 15, 2021, designated Mura-Drava-Danube (MDD) as the world's first 'five-country biosphere reserve.

The biosphere reserve covers 700 kilometres of the Mura, Drava and Danube rivers and stretches across Austria, Slovenia, Croatia, Hungary and Serbia.

The total area of the reserve — a million hectares — in the so-called 'Amazon of Europe', makes it the largest riverine protected area on the continent.

Source: <https://www.downtoearth.org.in/news/wildlife-biodiversity/unesco-declares-world-s-first-5-country-biosphere-reserve-in-amazon-of-europe--79056>

**S168. Ans.(d)**

**Sol.** Article 217 of the Constitution states that the Judge of a High Court shall be appointed by the President in consultation with the Chief Justice of India (CJI) and the Governor of the State. Collegium System is the system of appointment and transfer of judges that has evolved through judgments of the SC, and not by an Act of Parliament or by a provision of the Constitution.

The Chief Justice of the High Court is appointed as per the policy of having Chief Justices from outside the respective States.

Source:

<https://www.thehindu.com/news/national/supreme-court-collegium-on-mission-mode-to-fill-vacancies/article36515864.ece>

**S169. Ans.(d)**

**Sol.** Substandard Assets: These are the assets that have remained NPA for a period of less than or equal to 12 months.

Doubtful Assets: If the asset is in the substandard category for a period of 12 months.

Loss Assets: These assets are of little value; they can no longer continue as a bankable assets, there could be some recovery value.

Source:

<https://www.thehindu.com/business/Economy/government-sets-up-bad-bank-to-clear-the-npa-mess/article36495756.ece>

**S170. Ans.(b)**

**Sol.** In 2015, FSSAI set up a second expert committee to assess the availability of foods high in fat, salt or sugar in the Indian market and to recommend its regulatory limits and labelling and display requirements.

The committee was led by D Prabhakaran, then vice-president of Public Health Foundation of India, and in 2018, FSSAI released the draft Food Safety and Standards (Labelling and Display) Regulations, which for the first time proposed FoP labelling for packaged food in India by accepting its recommendations.

Source:

<https://www.downtoearth.org.in/news/food/food-fudge-the-story-behind-why-india-still-does-not-have-front-of-pack-labelling-79078>

**S171. Ans.(d)**

**Sol.** Context: Researchers at the Indian Institute of Technology (IIT), Guwahati, have developed a new class of super-hydrophobic cotton composite with Metal-Organic Framework (MOF) that promise marine oil-spill clean-up in the near future

**Metal-Organic Framework (MOF) :**

MOFs are a class of compounds containing metal ions coordinated to organic ligands to form 3D structures, with the special feature that they are often highly porous materials that act like a sponge.

Due to their structural diversity and adjustability, MOFs are ideal host platforms for the immobilization or encapsulation of other functional materials, such as nanoparticles (NPs), quantum dots, polyoxometalates, enzymes, and polymers.

The MOF composite has great capability for selective separation of the oils from oil/water mixtures and the separation efficiency lies between 95 percent and 98 percent, irrespective of the chemical composition and density of the oils. Besides, the MOF composite is also able to absorb large volumes of oils and can be reused a minimum of 10 times so that the sorbents can provide more recovery of the spilled oil.

**Additional info:****Quantum dot:**

A quantum dot is a **nanometer-sized semiconductor particle traditionally with a core-shell structure**. Quantum dots are widely used for their unique optical properties, as they emit light of specific wavelengths of energy is applied to them

Source: <https://www.downtoearth.org.in/news/science-technology/researchers-develop-super-hydrophobic-cotton-for-oil-spill-cleanup-79114>

**S172. Ans.(a)**

**Sol.** Penguins are divided into six genera (see table). The Humboldt penguin (*Spheniscus humboldti*) belongs to a genus that is commonly known as the 'banded' group. Humboldt penguins are endemic to the Pacific coasts of Chile and Peru. They are so named because their habitat is located near the Humboldt Current, a large oceanic upwelling characterized by cold waters.

The species is listed as vulnerable by the IUCN with no population recovery plan in place.[3] The current population is composed of 32,000 mature individuals and is going down

Source:

<https://indianexpress.com/article/explained/explained-how-are-humboldts-different-from-other-penguins-7520251/>

**S173. Ans.(d)**

**Sol.** A volcanic eruption of the **Cumbre Viejo volcano**, on the Spanish Canary Island of La Palma, has led to the mass evacuation of thousands of people. After a week-long build-up of seismic activity, the volcano erupted in the northwestern island of the Canary archipelago.

Source:

<https://indianexpress.com/article/trending/trending-globally/watch-videos-lava-pours-out-of-volcano-on-la-palma-in-spains-canary-islands-7524983/>



**S174. Ans.(b)**

**Sol.** Two more beaches in India have been awarded 'Blue Flag' certification, an international eco-level tag, taking the total number of such beaches in the country to 10. The two beaches to receive the certification this year are Kovalam in Tamil Nadu and Eden in Puducherry.

Foundation for Environment Education in Denmark (FEE) which accords the globally recognized eco-label - Blue Flag certification, has also given re-certification for eight nominated beaches Shivrajpur- Gujarat, Ghoghla-Diu, Kasarkod and Padubidri-Karnataka, Kappad-Kerala, Rushikonda- Andhra Pradesh, Golden-Odisha and Radhanagar- Andaman and Nicobar, which were awarded the Blue Flag certificate last year.

Source: <https://www.freepressjournal.in/india/tamil-nadus-kovalam-and-puducherrys-eden-beaches-get-coveted-blue-flag-tag>

**S175. Ans.(c)**

**Sol.** Blue Flag certification is a globally recognized eco-label accorded on the basis of 33 stringent criteria in four major heads which are environmental education and information, bathing water quality, environmental management, and conservation and safety and services in the beaches.

Foundation for Environment Education in Denmark (FEE) accords the globally recognized eco-label - Blue Flag certification.

Two more beaches in India have been awarded 'Blue Flag' certification, an international eco-level tag, taking the total number of such beaches in the country to 10. The two beaches to receive the certification this year are Kovalam in Tamil Nadu and Eden in Puducherry.

Source: <https://www.hindustantimes.com/india-news/two-more-beaches-in-india-awarded-prestigious-blue-flag-tag-details-here-101632270649443.html>

**S176. Ans.(b)**

**Sol.** The X moonshot labs of Alphabet have beamed 700TB of data across the Congo River, potentially saving money over installing fiber links in challenging terrain. Google's plan for bridging the Congo River is to build a link between Brazzaville and Kinshasa using "free space" optics, which were also utilized to transfer data in the now-defunct Loon project. It uses light to transmit data between two sites, in this case, a 4.8-kilometer distance that would otherwise necessitate a 400-kilometer terrestrial route due to the river. Because the fiber connection has to travel such a long distance in Kinshasa, connectivity is five times more expensive.

Source: <https://enterprisetalk.com/quick-bytes/alphabets-project-taara-beams-broadband-between-two-cities/>

**S177. Ans.(b)**

**Sol.** Congo river was recently seen in the news due to Project TAARA. Under this light was used by Google to transmit data between two sites Brazzaville and Kinshasa located on the Congo river

Countries through which it flows: Democratic Republic of the Congo, Republic of the Congo, Angola



**S178. Ans.(d)**

**Sol.** The concept of ICZM was introduced in 1992 during the Earth Summit at Rio de Janeiro and most of the coastal countries in the world have been adopting ICZM principles for managing their coastal zones. Thus, the adoption of ICZM principles for managing and sustainably developing our coastal regions is helping India in keeping with its commitments to international agreements on ICZM.

Integrated coastal zone management (ICZM) aims to improve the livelihood of coastal communities and conserve the coastal ecosystem. It is a World Bank-assisted project. The National Centre for Sustainable Coastal Management (NCSCM), Chennai, will provide scientific and technical inputs.

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1656392>

**S179. Ans.(c)**

**Sol.** The objective of the **BEAMS** program is to abate pollution in coastal waters, promote sustainable development of beach facilities, protect & conserve coastal ecosystems & natural resources, and seriously challenge local authorities & stakeholders to strive and maintain high standards of cleanliness, hygiene & safety for beachgoers in accordance with coastal environment & regulations. This program promotes beach recreation in absolute harmony with nature.

Source: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1656392>

**S180. Ans.(a)****Sol. R-Value**

The R-value, which reflects how rapidly the COVID-19 pandemic is spreading, dropped to 0.92 by mid-September after going over one in August-end.

R-value or R-factor or R0 (R-naught) or Reproduction Rate refers to how many persons an infected person infects on average. It indicates the speed at which the Covid infection is spreading in the country, along with the 'efficiency' of the spread. The higher the R-value number, the more contagious is the disease caused by the virus and the faster it will spread in the community.

**S181. Ans.(a)**

**Sol.** It is a kind of free trade pact that aims to provide an institutional mechanism to encourage and improve trade between the two countries. Under this agreement, countries reduce or eliminate the duties on the products. The countries also give relaxation in the norms to promote the services trade.

India and Mauritius have recently signed the Comprehensive Economic Cooperation and Partnership Agreement (CECPA), the first trade agreement signed by India with a country in Africa.

the agreement is a limited agreement, which will cover Trade in Goods, Rules of Origin, Trade in Services, Technical Barriers to Trade (TBT), Sanitary and Phytosanitary (SPS) measures, Dispute Settlement, Movement of Natural Persons, Telecom, Financial services, Customs Procedures and Cooperation in other Areas.

Source:

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1708794>

<https://commerce.gov.in/wp-content/uploads/2021/08/India-Mauritius-CECPA-Text-for-Upload.pdf>

**S182. Ans.(a)**

**Sol.** Carbon dioxide and Methane is not in the WHO list of a new guideline for air quality.

New WHO Global Air Quality Guidelines (AQGs) provide clear evidence of the damage air pollution inflicts on human health, at even lower concentrations than previously understood.

Since WHO's last 2005 global update, there has been a marked increase of evidence that shows how air pollution affects different aspects of health.

WHO's new guidelines recommend air quality levels for 6 pollutants, where evidence has advanced the most on health effects from exposure. When action is taken on these so-called classical pollutants – particulate matter (PM), ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>) sulfur dioxide (SO<sub>2</sub>), and carbon monoxide (CO), it also has an impact on other damaging pollutants.

The health risks associated with particulate matter equal or smaller than 10 and 2.5 microns (µm) in diameter (PM<sub>10</sub> and PM<sub>2.5</sub>, respectively) are of particular public health relevance

Source: <https://www.who.int/news/item/22-09-2021-new-who-global-air-quality-guidelines-aim-to-save-millions-of-lives-from-air-pollution>

**S183. Ans.(c)**

**Sol.** At 71%, Assam is home to the world's largest population of one-horned rhinoceros. According to a 2018 census, there are nearly 2,650 rhinos in the state with around 2,400 of them in the Kaziranga National Park.

Rhinoceros are listed in Schedule 1 of the Wildlife (Protection) Act, 1972, as **endangered animals** and there is an international ban on the trade of rhino horns under the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES).

The Wildlife Protection Act, 1972 allows for the destruction of wildlife parts (including rhino horn) under Section 39 (3).

India Rhino Vision 2020 (IRV2020) began in 2005 and played an instrumental role in conserving these rhinos. The goal of IRV2020 was to increase **the rhino population in Assam to 3,000** by establishing populations in new areas. The program successfully re-established a new population in Manas National Park, which now numbers 47 individuals. Rhinos can now be found thriving in four Protected Areas in Assam: Pobitora Wildlife Sanctuary, Orang National Park, Kaziranga National Park, and Manas National Park.

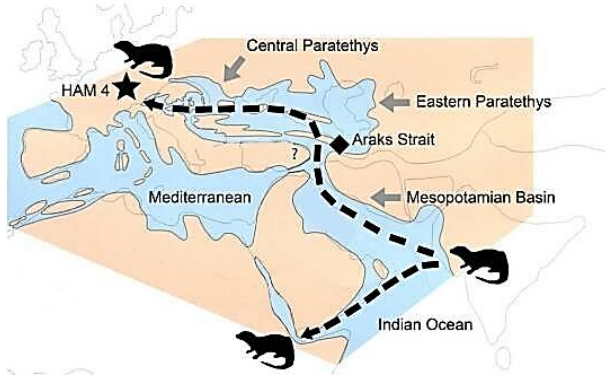
Source: <https://www.hindustantimes.com/india-news/world-rhino-day-assam-burns-rhino-horns-to-bust-myth-on-medicinal-value-101632335918823.html>

<https://weather.com/en-IN/india/biodiversity/news/2021-09-22-the-success-story-of-rhinoceros-conservation-in-assam>

**S184. Ans.(d)**

**Sol.** Between 12.5 million and 14 million years ago, members of a genus of otters called Vishnuonyx lived in the major rivers of southern Asia. Fossils of these now extinct otters were first discovered in sediments found in the foothills of the Himalayas. Now, a newly found fossil indicates it had traveled as far as Germany. The discovery has been described in the Journal of Vertebrate Paleontology.

Vishnuonyx were mid-sized predators that weighed, on average, 10-15 kg. Before this, the genus was known only in Asia and Africa (recent findings show that Vishnuonyx reached East Africa about 12 million years ago, according to the release



Source:

<https://indianexpress.com/article/explained/vishnuonyx-extinct-otter-fossil-discovery-explained-7523724/>

**S185. Ans.(b)**

**Sol.** To encourage states to improve food safety in their jurisdiction, the Food Safety and Standards Authority of India (FSSAI) releases State Food Safety Index or SFSI.

As per the ranking of the 20 large states, Gujarat was the best state in the country in terms of food safety with 72 points out of 100, the highest across all the categories.

Southern states of Kerala and Tamil Nadu bagged the second and the third places respectively. Among the large states, Bihar ranked last at 20th position, while Andhra Pradesh was placed 19th and Rajasthan was 18th.

Meanwhile, in the small states, Goa topped the list, followed by Meghalaya and Manipur. Among the eight small states, Mizoram ranked last.

As far as the eight UTs are concerned, Jammu and Kashmir were ranked as the UT with the highest food safety, while Andaman and Nicobar Islands were ranked second and the national capital of Delhi was ranked third. Lakshadweep was ranked as the UT with the lowest standards of food safety.

Source:

<https://www.financialexpress.com/lifestyle/gujarat-ranks-as-state-with-highest-food-safety-in-india-as-fssai-releases-third-state-food-safety-index/2336149/>

**S186. Ans.(d)**

**Sol.** Competition Commission of India (CCI) is a statutory body of the Government of India responsible for enforcing the Competition Act, 2002; it was duly constituted in March 2009.

The Monopolies and Restrictive Trade Practices Act, 1969 (MRTP Act) was repealed and replaced by the Competition Act, 2002, on the recommendations of the Raghavan committee.

The Commission consists of one Chairperson and six Members as per the Competition Act who shall be appointed by the Central Government. The chairman is not necessary to be a retired Chief justice of SC or HC. Currently it is headed by Ashok Kumar Gupta a 1981 Batch IAS officer of the Tamil Nadu cadre. In the past HL Dattu a former Chief Justice of India (CJI), had been appointed as chairman of it.

Source:

<https://www.thehindu.com/sci-tech/technology/google-abused-android-dominance-competition-commission-of-india-report-finds/article36535148.ece>

**S187. Ans.(b)**

**Sol.** CPCB is a statutory organization that was constituted in September 1974 under the Water (Prevention and Control of Pollution) Act, 1974.

It was entrusted with the powers and functions under the Air (Prevention and Control of Pollution) Act, 1981.

It serves as a field formation and also provides technical services to the Ministry of Environment and Forests of the provisions of the Environment (Protection) Act, 1986.

principal Functions of the CPCB, as spelt out in the Water (Prevention and Control of Pollution) Act, 1974, and the Air (Prevention and Control of Pollution) Act, 1981: to promote cleanliness of streams and wells in different areas of the States by prevention, control and abatement of water pollution.

Source:

<https://www.thehindu.com/todays-paper/tp-features/tp-sci-tech-and-agri/iisc-researchers-find-a-way-to-substitute-for-single-use-plastics/article36545446.ece>

**S188. Ans.(c)**

**Sol.** National Financial Reporting Authority (NFRA) was constituted in 2018 by the Government of India under section 132 (1) of the Companies Act, 2013. It is an audit regulator.

It can undertake investigation related to the following class of companies and bodies corporate called Public Interest Entities

It can undertake investigation related to the companies whose securities are listed on any stock exchange in India or outside India.

Unlisted public companies having paid-up capital of not less than Rs. 500 crores or having an annual turnover of not less than Rs. 1,000 crores or having, in the aggregate, outstanding loans, debentures, and deposits of not less than Rs. 500 crores as on the 31st March of immediately preceding financial year.

Source:

<https://www.thehindu.com/business/Industry/nfra-needs-to-have-standalone-legislation/article36504051.ece>

**S189. Ans.(b)**

**Sol.** Habitat is the physical environment in which an organism lives. Each organism has particular requirements for its survival and lives where the environment provides for those needs. Note: An adaptation is the appearance or behavior or structure or mode of life of an organism that allows it to survive in a particular environment.

The term niche means the sum of all the activities and relationships of a species by which it uses the resources in its habitat for its survival and reproduction. A niche is unique for a species while many species share the habitat. It has to be noted that no two species in a habitat can have the same niche. This is because if two species occupy the same niche they will compete with one another until one is displaced.

Source: <https://www.thehindu.com/todays-paper/tp-national/tp-tamilnadu/habitat-loss-threatens-brown-palm-civets-in-western-ghats/article36487166.ece>  
<https://www.thehindu.com/todays-paper/tp-national/tp-tamilnadu/the-art-of-handling-snakes-with-love/article36508221.ece>

**S190. Ans.(a)**

**Sol.** Context: An experimental monoclonal antibody cocktail, REGEN-COV2, has been found to be a life-saving treatment for some of the most severely affected Covid-19 patients,

These antibodies recognize unique epitopes, or binding sites, on a single antigen. Derivation from single B-cell clones and subsequent targeting of a single epitope is what differentiates monoclonal antibodies from polyclonal antibodies.

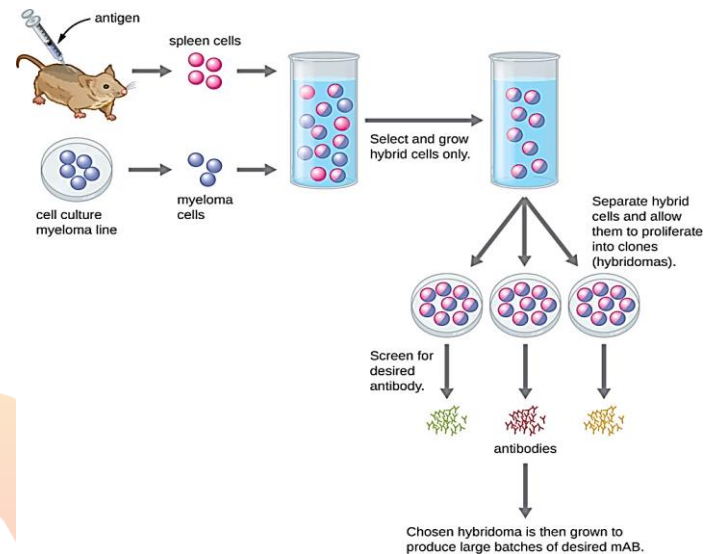
Given almost any substance, it is possible to produce monoclonal antibodies that specifically bind to that substance; they can then serve to detect or purify that substance.

Monoclonal antibody production requires the collection of the antibody-producing cells found in the spleen or lymph nodes.

As spleen cells have limited survival times in culture, they require fusion with myelomas, cancerous B-cells, to create an immortalized hybrid that can undergo many passages *in vitro*. This is achieved through polyethylene glycol (PEG) or electric pulses both of which disrupt cell membrane and allow merging of two adjacent cells.

In 1975, monoclonal antibodies were first generated by Milstein and Köhler. This method for the production of monoclonal antibodies is called hybridoma technology.

Monoclonal antibody production is expensive because they are difficult to make and take a lot of time. In India, Cipla is supplying 100,000 packs of REGEN-COV2 at a maximum retail price of approximately Rs 1.20 lakh per pack. With one pack offering treatment for two patients, the price of a dose for one patient is Rs 59,750, inclusive of all taxes.



Source:

- <https://indianexpress.com/article/explained/explained-mono-clonal-antibodies-covid-7368039/>
- <https://www.genscript.com/how-to-make-mono-clonal-antibodies.html>
- <https://www.sinobiological.com/resource/antibody-technical/mono-clonal-antibody-production>
- <https://courses.lumenlearning.com/microbiology/chapter/poly-clonal-and-mono-clonal-antibody-production/>

**S191. Ans.(b)**

**Sol.** Article 142 of the Constitution allows the Supreme Court to pass any order necessary for doing complete justice in any cause or matter pending before. it supersedes the power of the executive and legislature for maintaining stability in-country, protecting the rights of people.

Supreme Court has recently introduced a new system, namely the “Fast and Secured Transmission of Electronic Records” (FASTER) system, by which its crucial decisions, including orders on bail and stay of arrest, can be communicated electronically to prison authorities and investigating agencies through a secure channel.

Source: <https://www.thehindu.com/news/national/sc-introduces-fast-and-secured-transmission-of-electronic-records-system/article36639124.ece>

**S192. Ans.(b)**

**Sol.** The isolated forest was once a part of the Central Indian Elephant range and Eastern Ghats forest.

The sanctuary was established in Odisha in the year 1982 and on 7<sup>th</sup> January 1994, the Odisha Gazette notified the protected area.

It is considered to be one of the premier wildlife destinations in the state of Odisha which is declared to preserve the elephants mostly but along with that, a large no of birds can also be found in the sanctuary and also has a variety of snakes including the python.

Elephants are considered to be the key species of this sanctuary ecosystem

There are two beautiful water reservoirs namely Deras Dam and Jhumka Dam located within the sanctuary.

Source: <https://www.utkaltoday.com/chandaka-dampada-sanctuary/>

<https://www.newindianexpress.com/states/odisha/2021/sep/17/all-eyes-on-ramu-first-elephant-to-be-radio-collared-in-odisha-2359993.html>

<https://dot.odishatourism.gov.in/?q=node/65>

**S193. Ans.(a)**

**Sol.** The Five Eyes is an intelligence alliance comprising Australia, Canada, New Zealand, the United Kingdom, and the United States. These countries are parties to the multilateral UKUSA Agreement, a treaty for joint cooperation in signals intelligence. **It evolved during the Cold War as a mechanism for monitoring the Soviet Union and sharing classified intelligence. It is often described as the world's most successful intelligence alliance.**

The creation of the Australia-United Kingdom-United States alliance, or AUKUS which promises to bring hard military power to support the order built by the United States in Asia, and “sustain peace and stability in the Indo-Pacific region, is a promising “an enhanced trilateral security partnership”

Source: <https://www.bbc.com/news/world-56970640>

**S194. Ans.(c)**

**Sol.** The National Green Tribunal has been established on 18.10.2010 under the National Green Tribunal Act 2010 for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to the environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto. It is a specialized body equipped with the necessary expertise to handle environmental disputes involving multi-disciplinary issues. The Tribunal shall not be bound by the procedure laid down under the Code of Civil Procedure, 1908, but shall be guided by principles of natural justice.

Source: <http://www.greentribunal.gov.in/about-us>  
<https://www.thehindu.com/news/cities/chennai/ngt-suspends-clearance-for-ennore-power-plant-extension/article36600535.ece>

**S195. Ans.(d)**

**Sol.** PRANA or the Portal for Regulation of Air-pollution in Non-Attainment cities under the National Clean Air Programme (NCAP) would support tracking of the physical and financial status of city air action plan implementation. It would also disseminate information on air quality to the public while also providing comprehensive information related to NCAP program details, progress, city action plans, implementation updates by city/state/ national level agencies, air quality data, and trends, etc.

Source: <https://newsonair.com/2021/09/08/prana-portal-launched-to-regulate-air-pollution-in-132-cities/>

**S196. Ans.(a)**

**Sol.** 1. The first factory Commission was set up in 1879 to study the problems of workers. In 1891, the first factory act- The Indian factory Act was passed but it remained ineffective. The Second Factory Commission was formed in 1884 to which a memorandum signed by Narayan Meghji Lokhande along with 5300 workers was submitted

2. **All India Trade Union Congress (AITUC), the first national-level trade union in India was formed in 1920** just after the formation of ILO in 1919.

3. Lala Lajpat Rai was elected as its first president who later also attended the ILO Conference **in Geneva in 1926.**

4. Other national-level trade unions were also formed subsequently. The most notable among these was the Indian National Trade Unions Congress (INTUC) in 1947, the Hind Mazdoor Sabha (HMS) in 1948, **Bharatiya Mazdoor Sangh in 1955**, and the Centre of Indian Trade Unions (CITU) in 1970.

Source: <https://www.statecraft.co.in/article/a-history-of-trade-unions-in-india>

<https://www.thehindu.com/news/national/rss-affiliated-trade-union-slams-monetisation-plan/article36105908.ece>

**S197. Ans.(c)**

**Sol.** VIETNAM WAR (1959-1975)

The Taliban's march to Kabul is frequently being likened to the 'fall of Saigon' — a reference to 1975 when the capital of US-backed South Vietnam fell to Communist-ruled North Vietnam two years after the withdrawal of US military presence of 19 years.

Saigon's capture on April 30, 1975 (it was later renamed Ho Chi Minh City) signaled the end of the Vietnam War, and the Communists consolidated their hold over the entire country in the next few months — just as security analysts fear the Taliban would do in Afghanistan in the near future.

**Note that:**

GULF WAR (1990-1991): fought between Iraq and the coalition forces of 34 nations that were authorized by the UN, after the Iraqi invasion of Kuwait

Iraq War 2003-2011: invasion of Iraq by a U.S.-led coalition that overthrew the government of Saddam Hussein

Source: <https://www.gettysburgflag.com/history-of-american-wars>

<https://indianexpress.com/article/explained/explained-46-yrs-ago-another-us-exit-and-fall-of-saigon-7455490/>

**S198. Ans.(a)**

**Sol.** Context: The Supreme Court recently asked the government to produce material showing its reasons for introducing the Tribunal Reforms Bill of 2021, which abolishes nine appellate tribunals and revives provisions of an ordinance struck down by the Supreme Court, in the Parliament.

**The Tribunals Reforms Act, 2021 :**

The act seeks to dissolve certain existing appellate bodies and transfer their functions (such as adjudication of appeals) to other existing judicial bodies.

The Chairperson and Members of the Tribunals will be appointed by the central government on the recommendation of a Search-cum-Selection Committee. The Committee will consist of: (i) the Chief Justice of India, or a Supreme Court Judge nominated by him, as the Chairperson (with casting vote), (ii) two Secretaries nominated by the central government, (iii) the sitting or outgoing Chairperson, or a retired Supreme Court Judge, or a retired Chief Justice of a High Court, and (iv) the Secretary of the Ministry under which the Tribunal is constituted (with no voting right).

The act provides for a **four-year term of office** (subject to the upper age limit of 70 years for the Chairperson, and 67 years for members). **Further, it specifies a minimum age requirement of 50 years for the appointment of a chairperson or a member.**

Source: <https://prsindia.org/billtrack/the-tribunals-reforms-bill-2021>

**S199. Ans.(d)**

**Sol.** Recently CCAEA has given its approval to the proposal for National Mission on Edible Oil-Oil Palm (NEMO-OP). As per the roadmap, the government will work towards shooting up the cultivation of oil palm to 10 lakh hectares and 16.7 lakh hectares by 2025-26 and 2029-30 respectively.

The central government is targeting to ramp up the domestic production of palm oil by over three times to 11 lakh tonnes by 2025-26 in order to cut down the country's import dependency on edible oils.

The north-eastern states along with the Andaman and Nicobar Islands will be particularly focused upon expediting the production and cultivation of palm oil in India. This is because the weather conditions in these two regions would be conducive for this purpose.

The Oil Palm grows best in areas with a mean maximum temperature of 30-32 °C and on an average of at least five hours of sunlight. Oil palm is a humid crop and requires a well-distributed rainfall of 200 cm per annum

Source: <https://oilpalmindia.com/opdpmoop/>

<https://swarajyamag.com/insta/govt-targets-three-fold-increase-in-domestic-production-of-palm-oil-to-cut-import-dependency>

**S200. Ans.(d)**

**Sol.** The International Fund for Agricultural Development in a report released on Tuesday called for revolutionary transformation in the world's food systems if adequate nutritious food was to be ensured for all. The report titled transforming food systems for rural prosperity stressed more investment in rural farms and local small and medium-sized enterprises for improving food storage, processing, marketing, and distribution.

Source:

<https://www.newagebd.net/article/149709/global-food-systems-must-be-transformed-ifad>

**S201. Ans.(b)**

**Sol. Context:** Recently inaugural session of Aarogya Manthan 3.0 to mark the third anniversary of the AB-PMJAY was held.

**AB-PMJAY:**

The scheme was launched by Prime Minister Narendra Modi on September 23, 2018, from Ranchi with the vision to achieve Universal Health Coverage (UHC).

Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) is a Centrally Sponsored Scheme having a central sector component under the Ayushman Bharat Mission anchored in the Ministry of Health and Family Welfare (MoHFW). It is an umbrella of two major health initiatives, namely Health and Wellness Centres and the National Health Protection Scheme.

AB-PMJAY provides a defined benefit cover of Rs. 5 lakh per family per year. This cover will take care of almost all secondary care and most of the tertiary care procedures.

AB-PMJAY is an entitlement based scheme with entitlement decided on the basis of deprivation criteria in the SECC 2011 database.

Source" <https://vikaspedia.in/health/nrhm/national-health-mission/ayushman-bharatpm-jan-arogyayojana>

<https://www.freepressjournal.in/business/ab-pmjay-has-served-over-22-cr-people-in-last-3-years-mansukh-mandaviya>

**S202. Ans.(b)**

**Sol. Context:** The Defence Ministry recently placed an order with the Heavy Vehicle Factory (HVF), Avadi, for the supply of 118 indigenous **Arjun Mk-1A Main Battle Tanks** for the Army at a cost of ₹7,523 crores.

**Arjun Mk-1A Main Battle Tanks :**

The state-of-the-art MBT Mk-1A is a new variant of the Arjun tank designed to enhance firepower, mobility and survivability. Infused with 72 new features and **more indigenous content** from the Mk-1 variant, the tank would ensure effortless mobility in all terrains. **(it is not fully indigenous read the sentence carefully)**

The MBT Arjun Mk-1A was designed and developed by the Combat Vehicles Research and Development Establishment (CVRDE) along with the other laboratories of the Defence Research and Development Organisation (DRDO).

Source:

<https://www.thehindu.com/news/national/defence-ministry-places-7523-crore-order-for-118-indigenous-arjun-mk-1a-tanks/article36632889.ece>

**S203. Ans.(b)**

**Sol.** The report *The Ocean State Report 5* was recently launched by the Copernicus Marine Environmental Monitoring Service.

The report showed that warming ocean waters have caused many marine species to move towards cooler waters; this migration has led to the introduction of non-native and invasive species to different marine ecosystems.

In the **Arctic**, sea ice is steadily decreasing; in September 2019, sea ice followed a decreasing trend of -12.89 per cent per decade — a record lows in sea ice extent in the last two years.

Source: <https://www.downtoearth.org.in/news/climate-change/sea-level-rose-3-1-mm-each-year-between-1993-and-2020-report-79183>

**S204. Ans.(a)**

**Sol.** Goa's famed alcoholic beverage Feni has been recently granted a geographical indication (GI) tag which gives local producers exclusive brand protection rights.

Tawlhlohpuan is a handicraft of Mizoram which was given GI Tag in 2020

Srivilliputtur Palkova is a foodstuff of Tamilnadu which was conferred GI tag in 2020

Source: [https://www.business-standard.com/article/economy-policy/feni-makers-on-high-as-spirit-gets-gi-tag-109061600110\\_1.html](https://www.business-standard.com/article/economy-policy/feni-makers-on-high-as-spirit-gets-gi-tag-109061600110_1.html)

**S205. Ans.(a)**

**Sol. History of Integrated Disease Surveillance Project (IDSP):**

A major cholera outbreak in Delhi in 1988 and the Surat plague outbreak of 1994, nudged the Government of India to launch the National Surveillance Programme for Communicable Diseases in 1997. However, this initiative remained rudimentary till, in wake of the SARS outbreak, in 2004, India launched the Integrated Disease Surveillance Project (IDSP).

Integrated Disease Surveillance Programme (IDSP) was launched with World Bank assistance in November 2004 to detect and respond to disease outbreaks quickly.

The key objective of the programme is to strengthen/maintain a decentralized laboratory based IT enabled disease surveillance system for epidemic prone diseases to monitor disease trends and to detect and respond to outbreaks in the early rising phase through trained Rapid Response Team (RRTs).

Source: <https://www.idsp.nic.in/>  
<https://www.thehindu.com/opinion/lead/a-disease-surveillance-system-for-the-future/article36639432.ece>

**S206. Ans.(b)**

**Sol.** The National Investigation Agency (NIA) is a statutory organisation as it has been constituted under the NIA Act, 2008

One of the most controversial provisions of the Unlawful Activities (Prevention) Amendment Bill, 2019 was its empowerment of the government to designate individuals as terrorists if they commit or participate in the acts of terrorism, prepare for acts of terror, promote terrorism or are otherwise involved in terrorism

The Unlawful Activities (Prevention) Amendment Bill, 2019 gives power to the Director-General of the National Investigation Agency to attach properties acquired from proceeds of terrorism

**The Unlawful Activities Prevention (UAPA) Bill:**

The Unlawful Activities Prevention (UAPA) Bill is an anti-terror legislation. The Unlawful Activities (Prevention) Act, 1967 was legislated to fight Naxalism. The UAPA amendment 2019 was passed by parliament in August 2019. Major provisions of the UAPA amendment 2019 are following:

- Under the Act, the central government may designate an organisation as a terrorist organisation if it: (i) commits or participates in acts of terrorism, (ii) prepares for terrorism, (iii) promotes terrorism, or (iv) is otherwise involved in terrorism. The Bill additionally empowers the government to designate individuals as terrorists on the same grounds.

- The earlier UAPA law requires an investigating officer to take prior permission of the Director-General of Police of a state for conducting raids and seizing properties that are suspected to be linked to terrorist activities. The amendment Bill, however, removed this requirement if the investigation is conducted by an officer of the National Investigation Agency (NIA). The investigating officer, under the Bill, only requires sanction from the Director-General of NIA.
- The existing UAPA law specifies that only officers of the rank of Deputy Superintendent or Assistant Commissioner of Police of the NIA shall have the power to investigate offences under the UAPA law. The Bill allows NIA officers of Inspector rank to carry out investigations.
- The Bill added the International Convention for Suppression of Acts of Nuclear Terrorism (2005) within the scope of any of the treaties listed in a schedule to the Act.

Source: <https://www.thehindu.com/todays-paper/tp-national/terrorism-knows-no-age-nia-tells-sc/article36621980.ece>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1559109>

<https://prsindia.org/billtrack/the-unlawful-activities-prevention-amendment-bill-2019>

**S207. Ans.(a)**

**Sol.** Emission Gap report is the annual publication of the United Nations Environment Programme (UNEP). The UNEP Emissions Gap Report provides a yearly review of the difference between where greenhouse emissions are predicted to be in 2030 and where they should be to avoid the worst impacts of climate change.

The Emission Gap report-2020 finds that, despite a brief dip in carbon dioxide emissions caused by the COVID-19 pandemic, the world is still heading for a temperature rise in excess of 3°C this century – far beyond the Paris Agreement goals of limiting global warming to well below 2°C and pursuing 1.5°C.

Source: <https://www.thehindu.com/todays-paper/tp-opinion/sea-level-rise-is-certain/article36621956.ece>  
<https://www.unep.org/emissions-gap-report-2020>

**S208. Ans.(a)**

**Sol.** The NLM portal is developed by the Small Industries Development Bank of India (SIDBI) in collaboration with the Department of Animal Husbandry and Dairying. The online portal aims to enable a customized workflow between State Implementing Agency (SIA), lenders, and Ministry as required under the National Livestock Mission.

The National Livestock Mission, an initiative of the Ministry of Agriculture and Farmers' Welfare, was introduced in 2014-15, with the objective of sustainable development of the livestock sector. The livestock sector in the country has been growing at a compound annual growth rate of 8.15% from 2014-15 to 2019-20.

Source: <https://newsonair.com/2021/09/07/govt-launches-portal-for-national-livestock-mission/>

**S209. Ans.(a)**

**Sol.** National Programme for Bovine Breeding and Dairy Development (NPBBDD) has the following three components.

National Programme for Bovine Breeding (NPBB)

National Programme for Dairy Development (NPDD) and Rashtriya Gokul Mission.

Source: <https://vikaspedia.in/agriculture/policies-and-schemes/livestock-poultry-related/national-project-for-cattle-buffalo-breeding>

**S210. Ans.(b)**

**Sol.** The Sundarbans forest is about 10,000 sq km across India and Bangladesh, of which 40% lies in India.

Sundarbans is a mangrove area in the delta formed by the confluence of the Ganges, Brahmaputra and Meghna Rivers in the Bay of Bengal. It spans from the Hooghly River in India's state of West Bengal to the Baleswar River in Bangladesh's division of Khulna.

**1973:** Involved in the Sundarbans since the inception of Project Tiger.

Assisted the Sundarbans Forest Department in the first tranquilization of a stray tiger in 1974.

Four protected areas in the Sundarbans are enlisted as UNESCO World Heritage Sites, viz. Sundarbans National Park, Sundarbans West, Sundarbans South and Sundarbans East Wildlife Sanctuaries.

Source:

[https://www.wwfindia.org/about\\_wwf/critical\\_regions/sundarbans3/about\\_sundarbans/](https://www.wwfindia.org/about_wwf/critical_regions/sundarbans3/about_sundarbans/)

**S211. Ans.(c)**

**Sol.** Botanical Survey of India (BSI) is located in Kolkata, West Bengal, India. It was founded on 13 February 1890 by the East India Company (EIC) under the direction of Sir George King.

It is working under the aegis of the Ministry of Environment, Forest and Climate Change.

The Botanical Survey of India, in its new publication Plant Discoveries 2020 has added 267 new taxa/ species to the country's flora.

An assessment of the geographical distribution of these newly discovered plants reveals that 22% of the discoveries were made from the Western Ghats followed by Western Himalayas (15%), Eastern Himalayas (14%), and Northeast Ranges (12%).

Source: <https://www.thehindu.com/sci-tech/energy-and-environment/new-wild-banana-variety-among-267-new-plants-recorded-in-2020/article36570904.ece>



**S212. Ans.(a)**

**Sol.** The conditions favorable for the formation and intensification of tropical cyclones are:

1. Large sea surface with a temperature higher than 27° C
2. Presence of the Coriolis force
3. Small variations in the vertical wind speed
4. A pre-existing weak low-pressure area or low-level-cyclonic circulation

Upper divergence above the sea level system

Source: <https://www.thehindu.com/opinion/op-ed/tauktae-yaas-and-planning-for-the-next/article36067714.ece>  
<https://indianexpress.com/article/india/cyclone-gulab-arabian-sea-imd-7537302/>

**S213. Ans.(a)**

**Sol.** The scheme has been launched by the ministry of Chemicals and Fertilizers.

The Medical Devices Parks to be developed under the scheme will provide common infrastructure facilities at one place thereby creating a robust ecosystem for the medical device manufacturing in the country and also reducing the manufacturing cost significantly. The total financial outlay of the scheme is Rs. 400 crores and the tenure of the scheme is from FY 2020-2021 to FY 2024-2025.

The financial assistance to a selected Medical Device Park would be 70% of the project cost of common infrastructure facilities. In the case of the North-Eastern States and the Hilly States, financial assistance would be 90% of the project cost.

Maximum assistance under the scheme for one Medical Device Park would be limited to Rs. 100 crores.

Based on the evaluation, the proposals of the State Government of Himachal Pradesh, Tamil Nadu, Madhya Pradesh, and Uttar Pradesh have been given “in principle” approval under the scheme.

Source: <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1757662>

**S214. Ans.(a)**

**Sol.** A cartel is a collection of independent businesses or organizations that collude in order to manipulate the price of a product or service. Cartels almost invariably involve secret conspiracies

Cartels are competitors in the same industry and seek to reduce that competition by controlling the price in agreement with one another.

Tactics used by cartels include reduction of supply, price-fixing, collusive bidding, and market carving.

**What is collusive bidding?**

An agreement among two or more competitors to change the bids they otherwise would have offered absent the agreement.

*Cartelisation is illegal in India.*

Recently, the Competition Commission of India found that **three beer companies** — United Breweries Ltd (UBL), Carlsberg India Pvt Ltd (CIPL), and Anheuser Busch InBev India — had colluded to fix beer prices for a full decade — between 2009 and 2018. As a result, the CCI slapped a penalty of Rs 873 crore on the companies as well as the All India Brewers Association (AIBA) and 11 individuals for cartelization in the sale and supply of beer in 10 states and Union Territories.

Source: <https://indianexpress.com/article/explained/why-cartels-can-be-even-worse-than-monopolies-7536426/>  
[https://www.business-standard.com/article/current-affairs/cci-penalises-3-beer-companies-for-cartelisation-of-sale-supply-of-beer-121092500150\\_1.html](https://www.business-standard.com/article/current-affairs/cci-penalises-3-beer-companies-for-cartelisation-of-sale-supply-of-beer-121092500150_1.html)  
<https://www.investopedia.com/terms/c/cartel.asp>

**S215. Ans.(b)**

**Sol.** The predecessor of Quad Group, “Democratic Security Diamond,” was first envisioned by Prime Minister Abe.

The growing consensus over China’s revisionist behavior in the wake of the disintegration of the first iteration of the Quad in 2008 galvanized motivations in each Quad nation to further integrate bilaterally, trilaterally, and finally quadrilaterally in the early-2010s.

The beginning of the Quad as a grouping of the United States, Japan, India, and Australia can be found in the so-called “Tsunami Core Group,” an ad-hoc grouping that sprang up to respond to the devastating Boxing Day tsunami of 2004.

Source: <https://www.csis.org/analysis/defining-diamond-past-present-and-future-quadrilateral-security-dialogue>

**S216. Ans.(d)**

**Sol.** Everything we see – the planets, moons, massive galaxies, you, me, this website – makes up less than 5% of the universe. About 27% is dark matter and 68% is dark energy. While dark matter attracts and holds galaxies together, dark energy repels and causes the expansion of our universe.

Dark energy has been noted as “the most profound mystery in all of science”

The XENON1T experiment is the world’s most sensitive dark matter experiment and was operated deep underground at the INFN Laboratori Nazionali del Gran Sasso in Italy.

The finding also suggests that experiments like XENON1T, which are designed to detect dark matter, could also be used to detect dark energy.

Source: <https://indianexpress.com/article/explained/what-is-dark-energy-have-scientists-detected-it-finally-7534930/>

**S217. Ans.(d)**

**Sol.** The XENON experiment is a 3500kg liquid xenon detector to search for the elusive Dark Matter which makes up 85% of the matter in the universe.

Recently a finding also suggests that experiments like XENON1T, which are designed to detect dark matter, could also be used to detect dark energy.

Similar experiments such as LUX-Zeplin – a next-generation dark matter experiment located at the Sanford Underground Research Facility, and PandaX-xT – another project at China Jinping Underground Laboratory could also help directly detect dark energy within the next decade.

**XENON1T experiment :**

XENON1T was operated deep underground at the INFN Laboratori Nazionali del Gran Sasso in Italy, from 2016 to 2018. the experiment was essentially a big tank full of liquid xenon, kept deep underground. The idea was that if a dark matter particle zipped through the tank, it would excite the xenon atoms to produce a flash of light and free electrons, which a suite of sensors can detect.

So far, scientists have only observed indirect evidence of dark matter, and a definitive, direct detection is yet to be made. So-called WIMPs (Weakly Interacting Massive Particles) are among the theoretically preferred candidates, and XENON1T has thus far set the best limit on their interaction probability over a wide range of WIMP masses.

Source: <https://newatlas.com/physics/dark-energy-dark-matter-detector-xenon1t/>  
<http://www.xenon1t.org/>  
<https://indianexpress.com/article/explained/what-is-dark-energy-have-scientists-detected-it-finally-7534930/>

**S218. Ans.(b)**

**Sol.** The XENON1T experiment is the world’s most sensitive dark matter experiment and was operated deep underground at the INFN Laboratori Nazionali del Gran Sasso in Italy.

Similar experiments such as **LUX-Zeplin** – a next-generation dark matter experiment located at **the Sanford Underground Research Facility USA**, and **PandaX-xT** – another project at **China** Jinping Underground Laboratory could help directly detect dark energy within the next decade.

Source: <https://indianexpress.com/article/explained/what-is-dark-energy-have-scientists-detected-it-finally-7534930/>

**S219. Ans.(b)**

**Sol.** Under article 243S of the Part IX-A (added by the 74<sup>th</sup> constitutional amendment act), it has been provided that there shall be constituted Wards Committees, consisting of one or more wards, **within the territorial area of a Municipality having a population of three lacs or more.**

The Ward Committee” which would be chaired by the elected representative from the particular ward, may have representatives of the civil society as its members, whereas in a “Wards Committee”, only the elected representatives would be the members and would elect a Chairperson from among themselves.

**Thus, while each Ward Committee would have an advisory role only**, the Wards Committees may exercise executive powers for the local level functions.

Source: <http://mohua.gov.in/upload/uploadfiles/files/chap10.pdf>  
<https://www.deccanherald.com/city/top-bengaluru-stories/how-ward-committees-failed-bengalureans-1034270.html>  
<https://www.hindustantimes.com/cities/mumbai-news/maharashtra-cabinet-clears-plan-for-multi-member-wards-in-urban-civic-bodies-excluding-mumbai-101632330098464.html>

**S220. Ans.(a)**

**Sol.** Both the tunnels connect Srinagar to Leh  
**Context:** The information and Broadcasting Minister recently inspected the prestigious Zojila Tunnel and 6.5-kilometer long Z-Morh tunnel projects on the Srinagar-Leh National Highway.

**1. Zozilla tunnel :**  
 The 14.15km long tunnel will be built at an altitude of about 3000 m under Zojila pass (presently motorable only for 6 months in a year) on NH-1 **connecting Srinagar and Leh through Dras & Kargil**. The stretch is one of the most dangerous in the world to drive and so the project is also geo-strategically sensitive.

**2. Z-Morh Tunnel :**  
 The Z-Morh Tunnel is a currently under-construction 6.5 km long road tunnel that will provide connection throughout all weather conditions **between Srinagar and Kargil in the Union Territory of Ladakh, India**. It is named for the Z-shaped stretch of road between Sonamarg and Gagangir that the tunnel will replace.

Source: <https://newsonair.com/2021/09/27/anurag-singh-thakur-inspects-zojila-and-z-morh-tunnel-projects-in-kashmirs-kichpora/>

**S221. Ans.(c)**

**Sol.** National Mission on Cultural Mapping is a mission mode project of the Ministry of Culture, Government of India.

1. It is aimed to address the necessity of preserving the threads of rich Indian Art and Cultural Heritage, convert the vast and widespread cultural canvas of India into an objective Cultural Mapping while creating a strong “Cultural Vibrancy” throughout the nation.
2. It can create a database that anybody can plug into, thus becoming a resource for the media, researchers, and funders.

3. Born in 2015, the National Mission on Cultural Mapping was created with an outlay of ₹3,000 crore  
 4. It will identify, collect and record cultural assets and resources. It correlates this to planning and strategizing.  
 5. A portal and database listing organizations, spaces, facilities, festivals, and events will be created  
 Source: <https://journalsofindia.com/national-mission-on-cultural-mapping-and-roadmap/>

**S222. Ans.(d)**

**Sol.** Swachh Survekshan is a ranking exercise taken up by the Government of India to assess rural and urban areas for their levels of cleanliness and active implementation of Swachhata mission initiatives in a timely and innovative manner.

The Ministry of Urban Development, Government of India takes up the Swachh Survekshan in urban areas and the **Ministry of Drinking Water and Sanitation in rural areas.**

The **Quality Council of India (QCI)** has been commissioned the responsibility of carrying out the assessment.

Source: <https://vikaspedia.in/health/sanitation-and-hygiene/swachh-survekshan>  
<https://www.moneycontrol.com/news/business/real-estate/housing-minister-hardeep-puri-launches-7th-edition-of-swachh-survekshan-2022-7513981.html>

**S223. Ans.(c)**

**Sol.** Sohrai – Khovar Painting was given GI tag in 2020 to Jharkhand

Chokuwa rice and Judima Rice wine Are GI tag products of Assam.

Chokuwa rice was given GI Tag in 2020 and Judiam rice has recently received GI Tag status.

A local fermented drink made with rice, Judima derives its name from ju which means wine and Dima means 'belonging to the Dimasa'. It is a pale yellow or reddish (depending on the color of rice) drink that is slightly cloudy in appearance, has a mellow fragrance, and is sweet to taste.

It is made from three different types of saul (rice): red or white bora (the glutinous sticky variety), non-bora (the everyday non-sticky variety), and finally the bairing rice, a unique variety cultivated in Jhum style (terrace farming) only by the Dimasa people. Bairing rice is cultivated solely for preparing Judima. For the Dimasa people, judima is an important part of their tradition, to be used in ceremonies that celebrate the birth and mourn death.

1. Sohrai – Khovar Painting-Jharkhand
2. Chokuwa Rice- Assam
3. rice wine Judima- Assam

Source: <https://www.thehindu.com/news/national/judima-dimasa-people-judima-rice-wine-of-dimasa-people-gi-tag/article36708733.ece>

**S224. Ans.(c)**

**Sol. Context:** Nimaben Acharya, became the first woman Speaker of Gujarat Legislative Assembly t recently

**Speaker of loksabha and legislative assembly:**

According to the **book Practice and Procedure of Parliament, published by the Lok Sabha Secretariat**, the Speaker is “the principal spokesman of the House, he represents its collective voice and is its sole representative to the outside world”. The Speaker presides over the House proceedings and joint sittings of the two Houses of Parliament.

**The Constitution neither sets a time limit nor specifies the process for these elections.** It leaves it to the legislatures to decide how to hold these elections. In Lok Sabha and state legislatures, the President/Governor sets a date for the election of the Speaker, and it is the Speaker who decides the date for the election of the Deputy Speaker.

The Constitution provides that the office of the Speaker should never be empty. So, he continues in office until the beginning of the next House, except in the event of death or resignation.

It is the Speaker’s decision that determines whether a Bill is a Money Bill and therefore outside of the purview of the other House.

Source: <https://indianexpress.com/article/explained/explained-electing-a-speaker-deputy-speaker-7399970/>  
<https://indianexpress.com/article/cities/gandhinagar/gujarat-nimaben-acharya-appointed-first-woman-speaker-7538373/>

**S225. Ans.(a)**

**Sol. Context:** Trials of AGNI-V being conducted by DRDO recently

**What are ICBMs?**

Intercontinental ballistic missiles or ICBMs are guided missiles that can deliver nuclear and other payloads. ICBMs have a minimum range of 5,500 km, with maximum ranges varying from 7,000 to 16,000 km.

- Only a handful of countries, including Russia, United States, China, France, India, and North Korea, have ICBM capabilities

*The Agni-V, a three-stage solid-fueled missile, has an approximate range of 5,500-5,800 kilometers [the exact range remains classified, but it is assumed that the missile has a range of 6,000-7,500 kilometers], and can carry a 1,500-kilogram (3,300-pound) nuclear warhead. It is India’s most advanced ICBM*

Source: <https://www.news18.com/news/explainers/explained-as-india-plans-agni-v-test-heres-how-itll-boost-deterrence-and-why-china-is-not-amused-4241852.html>

**S226. Ans.(b)**

**Sol.** Buddha asked his followers to avoid the two extremes of indulgence in worldly pleasure and the practice of strict abstinence and asceticism. He ascribed instead the 'Madhyam Marg' or the middle path which was to be followed.

His teachings were written down around 25 B.C.E. in Pali. The Abhidhamma Pitaka is a philosophical analysis and systematization of the teaching and the scholarly activity of the monks. The Sutta Pitaka consists of the main teaching or Dhamma of Buddha. Source: <https://www.thehindu.com/news/national/national-museum-to-open-buddha-galleries-soon-arms-gallery-in-2-months/article36570651.ece>

**S227. Ans.(b)**

**Sol.** Every year, the Finance Minister announces the quantum of funds that will be raised by the government by borrowing from the market. This amount and the interest due on it are reflected in the government debt. Off-budget borrowings are loans that are taken not by the Centre directly, but by another public institution that borrows in the direction of the central government. Such borrowings are used to fulfill the government's expenditure needs.

But since the liability of the loan is not formally on the Centre, the loan is not included in the national fiscal deficit. This helps keep the country's fiscal deficit within acceptable limits.

The government can ask an implementing agency to raise the required funds from the market through loans or by issuing bonds.

**Food subsidy is one of the major expenditures of the Centre.** In the Budget presentation for 2020-21, the government paid only half the amount budgeted for the food subsidy bill to the Food Corporation of India. The shortfall was met through a loan from the National Small Savings Fund.

Source:

<https://indianexpress.com/article/explained/why-govt-borrows-off-budget-and-how-7162925/>

**S228. Ans.(b)**

**Sol.** Manipur's most famous Hathei chili and Tamenglong orange have been awarded the GI Tag recently.

Hathei chilly, commonly known as the Sirarakhong chilly, is almost 9-inches in size and bright red in color. This specific variety of chili thrives well only in the climatic condition of the Sirarakhong village of the Ukhrul district, Another Indian food that bagged its GI Tag is the Tamenglong Orange. This orange variant belongs to the Tamenglong district of Manipur, which is also known as 'The Orange Bowl of Manipur'.

Source: <https://timesofindia.indiatimes.com/life-style/food-news/manipurs-hathei-chilli-and-tamenglong-orange-get-gi-tag/photostory/86365811.cms?picid=86365870>

**S229. Ans.(d)**

**Sol.** Kathaprasangam (lyrical narrative or storytelling performance) is a performing art of Kerala, India.

It combines speaking, acting, and singing to present a story. Costumes, make-up, or settings are not used. The main artist, the *Kaadhikan*, tells the story, acts, and sings with two or three accompanying instrumentalists.

Source:

<https://www.thehindu.com/news/national/kerala/katha-prasangam-artiste-kollam-babu-dead/article36415803.ece>

<https://www.thehindu.com/news/cities/kozhikode/reinventing-kathaprasangam-for-modern-times/article36682128.ece>

**S230. Ans.(d)**

**Sol.** Pradhan Mantri Sahaj Bijli Har Ghar Yojana – "Saubhagya" is a scheme to ensure electrification of all willing households in the country in rural as well as urban areas.

1. Pradhan Mantri Sahaj Bijli Har Ghar Yojana – Saubhagya, was launched in October 2017 .

2. **Ministry of power is the nodal agency for it.**

3. The beneficiaries for free electricity connections would be identified using Socio-Economic and Caste Census (SECC) 2011 data. However, un-electrified households not covered under the SECC data would also be provided electricity connections under the scheme on payment of Rs. 500 which shall be recovered by DISCOMs in 10 installments through electricity bill.

4. The solar power packs of 200 to 300 Wp with battery bank for un-electrified households will be located in remote and inaccessible areas, comprising Five LED lights, One DC fan, One DC power plug. It also includes Repair and Maintenance (R&M) for 5 years.

Source: <https://powermin.gov.in/en/content/saubhagya>

<https://vikaspedia.in/energy/policy-support/pradhan-mantri-sahaj-bijli-har-ghar-yojana>

[https://www.business-standard.com/article/current-affairs/saubhagya-scheme-sees-electrification-in-2-82-crore-households-121092500319\\_1.html](https://www.business-standard.com/article/current-affairs/saubhagya-scheme-sees-electrification-in-2-82-crore-households-121092500319_1.html)

**S231. Ans.(c)**

**Sol.** The EC has the power to register parties under the **Representation of the People Act, 1951**, it **does not have** the power to deregister parties that are inactive.

The EC has raised concern over the possible misuse of the income tax exemption by parties that don't contest elections. EC had raised the concern that the **Income Tax exemption on donations given to registered parties under Section 13 A of the Income-tax Act** could be misused by some.



The Akash system is fully mobile and capable of protecting a moving convoy of vehicles. The launch platform has been integrated with both wheeled and tracked vehicles

Source: <https://www.hindustantimes.com/india-news/akash-prime-range-of-missile-test-fired-successfully-101632760274970.html>  
<https://www.livemint.com/news/india/ladakh-drdo-akash-prime-adds-more-firepower-to-india-s-missile-arsenal-5-points-11632804492239.html>  
<https://indianexpress.com/article/explained/explained-two-advanced-versions-of-akash-missile-7539643/>

**S235. Ans.(a)**

**Sol.** The Indian Agricultural Research Institute (IARI) has developed the country's first-ever **non-GM** (genetically modified) herbicide-tolerant rice varieties that can be directly seeded and significantly save water and labor compared to conventional transplanting.

The varieties — Pusa Basmati 1979 and Pusa Basmati 1985 — contain a mutated acetolactate synthase (ALS) gene making it possible for farmers to spray Imazethapyr, a broad-spectrum herbicide, to control weeds.

**Importance of these new varieties:**

Imazethapyr, effective against a range of broadleaf, grassy, and sedge weeds, can't be used on normal paddy, as the chemical does not distinguish between the crop and the invasive plants. The ALS gene in rice codes for an enzyme (protein) that synthesizes amino acids for crop growth and development. The herbicide sprayed on normal rice plants binds itself to the ALS enzymes, inhibiting their production of amino acids.

The new basmati varieties contain an ALS gene whose DNA sequence has been altered using ethyl methanesulfonate, a chemical mutant. As a result, the ALS enzymes no longer have binding sites for Imazethapyr and amino acid synthesis isn't inhibited. The plants can also now "tolerate" the application of the herbicide, and hence it kills only the weeds.

Source: <https://indianexpress.com/article/india/india-gets-first-herbicide-tolerant-launch-today-7538299/>



**S236. Ans.(c)**

**Sol.** The Tenth Schedule of the Constitution, popularly known as the anti-defection law, specifies the circumstances under which changing of political parties by legislators invites action under the law. The law covers three scenarios with respect to the shifting of political parties by an MP or an MLA. Three Scenarios Elected Member - The first is when a member elected on the ticket of a political party "voluntarily gives up" membership of such a party or votes in the House against the wishes of the party. Independent Candidate - The second is when a legislator who has won his or her seat as an independent candidate joins a political party after the election. In both these instances, the legislator loses the seat in the legislature on changing (or joining) a party. Nominated Member - The third scenario relates to nominated MPs. In their case, the law gives them six months to join a political party, after being nominated. If they join a party after such time, they stand to lose their seat in the House.

**S237. Ans.(c)**

**Sol.** A "Cyclonic Storm" or a "Cyclone" is an intense vortex or a whirl in the atmosphere with very strong winds circulating around it in an anti-clockwise direction in the Northern Hemisphere and in the clockwise direction in the Southern Hemisphere. Tropical Cyclones (TCs) are warm-core low-pressure systems having a large vortex in the atmosphere, which is maintained by the release of latent heat by convective clouds that form over warm oceans. In the northern hemisphere, the winds in a cyclone blow anticlockwise in the lower troposphere and clockwise in the upper troposphere. However, in the southern hemisphere, the winds of the cyclone blow in the opposite direction i.e. clockwise in the lower levels and anticlockwise in the upper levels.

A full-grown cyclone is a violent whirl in the atmosphere with 150 to 1000 km diameter and 10 to 15 km height. The following factors are considered favorable for cyclogenesis. These are:

- i. Coriolis Parameter
- ii. Low-level positive vorticity
- iii. Weak vertical wind shear of horizontal winds
- iv. Warm Sea surface temperature (> 26.5° Celsius)
- v. Large convective instability
- vi. Large relative humidity at lower and middle troposphere

Source:

<https://www.thehindu.com/news/national/other-states/odisha-sounds-high-alert-over-cyclone-gulab/article36663018.ece>  
[https://mausam.imd.gov.in/imd\\_latest/contents/pdf/cyclone\\_sop.pdf](https://mausam.imd.gov.in/imd_latest/contents/pdf/cyclone_sop.pdf)



**S242. Ans.(b)**

**Sol.** Recently the World Health Organization (WHO) and partners launched the first-ever global strategy “the Global Roadmap to Defeat Meningitis by 2030”, to defeat meningitis

Meningitis is a dangerous inflammation of the membranes that surround the brain and spinal cord, predominantly caused by infection with bacteria and viruses. It can occur by Fungi, parasites, or even amoeba.

Over the last ten years, meningitis epidemics have occurred in all regions of the world, though most commonly in the ‘Meningitis Belt,’ which spans 26 countries across Sub-Saharan Africa.

Several vaccines that protect against meningitis, include meningococcal, *Haemophilus influenzae* type b, and pneumococcal vaccines

Source: <https://www.cdc.gov/meningitis/index.html>  
<https://www.who.int/news/item/28-09-2021-who-and-partners-call-for-urgent-action-on-meningitis>

**S243. Ans.(b)**

**Sol.** Build Back Better World or B3W is an initiative undertaken by G7 countries.

Launched in June 2021, the initiative is designed to counter China's strategic influence of the BRI Project (Belt and Road Initiative) by providing an alternative to the Belt and Road Initiative for the infrastructure development of low and middle-income countries.

Led by the United States, the G7 countries will work to address the \$40 trillion worth of infrastructure needed by developing countries by 2035. The initiative aims to catalyze funding for quality infrastructure from the private sector and will encourage private-sector investments that support "climate, health, and health security,

The initiative builds on the Blue Dot Network, a collaboration that aims to build a global network through lending-based financing to build roads, bridges, airports, ports, power plants.

Source: <https://indianexpress.com/article/world/us-b3w-projects-latin-america-china-belt-and-road-7537360/>

**S244. Ans.(d)**

**Sol.** Recently the All-India Debt and Investment Surveys (AIDIS), carried out by the National Statistical Office which is among the most important nationally representative data sources on the rural credit market in India was released.

**Findings:**

According to the report, the average debt per household in rural India is Rs 59,748, nearly half the average debt per household in urban India. A key indicator of access to credit is the incidence of indebtedness (IOI) — the proportion of households having outstanding loans on June 30 of the year in which the survey is conducted (2019 in this case). As per the latest AIDIS report, the IOI is 35 percent in rural India — 17.8 percent of rural households are indebted to institutional credit agencies, 10.2 percent to non-institutional agencies, and 7 percent to both.

Dependence on institutional sources is often seen as a positive development, signifying broadening financial inclusion, while reliance on non-institutional sources denotes vulnerability and backwardness.

Source:

<https://indianexpress.com/article/opinion/columns/wh-at-gives-rise-to-the-rural-debt-trap-7542634/>

**S245. Ans.(c)**

**Sol.** The earth monitoring satellite, Landsat 9, is a joint mission of NASA and the US Geological Survey (USGS). The first Landsat satellite was launched in 1972 and since then, Landsat satellites have collected images of our planet and helped understand how land usage has changed over the decades.

Landsat images can also help identify water bodies affected by potentially harmful algal blooms.

Landsat images have helped glaciologists study the melting ice sheets of the Antarctic and Arctic regions. The images can help track cracks in the glaciers, movement of glaciers, and decode how further global warming will impact them.

The instruments aboard Landsat 9 are the Operational Land Imager 2 (OLI-2) and the Thermal Infrared Sensor 2 (TIRS-2). They will measure different wavelengths of light reflected off the Earth's surface.

Source:

<https://indianexpress.com/article/explained/landsat-9-nasa-satellite-climate-change-explained-7539631/>

**S246. Ans.(c)**

**Sol.** The special category status is accorded to states which have

- hilly and difficult terrain,
- *low population density*,
- presence of a sizable tribal population,
- strategic location along international borders,
- economic and infrastructural backwardness, and
- non-viable nature of state finances. This criterion was introduced by the government in 1969 acknowledging that several regions of the country were disadvantaged than the others.

Source:

<https://www.hindustantimes.com/india-news/nitish-kumar-govt-drops-decade-old-demand-for-special-status-to-bihar-101632750328010.html>



**S247. Ans.(a)**

**Sol.** The decision to grant special category status lies with the **National Development Council**, composed of the prime minister, union ministers, chief ministers, and members of the planning commission, who guide and review the work of the commission.

The 14th Finance Commission effectively removed the concept of special category status after its recommendations were accepted in 2015.

**Benefits of it:**

1. The central government bears 90 percent of the state expenditure on all centrally-sponsored schemes and external aid while the rest 10 percent is given as loan to the state at zero percent rate of interest.
2. Preferential treatment in getting central funds.
3. Concession on excise duty to attract industries to the state.
4. **30 percent of the Centre's gross budget also goes to special category states.**
5. These states can avail the benefit of debt-swapping and debt relief schemes.
6. **States with special category status are exempted from customs duty, corporate tax, income tax, and other taxes to attract investment.**
7. Special category states have the facility that if they have unspent money in a financial year; it does not lapse and gets carry forward for the next financial year.

Source: <https://www.indiatoday.in/education-today/gk-current-affairs/story/difference-between-special-category-status-and-special-status-india-1577912-2019-08-06>  
<https://www.hindustantimes.com/india-news/nitish-kumar-govt-drops-decade-old-demand-for-special-status-to-bihar-101632750328010.html>

**S248. Ans.(a)**

**Sol.** A first-of-its-kind initiative by launching the SACRED portal by the government will now allow senior citizens seeking job opportunities to register on a dedicated employment exchange from October 1.

The Ministry of Social Justice and Empowerment's (MoSJ&E's) Senior Able Citizen for Re-Employment in Dignity (SACRED) will enable senior citizens above the age of 60 to search for a job, but only through the virtual platform.

Source: <https://www.indiatoday.in/education-today/news/story/senior-citizens-can-apply-for-jobs-through-govt-portal-from-oct-1-1859134-2021-09-30>

**S249. Ans.(a)**

**Sol.** The Trojan asteroids are leftovers of the primordial material from which Jupiter and the other outer planets were formed.

Recently NASA has announced to launch its new mission "Lucy" To study Trojan asteroids.

**OSIRIS-REx :**

In 2016, NASA launched the OSIRIS-REx spacecraft to study an asteroid near Earth named Bennu. After studying Bennu for a few years, OSIRIS-REx scooped up a sample of dust and rocks from the asteroid's surface. Now, OSIRIS-REx is headed back to Earth! Its sample container will land in the Utah desert in September 2023. Scientists will then collect the container and examine the dust and rocks for clues about how planets formed and life began.

Source: <https://www.nbcnews.com/science/space/nasa-lucy-mission-jupiter-trojan-asteroid-rcna2409>  
<https://spaceplace.nasa.gov/asteroid/en/>

**S250. Ans.(b)**

**Sol.** Recently NASA has announced to launch its new mission "Lucy" to study Trojan asteroids.

The Trojan asteroids are leftovers of the primordial material from which Jupiter and the other outer planets were formed. The space rocks function similar to [time capsules from the earliest days of the solar system](#), about 4.5 billion years ago.

The Lucy mission could offer new insights into the history of the solar system, including how all of the planets came to be and why they are aligned in their current configuration

Source: <https://www.nbcnews.com/science/space/nasa-lucy-mission-jupiter-trojan-asteroid-rcna2409>

**S251. Ans.(a)**

**Sol.** The All-India Debt and Investment Surveys (AIDIS) was carried out by the National Statistical Office and its findings were recently published.

The AIDIS report published this month reveals that non-institutional sources have a strong presence in the rural credit market, notwithstanding the high costs involved in borrowing from them. In non-institutionalized debt, professional and agricultural moneylenders remain the primary sources of credit.

A significant portion of debt from non-institutional sources in rural areas is used for other household expenditures.

The share of debt from institutional credit agencies in total outstanding debt in rural India is 66 percent as compared to 87 percent in urban India.

Source:

<https://indianexpress.com/article/opinion/columns/wh-at-gives-rise-to-the-rural-debt-trap-7542634/>

**S252. Ans.(a)**

**Sol.** Bharatkosh is an online web portal—a single window of the Union Government for consolidated collection of non-taxes for all Ministries and Departments. It works under the supervision of the Controller General of Accounts (CGA).

It aims to provide 24x7 year-round electronic services to deposit the money into Government Account using internet-based payment technologies t

All types of non-tax receipts, due to the government can be routed through Bharatkosh. The website is also receiving donations for Swachh Bharat and the National Disaster Relief Fund.

Bharatkosh has the capability to collect small and large payments due to the Central government—from a small receipt of Rs 10 payment for a Right to Information application to some of the high-value payments like dividends from PSUs, license fees from telecom operators, etc. “First receipt collected through Bharatkosh portal was a dividend from the National Thermal Power Corporation worth Rs. 989 crores.

Source:

<https://www.sundayguardianlive.com/news/radar-bharatkosh-glittering-star-digital-india-galaxy>

<https://bharatkosh.gov.in/NTRPHome/Index>

**S253. Ans.(a)**

**Sol.** The Union Ministry of Labour and Employment has joined hands with [Microsoft India](#) to launch the DigiSaksham scheme to "empower job seekers in an increasingly tech-driven economy

Under the scheme, 10 million active registered job seekers on the National Career Service (NCS) platform will be provided with free-of-cost training over a few years. The training will include digital and technical skills along with advanced computing.

Source:

<https://www.cnbc18.com/economy/digisaksham-initiative-microsoft-india-centre-collaborate-to-train-10-million-job-seekers-10960542.htm>

**S254. Ans.(a)**

**Sol.** The OSOWOG was first floated by India in 2018 during the first assembly of the International Solar Alliance (ISA).

As per the draft plan prepared by the Union Ministry of New and Renewable Energy, the ambitious OSOWOG will connect 140 countries through a common grid that will be used to transfer solar power

The vision behind the OSOWOG mantra is “the Sun never sets” and is a constant at some geographical location, globally, at any given point in time

The aim of the Green Grids Initiative is to help achieve the pace and scale of reforms to infrastructure and market structures needed to underpin the global energy transition

India and UK will be launching the green Grids initiative at the Cop26 being hosted by UK in 202.

Source:

<https://www.ucl.ac.uk/bartlett/news/2021/jun/cop26-green-grids-initiative>

<https://www.firstpost.com/india/india-uk-likely-to-announce-one-sun-one-world-one-grid-at-un-climate-meet-all-you-need-to-know-about-global-solar-plan-10012631.html>

**S255. Ans.(b)**

**Sol.** The Expert Committee will study the current regulatory practices in Sustainable Finance across major international financial jurisdictions and recommend a robust framework to develop a world-class sustainable finance hub at IFSC.

It will identify existing and emerging opportunities in Sustainable Finance for GIFT-IFSC to act as a gateway to meet India's requirements and recommend a short, medium, and long-term vision/roadmap on Sustainable Finance.

Source:

[https://www.business-standard.com/article/current-affairs/centre-forms-expert-committee-for-sustainable-climate-finance-121100100166\\_1.html](https://www.business-standard.com/article/current-affairs/centre-forms-expert-committee-for-sustainable-climate-finance-121100100166_1.html)

**S256. Ans.(a)**

**Sol.** With the amendment of the Sugarcane (Control) Order, 1966 in 2009, the concept of statutory Minimum Price (SMP) of sugarcane was replaced with the ‘Fair and Remunerative Price (FRP)’ of sugarcane for 2009-10 and subsequent sugar seasons. The cane price announced by the Central Government is decided on the basis of the recommendations of the Commission for Agricultural Costs and Prices (CACP) in consultation with the State Governments and after taking feedback from associations of the sugar industry.

FRP is uniformly applicable all over the country. Determination of FRP is the interest of sugarcane growers keeping in view their entitlement to a fair and remunerative price for their produce.

The Cabinet Committee on Economic Affairs (CCEA) approves Fair and Remunerative Price (FRP) of sugarcane Fair and Remunerative Price (FRP) of sugarcane is uniformly applicable all over the country

Source:

<https://www.thehindu.com/news/national/other-states/uttar-pradesh-hikes-sugarcane-purchase-price-by-25-per-quintal/article36680012.ece>

<https://pib.gov.in/PressReleaseDetailm.aspx?PRID=1580066>

**S257. Ans.(d)**

**Sol.** The protocol was signed...in the India-Bangladesh virtual summit on 17th December 2020 to facilitate smooth movement of elephants between India and Bangladesh and vice versa,

Source:

<https://www.outlookindia.com/newscroll/govts-focus-on-increasing-forest-cover-both-quantitatively-and-qualitatively-minister/2169652>

**S258. Ans.(b)**

**Sol.** Defense Acquisitions Council (DAC) is chaired by Defence Minister.

Following are the major functions of DAC:

(a) Give 'in principle' approval to Capital acquisitions in the Long Term Perspective Plan (LTPP) covering a 15-year time span at the beginning of a Five Year Plan period.

(b) Give 'in principle' acceptance of necessity to each Capital acquisition project for incorporation in the forthcoming Five Year Plan, at least nine months before the commencement of the first year of that plan. The approval will involve the identification of Either - 'Buy' Projects (outright purchase) Or - 'Buy and Make' projects (purchase followed by licensed production/ indigenous development) Or - 'Make' Projects (indigenous production and R&D)

(c) Monitor the progress of major projects on feedback from the Defence Procurement Board.

Source:

<https://www.thehindu.com/news/national/army-to-get-25-advanced-light-helicopters-at-3850-crore/article36738883.ece>

[https://www.mod.gov.in/dod/sites/default/files/DEFENCE\\_PROCUREMENT\\_ORGANISATION.pdf](https://www.mod.gov.in/dod/sites/default/files/DEFENCE_PROCUREMENT_ORGANISATION.pdf)

**S259. Ans.(d)**

**Sol.** National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat), was launched for ensuring that every child in the country necessarily attains foundational literacy and numeracy by the end of Grade 3, **by 2026-27**.

This Mission, which has been launched under the aegis of the centrally sponsored scheme of Samagra Shiksha, will focus on providing access and retaining children in foundational years of schooling; teacher capacity building; NIPUN Bharat aims to cover the learning needs of children in the age group **of 3 to 9 years**.

The unique feature is that the goals of the Mission are set in the form of Lakshya Soochi or Targets for Foundational Literacy and Numeracy

Source: <https://indiaeducationdiary.in/union-education-minister-launches-nipun-bharat-programme-today/>

**S260. Ans.(d)**

**Sol.** The National Action Plan for dog Mediated Rabies Elimination by 2030 (NAPRE) was recently launched under one health concept which aims to eliminate rabies by 2030.

Rabies is 100% fatal but 100% vaccine-preventable. 33% of global rabies deaths are recorded in India.

Rabies is a fatal but preventable viral disease. It can spread to people and pets if they are bitten or scratched by a rabid animal. In the United States, rabies is mostly found in wild animals like bats, raccoons, skunks, and foxes. However, in many other countries dogs still carry rabies, and most rabies deaths in people around the world are caused by dog bites.

**The rabies virus infects the central nervous system.**

Source: <https://www.cdc.gov/rabies/index.html>

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1758964>

**S261. Ans.(c)**

**Sol.** Article 47 says that the State shall endeavour to **bring about the prohibition of intoxicating drinks and drugs that are injurious to health**.

The Narcotic Drugs and Psychotropic Substances Act, 1985 which came into effect from the 14th November 1985 made an express provision for constituting a Central Authority for the purpose of exercising the powers and functions of the Central Government under the Act. In presence of this provision, the Government of India constituted the NARCOTICS CONTROL BUREAU on the 17th of March, 1986.

The NCB is outside the ambit of the Right to Information Act under Section 24(1) of the RTI act 2005.

Source: <https://narcoticsindia.nic.in/>

**S262. Ans.(d)**

**Sol.** India is a signatory to The UN Single Convention on Narcotics Drugs 1961, The Convention on Psychotropic Substances, 1971 and The Convention on Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988 which prescribe various forms of control aimed to achieve the dual objective of limiting the use of narcotics drugs and psychotropic substances for medical and scientific purposes as well as preventing the abuse of the same

Source:

<https://dor.gov.in/narcoticdrugspsychotropic/overview>

**S263. Ans.(c)**

**Sol.** The Ministry of Jal Shakti is implementing the National Rural Drinking Water Programme (NRDWP) and **Jal Jeevan Mission** to ensure that every rural person has enough safe water for drinking, cooking and other domestic needs.

The JJM was launched in 2019 by the Union Ministry of Jal Shakti to ensure 100 per cent functional tap water supply in rural areas by 2024 and to fulfil its commitment under Sustainable Development Goal 6 which is about "clean water and sanitation for all".

The JJM is managed by *paani samitis* to plan, implement, manage, operate and maintain village water supply systems.

These consist of 10-15 members, with at least 50 per cent of women members and other members from self-help groups, accredited social and health workers, Anganwadi teachers, etc.

Source: <https://www.downtoearth.org.in/news/rural-water-and-sanitation/pm-modi-launches-jal-jeevan-mission-app-on-gandhi-jayanti-79495>

<https://jaljeevanmission.gov.in/>

<https://vikaspedia.in/aspirational-districts/agencies-working-in-aspirational-districts/ministry-of-jal-shakti>

S264. Ans.(a)

**Sol.** CCAMLR is an international treaty to manage Antarctic fisheries to preserve species diversity and stability of the entire Antarctic marine ecosystem. It came into force in April 1982. India has been a permanent member of CCAMLR since 1986. Work pertaining to CCAMLR is coordinated in India by the Ministry of Earth Sciences through its attached office, the Centre for Marine Living Resources and Ecology (CMLRE) in Kochi, Kerala.

Source:

<https://indianexpress.com/article/technology/science/in-dia-designate-east-antarctica-weddell-sea-marine-protected-areas-7545870/>

S265. Ans.(a)

**Sol.** The **Weddell Sea** is part of the **Southern Ocean**, known as the **Antarctic Ocean**.

Recently India has extended support for protecting the Antarctic environment and for co-sponsoring the proposal of the European Union for designating East Antarctica and the Weddell Sea as Marine Protected Areas (MPAs).

This is the first time India is considering co-sponsoring an MPA proposal at the Conservation of Antarctic Marine Living Resources (CCAMLR) and getting aligned with countries such as Argentina, Brazil, Chile, Korea, New Zealand, South Africa and the USA, which are also proactively considering supporting the MPA proposals.



Source:

<https://indianexpress.com/article/technology/science/in-dia-designate-east-antarctica-weddell-sea-marine-protected-areas-7545870/>

S266. Ans.(c)

**Sol.** WHO has recently released the 11th revision of the International Classification of Diseases (ICD-11) in mid-2018.

Gaming disorder is defined in the 11th Revision of the International Classification of Diseases (ICD-11) as a pattern of gaming behaviour (“digital-gaming” or “video-gaming”) characterized by impaired control over gaming, increasing priority given to gaming over other activities to the extent that gaming takes precedence over other interests and daily activities, and continuation or escalation of gaming despite the occurrence of negative consequences

Source: [https://www.who.int/news/item/18-06-2018-who-releases-new-international-classification-of-diseases-\(icd-11\)](https://www.who.int/news/item/18-06-2018-who-releases-new-international-classification-of-diseases-(icd-11))

S267. Ans.(a)

**Sol. Context:** The Rubber Board started a nationwide census on rubber to prepare a comprehensive database on rubber plantations and rubber growers.

The Indian rubber plantation sector is dominated by smallholders who account for 92 per cent of the production and 91 per cent of the planted area in the country. It requires deep and lateritic fertile soil with an acidic pH of 4.5 to 6.0 and is highly deficient in available phosphorous. A tropical climate with an annual rainfall of 2000 – 4500 mm is suited for cultivation. Minimum and maximum temperature should be ranged from 25 to 34°C with 80 % relative humidity are ideal for cultivation. Regions prone to heavy winds should be avoided

**Rubber Board :**

The Rubber Board is a statutory body constituted by the Government of India, under the Rubber Act 1947, for the overall development of the rubber industry in the country. Head Office is in Kottayam,

Source:

<https://www.thehindubusinessline.com/news/nation-wide-census-on-rubber-to-prepare-comprehensive-database-begins/article35891473.ece>

[https://agritech.tnau.ac.in/horticulture/horti\\_plantation%20crops\\_rubber.html](https://agritech.tnau.ac.in/horticulture/horti_plantation%20crops_rubber.html)

S268. Ans.(a)

**Sol.** Rubber Board is conducting the first-ever nationwide census on natural rubber in order to prepare a detailed database on rubber cultivation in India. The census is to be conducted by using a mobile application, mobile app, 'RUBAC' for conducting the survey which will begin with the data collection in the Kottayam district, of Kerala Kerala accounts for roughly 70 per cent of the total rubber area in the country, of which, Kottayam district shares about one-fifth of the area.

Source:

<http://commoditiescontrol.com/eagrtrader/common/newsdetail.php?type=SPR&itemid=12666&comid=7.&cid1=&varietyid=&varid=>

**S269. Ans.(a)**

**Sol.** Under “Operation Blue Freedom “ a team of eight persons with disabilities has recently created a new world record for the largest number of people with disabilities” to scale the world’s highest battlefield, Siachen Glacier, by scaling up to the Kumar Post at an altitude of 15,632 ft.

The team of people with disabilities has been trained by ‘Team CLAW’, an elite team of Former Special Forces Veterans working towards creating ecosystems for people with disabilities to thrive.

It is in line with the Ministry of Social Justice Empowerment’s pursuit to harness the immense productive potential of people with disabilities.

Source:

<https://www.thehindu.com/news/national/braving-all-odds-for-a-trek-to-siachen/article36439228.ece>

**S270. Ans.(d)**

**Sol.** Central Government has approved a guarantee of Rs. 30,600 crore to back Security Receipts issued by National Asset Reconstruction Company Limited (NARCL) for acquiring stressed loan assets.

NARCL is intended to resolve stressed loan assets above ₹500 crores each amounting to about ₹ 2 lakh crore. In phase I, fully provisioned assets of about Rs. 90,000 crores are expected to be transferred to NARCL, while the remaining assets with lower provisions would be transferred in phase II.

The capitalization of NARCL would be through equity from banks and Non-Banking Financial Companies (NBFCs).

it will also raise debt as required.

Recently the Government of India has approved a ₹30,600-crore backstop facility for guaranteeing securities to be issued by the National Asset Reconstruction Company Ltd. (NARCL), the so-called ‘bad bank’ that is being set up to help aggregate and consolidate lenders’ non-performing assets (NPAs) or bad loans.

Source:

<https://epaper.thehindu.com/Home/ShareImage?Pictureid=GBR91HA5A.1>

<https://www.thehindu.com/business/Economy/explained-what-is-the-need-for-a-bad-bank/article36544241.ece>

<https://pib.gov.in/PressReleaseDetailm.aspx?PRID=1755466>

**S271. Ans.(c)**

**Sol.** Recently, UNCTAD (United Nations Conference on Trade and Development) has released a new report titled, ‘The Least Developed Countries Report’.

The WTO recognizes as least-developed countries (LDCs) those countries which have been designated as such by the United Nations.

UN defines least developing countries on the basis of three parameters

1. Human assets index (HAI):
2. Income Criteria:
3. Economic and environmental vulnerability index

There are no WTO definitions of “developed” or “developing” countries. Developing countries in the WTO are designated on the basis of self-selection although this is not necessarily automatically accepted in all WTO bodies.

Source: <https://unctad.org/topic/vulnerable-economies/least-developed-countries/ldc-report>  
[https://www.wto.org/english/thewto\\_e/whatis\\_e/tif\\_e/or\\_g7\\_e.htm](https://www.wto.org/english/thewto_e/whatis_e/tif_e/or_g7_e.htm)

<https://www.adda247.com/upsc-exam/the-least-developed-countries-report-2021/>

**S272. Ans.(a)**

**Sol.** Minimum Support Price (MSP) is a form of market intervention by the Government of India to insure agricultural producers against any sharp fall in farm prices. The minimum support prices are announced by the Government of India at the beginning of the sowing season for certain crops on the basis of the recommendations of the Commission for Agricultural Costs and Prices (CACP).

The MSP assures the farmers of a fixed price for their crops, well above their production costs. Following are the cost concepts that the Commission for Agricultural Costs and Prices (CACP)

considers while recommending MSPs of 23 crops:

- Cost A2- It covers all paid-out costs directly incurred by the farmer — in cash and kind — on seeds, fertilizers, pesticides, hired labor, leased-in land, fuel, irrigation, etc.
- Cost A2 +FL - In agriculture, farmers also use a lot of family labor and if their cost is imputed and added to cost A2, that concept is called cost A2+FL.
- Cost C2 - the Comprehensive cost (cost C2), it includes imputed costs of family labor, imputed rent of owned land, and imputed interest on owned capital.

CACP recommendation is based on 1.5 times the A2+FL costs while the farmers have been demanding that MSP should be 1.5 times of C2, which was suggested by the National Commission for Farmers

Source:

<https://www.thehindu.com/news/national/farm-unions-challenge-delay-in-paddy-procurement/article36781526.ece>

<https://pib.gov.in/PressReleasePage.aspx?PRID=1657219>

<https://www.prsindia.org/theprsblog/explained-recent-changes-msps>

**S273. Ans.(d)**

**Sol.** Biosphere Reserve (BR) is an international designation by the United Nations Educational, Scientific and Cultural Organization (UNESCO) for representative parts of natural and cultural landscapes extending over large areas of terrestrial or coastal/marine ecosystems or a combination of both.

The Nilgiri Biosphere Reserve is an International Biosphere Reserve in the Western Ghats and Nilgiri mountains of South India. It is the largest protected forest area in India, spreading across **Tamil Nadu, Karnataka, and Kerala**

Nilgiris Biosphere Reserve is first notified Biosphere Reserve as notified by UNESCO under its Man and Biosphere Programme in India.

It includes the protected areas Mudumalai, Mukurthi, Nagarhole, Bandipur, and Silent Valley National Parks, and Aralam Wildlife Sanctuary, Wayanad, Karimpuzha, and **Sathyamangalam wildlife sanctuaries.**

Conservation Assured | Tiger Standards (CA|TS) has been agreed upon as an accreditation tool by the global coalition of Tiger Range Countries (TRCs) and has been developed by tiger and protected area experts. Officially launched in 2013, it sets minimum standards for effective management of target species and encourages the assessment of these standards in relevant conservation areas.

Source:

<https://www.thehindu.com/news/national/tamil-nadu/order-issued-to-hunt-mudumalais-tiger-t23-after-it-kills-one-more-person/article36785741.ece>  
[http://www.wiienviis.nic.in/Database/BiosphereReserves\\_8225.aspx](http://www.wiienviis.nic.in/Database/BiosphereReserves_8225.aspx)  
<https://pib.gov.in/PressReleasePage.aspx?PRID=1740353>

**S274. Ans.(b)**

**Sol.** Recently, the Ministry of Health and Family Welfare has launched the MusQan initiative to ensure child-friendly services in public health facilities

MusQan is a new quality improvement initiative for the pediatric age group (0-12 years), within the existing National Quality Assurance Standards (NQAS) framework. Susan is designed to ensure the provision of quality child-friendly facility-based services from birth to children up to 12 years of age.

Source: <https://www.adda247.com/upsc-exam/musqan-initiative/>

**S275. Ans.(d)**

**Sol.** land" is in the State List of the Constitution but the subject to regulate contracts and transfer of property, is in the Concurrent List.

The Real Estate (Regulation and Development) bill 2016 (hereinafter referred to as "RERA") was turned into Act in 2017 and was into effect on May 1, 2017.

The RERA act 2016 established state-level regulatory authorities called Real Estate Regulatory Authorities (RERAs).it also established the state-level tribunals called Real Estate Appellate Tribunals. Decisions of RERAs can be appealed in these tribunals.

**Maharashtra was the first state to implement the provision of RERA and establish the Real Estate Regulatory Authority of Maharashtra, which is popularly known as MahaRERA..**

**Under this act**

- On registration, the promoter must upload details of the project on the website of the RERA. These include the site and layout plan, and schedule for completion of the real estate project.
- 70% of the amount collected from buyers for a project must be maintained in a separate bank account and must only be used for the construction of that project. The state government can alter this amount to less than 70%

Source: <https://hi.prsindia.org/billtrack/the-real-estate-regulation-and-development-bill-2013>  
<https://pib.gov.in/PressReleaseDetail.aspx?PRID=1545495>  
<https://www.thehindu.com/news/national/model-builder-buyer-agreement-needed-says-supreme-court/article36818156.ece>

**S276. Ans.(b)**

**Sol.** The Nobel Prize in Physiology or Medicine was jointly awarded to David Julius and Ardem Patapoutian for their work on how the human body senses temperature, touch, and movement. the scientists' discoveries had unlocked one of the secrets of nature by explaining the molecular basis for sensing heat, cold and mechanical force.

Dr. Julius used capsaicin, a compound that causes the burning sensation from chili peppers, to identify a sensor in nerve endings of the skin that responds to heat. In separate research, Dr. Patapoutian later used pressure-sensitive cells to discover new sensors that respond to touch in the skin and internal organs.

Both the scientists' work involved identifying the specific genes involved in either heat or touch. By figuring out what those genes did in cells, they discovered the molecular basis for the sensations of heat or touch.

Source:

<https://www.livemint.com/science/health/nobel-prize-in-medicine-awarded-to-scientists-who-discovered-how-our-bodies-feel-heat-and-touch-11633358890041.html>

**S277. Ans.(a)**

**Sol.** Recently India and Pakistan troops are reported to have exchanged fire briefly along the Line of Control (LoC) in Jammu and Kashmir's Kupwara district. India and Pakistan, in February 2021, issued a joint statement to strictly observe the 2003 Ceasefire agreement along the Line of Control(LoC).



**About the 2003 ceasefire agreement:**

The ceasefire agreement was reached in November 2003, four years after the Kargil War. On November 26, 2003, the ceasefire took effect along the entire stretch of the India-Pakistan frontier. It facilitated the opening of the Srinagar-Muzaffarabad and Poonch-Rawalkot routes, paving the way for bus and truck services linking the two Kashmiris for the first time in six decades and encouraging cross-LoC contacts, exchanges, travel, and trade. The ceasefire also enabled India to complete the construction of a fence near the LoC to prevent Pakistan's infiltration of terrorists into Kashmir, a project that it had begun a couple of decades earlier but had to suspend due to Pakistan's artillery fire.

Source:

<https://economictimes.indiatimes.com/news/defence/no-ceasefire-violation-only-two-successful-infiltration-attempts-this-year-in-kashmir-goc-15-corps/articleshow/86387986.cms>

**S278. Ans.(c)**

**Sol.** Tax Inspectors Without Borders (TIWB) is a joint initiative of the United Nations Development Programme (UNDP) and the Organisation for Economic Cooperation and Development (OECD). Recently in Seychelles India was chosen as the partner administration and has provided the tax expert for this program.

it aims to aid Seychelles in strengthening its tax administration by transferring technical know-how and skills to its tax auditors, and through sharing of best audit practices. The focus of the programme will be in the area of International Taxation and Transfer Pricing.

Source:

<https://www.aninews.in/news/national/general-news/tax-inspectors-without-borders-launches-programme-in-seychelles-with-indias-partnership20211004214848/>

**S279. Ans.(c)**

**Sol.** It is launched by the Telangana govt.

The 'Hara Bhara' campaign is expected to accelerate the mission of Green Telangana under the 'Haritha Haram programme.

This project uses drones to disperse seed balls over thin, barren, and empty forest lands to turn them into the lush green abode of trees.

The process begins with a field survey and mapping of the terrain area to understand the ecosystem and demarcate the areas needing urgent attention.

This is used to determine the number and species of trees that can be planted in the barren land based on the soil, climate, and other parameters.

The seed balls are prepared by the local women and welfare communities which are dispersed via drones in the targeted areas.

Further, the area is continuously monitored to track the growth of plants sown.

Source: <https://www.siasat.com/telangana-launches-hara-bhara-drone-based-afforestation-project-2200274/>

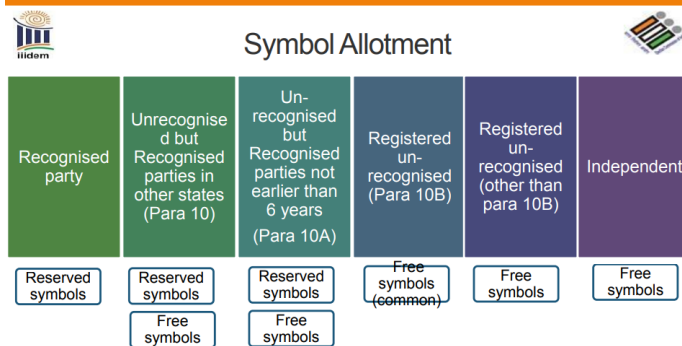
**S280. Ans.(d)**

**Sol.** 'Political party' means a party registered with ECI under section 29A of the RP Act, 1951.

A 'recognized political party' means a party recognized as a national or state party by ECI under Symbols Order, 1968.

Candidates set up by recognized national and state political parties to get only the symbols reserved for those parties

The Recognised Party status is reviewed periodically by the ECI. Before the amendment in 2016 (came into force with effect from 1 January 2014), if a political party failed to fulfill the criteria in the subsequent Lok Sabha or state legislative assembly election, they lost their status as a Recognised Party.<sup>[1]</sup> In 2016, the ECI announced that such a review would take place after two consecutive elections instead of every election. Therefore, a political party shall retain the Recognised Party status even if they do not meet the criteria in the next election. However, if they fail to meet the criteria in the subsequent election following the next election, they would lose their status



Source:

<https://cdn.s3waas.gov.in/s3e2ef524fbf3d9fe611d5a8e90fefdc9c/uploads/2021/02/2021022699.pdf>

<https://www.thehindu.com/news/national/ec-allots-names-symbols-to-both-ljp-factions/article36835308.ece>

**S281. Ans.(c)**

**Sol.** Peafowls are omnivores and eat mostly plants, flower petals, seed heads, insects and other arthropods, reptiles, and amphibians. They are known to grow and thrive in dry conditions. The bird has a celebrated status in Indian mythology and is hence protected culturally in India especially in Gujarat

The Indian Peafowl is listed as Least Concern by IUCN (2014) Red data

This species receives theoretical protection under the Indian Wildlife (Protection) Act, Schedule I [highest order of protection] of 1972

Source:

[http://www.environmentclearance.nic.in/writereaddata/Form2FB/General7/14\\_Nov\\_2019\\_181026893YOP41YDG\\_CVplan.pdf](http://www.environmentclearance.nic.in/writereaddata/Form2FB/General7/14_Nov_2019_181026893YOP41YDG_CVplan.pdf)

<https://www.downtoearth.org.in/blog/environment/peafowl-population-is-growing-in-kerala-but-are-they-threatening-humans--79505>

**S282. Ans.(b)**

**Sol.** *Somatosensation* is a collective term for the sensations of touch, temperature, body position, and pain recognized through neural receptors in the skin and certain internal organs. Thus, it includes processes such as”

1. **Mechanoreception:** sensory receptors which respond to mechanical forces, such as pressure or distortion.

2. **Thermoreception**

3. **Proprioception:** refers to the body's ability to perceive its own position in space. For example, proprioception enables a person to close their eyes and touch their nose with their index finger.

4. **Nociception:** Nociceptors respond to potentially damaging stimuli by sending signals to the spinal cord and brain. This process, called nociception, usually causes the perception of pain

They are found in internal organs, as well as on the surface of the body. Chemical nociceptors respond to a wide variety of chemicals, some of which are signs of tissue damage. They are involved in the detection of some spices in food

The somatosensory system also helps to regulate many key internal physiological processes, including blood pressure, respiration, urination and bone remodeling.

Recently David Julius and Ardem Patapoutian had shared the 2021 Nobel Prize in Physiology or Medicine for their work on the field of somatosensation

Both David Julius and Ardem Patapoutian identified another new receptor called TRPM8, a receptor that is activated by cold.

TRPM8 is a receptor in the skin that responds to low temperatures; it was discovered through experiments that used menthol as a stimulus

Source:

<https://www.biologyonline.com/dictionary/somatosensation>

<https://www.quantamagazine.org/medicine-nobel-prize-goes-for-temperature-and-touch-discoveries-20211004/>

<https://www.deccanchronicle.com/science/science/041021/nobel-prize-honors-discovery-of-temperature-touch-receptors.html>

**S283. Ans.(c)**

**Sol.** Shyamji Krishna Varma was born on this day in 1857 in Mandvi, Kutch, Gujarat. He founded the Indian Home Rule Society, India House, and The Indian Sociologist in London. An admirer of Herbert Spencer and Dayanand Saraswati,

On 18 February 1905, Shyamji inaugurated a new organization called The Indian Home Rule Society with the objective of:

- Securing Home Rule for India
- Carrying on Propaganda in England by all practical means with a view to attain the same.
- Spreading among the people of India the objectives of freedom and national unity.

This organization founded by Shyamji Krishna Varma, had support from a number of prominent Indian nationalists in Britain at the time, including Bhikaji Cama, Dadabhai Naoroji, and S.R. Rana

Source: <https://www.thestatesman.com/india/pm-modi-pays-tribute-shyamji-krishna-varma-jyanti-1503014422.html>

**S284. Ans.(c)**

**Sol.** Health Minister Mansukh Mandaviya has recently launched the ICMR's Drone Response and Outreach in North East (i-Drone). The delivery model is aimed at ensuring that life-saving vaccines reach everyone.

Currently, the drone-based delivery project has been granted permission for implementation in Manipur and Nagaland, as well as Andaman and Nicobar Islands.



The ICMR conducted an initial study in collaboration with the IIT Kanpur to test the capacity of the drones to carry and transfer vaccines safely. The study was conducted in Manipur, Nagaland, and the Andaman and Nicobar Islands. These studies provided promising results on the basis of which the Ministry of Civil Aviation (MoCA), the Directorate General of Civil Aviation (DGCA), and other regulatory authorities have granted permission to fly drones beyond the Visual Line Of Sight. On the basis of it i-Drone project was launched

Source:

<https://www.thehindu.com/news/national/icmrs-drone-based-vaccine-delivery-model-launched/article36821258.ece>

### S285. Ans.(a)

**Sol.** AEPS allows customers to make payments using their Aadhaar number and by providing Aadhaar verification at point of Sale (PoS) or micro ATMs. This is a simple, secure and user-friendly platform for financial transactions. This is another initiative taken by the National Payments Corporation of India (NPCI) to encourage cashless transactions in India. Customers can carry out all transactions through a Business Correspondent (BC) or bank agent through a micro ATM. Except for fund transfer, where you need to go to the specific bank BC, for other transactions you can use any bank BC

Reserve Bank of India (RBI) mandates a T+5 settlement period for a failure of any online transaction has which means within five days following the transaction failure date, the cash must be restored back to the customer's account—and ₹100 per day penalty will be levied for a failure to do so.

Source: <https://www.livemint.com/opinion/columns/fix-the-problems-in-aadhaar-based-cash-transactions-11588930862806.html>

### S286. Ans.(c)

**Sol.** The Unique Identification Authority of India (UIDAI) is a statutory authority established under the provisions of the Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016 on 12 July 2016 by the Government of India, under the Ministry of Electronics and Information Technology (MeitY).

Source: <https://uidai.gov.in/about-uidai/unique-identification-authority-of-india/about.html>

### S287. Ans.(b)

**Sol.** The Langas and Manganiyars are hereditary communities of Muslim musicians residing mostly in western Rajasthan's Jaisalmer and Barmer districts and in Pakistan's Tharparkar and Sanghar districts in Sindh.

The iconic and internationally acclaimed folk artists have, however, been hit hard by the COVID19 pandemic that stopped their performances in India and abroad and poses a challenge to the very survival of the popular arts

Source:

<https://www.thehindu.com/news/national/other-states/future-proofing-the-langa-manganiyar-heritage/article36794789.ece>

### S288. Ans.(b)

**Sol.** The General Assembly is the main deliberative, policymaking, and representative organ of the UN.

All 193 Member States of the UN are represented in the General Assembly, making it the only UN body with universal representation.

The President of the General Assembly is elected each year by the assembly to serve a one-year term of office.

Source: <https://www.thehindu.com/todays-paper/tp-national/i-got-covishield-ive-survived-unga-chief/article36801300.ece>

### S289. Ans.(c)

**Sol.** IHS Markit produces the PMI for India.

PMI or a Purchasing Managers' Index (PMI) is an indicator of business activity -- both in the manufacturing and services sectors. It is a survey-based measure that asks the respondents about changes in their perception of some key business variables from the month before. It is calculated separately for the manufacturing and services sectors and then a composite index is constructed.

A figure above 50 denotes expansion in business activity. Anything below 50 denotes contraction.

It is based on five major indicators: new orders, inventory levels, production, supplier deliveries, and the employment environment.

In July 2021, the value of the Purchasing Managers' Index in India stood at 55.3 points.

Source:

<https://www.statista.com/statistics/275297/purchasing-managers-index-pmi-in-india/>  
<https://www.business-standard.com/about/what-is-manufacturing-pmi>

### S290. Ans.(b)

**Sol.** Japanese-born American Syukuro Manabe, German Klaus Hasselmann, and Italian Giorgio Parisi won the 2021 Nobel Prize in Physics recently for the work that would help and understand complex physical systems such as Earth's changing climate.

Syukuro Manabe and Hasselmann worked "for the physical modeling of Earth's climate, quantifying variability and reliably predicting global warming" and Italian Giorgio Parisi worked for the discovery of the interplay of disorder and fluctuations in physical systems from atomic to planetary scales"

Source:

<https://www.reuters.com/lifestyle/science/manabe-hasselmann-parisi-win-2021-nobel-prize-physics-2021-10-05/>

**S291. Ans.(a)**

**Sol.** Recently The 2021 Nobel Prize in Chemistry has gone to [Benjamin List](#) and [David W. C. MacMillan](#) for the discovery of asymmetric **organocatalysis**.

[Asymmetric organocatalysis](#) uses **small organic molecules as catalysts instead of traditional catalysts such as enzymes or metals**. These molecules are able to catalyze reactions to selectively form one enantiomer of a particular compound—meaning one version of two mirror-image molecules

1. The molecules or ions that cannot be superimposed are called chiral.

**Isomers:**

Isomers are two or more compounds that have the same chemical formula but a different arrangement of atoms. Because of the different arrangement of atoms, they differ in one or more physical or chemical properties. Two principal types of isomerism are known among coordination compounds. Each of which can be further subdivided.

**(a) Stereoisomerism**

- (i) Geometrical isomerism
- (ii) Optical isomerism

**(b) Structural isomerism -**

- (i) Linkage isomerism
- (ii) Coordination isomerism
- (iii) Ionisation isomerism
- (iv) Solvate isomerism

Optical isomers are two mirror images that cannot be superimposed on one another. These are called as enantiomers.

The two forms are called dextro (d) and laevo (l) depending upon the direction they rotate the plane of polarised light in a polarimeter (d rotates to the right, l to the left.

Source: <https://cen.acs.org/people/nobel-prize/Asymmetric-organocatalysis-List-MacMillan-Nobel-Prize-Chemistry-organic-synthesis/99/web/2021/10>  
<https://www.ncert.nic.in/ncerts/l/lech109.pdf>  
<https://ncert.nic.in/ncerts/l/lech201.pdf>

**S292. Ans.(d)**

**Sol.** The National Tiger Conservation Authority (NTCA) has recently approved the Chhattisgarh government's proposal to declare the combined areas of the Guru Ghasidas National Park and Tamor Pingla Wildlife Sanctuary as a Tiger Reserve.

This will be the fourth Tiger Reserve in Chhattisgarh, after the Udanti-Sitanadi, Achanakmar, and Indravati Reserves. Bhoramdeo Wildlife Sanctuary is located in the centre of the state as a Tiger Reserve. Efforts were also made in the past to grant this as the status of the tiger reserve.

Source: <https://indianexpress.com/article/explained/explained-india-newest-tiger-reserve-no-4-in-chhattisgarh-7556513/>

**S293. Ans.(d)**

**Sol.** The Wild Life (Protection) Amendment Act, 2006 had come into force on 4 September 2006. The amended Act provides for creating the National Tiger Conservation Authority.

The National Tiger Conservation Authority (NTCA) was subsequently constituted under section **38 L (1)** of the Wildlife (Protection) Act, 1972.

Project Tiger was started in 1973, so it was not constituted along with it.

Under Wildlife (Protection) Act, 1972

Section 38 W (2) of the states that

No State Government shall de-notify a tiger reserve, **except in public interest** with the approval of the Tiger Conservation Authority and the National Board for Wild Life

Also

Section 38 W (1): No alteration in the boundaries of a tiger reserve shall be made except on a recommendation of the Tiger Conservation Authority and the approval of the National Board for Wild Life".

Source: <https://ntca.gov.in/faqs/#faq-new>  
<https://ntca.gov.in/about-us/#ministers>

**S294. Ans.(d)**

**Sol.** 1. Malaria is caused by *Plasmodium* parasites. The parasites are spread to people through the bites of infected female *Anopheles* mosquitoes, called "malaria vectors." There are 5 parasite species that cause malaria in humans, and 2 of these species - *P. falciparum* and *P. vivax* - pose the greatest threat.

2. Mosquirix is a vaccine that is given to children aged 6 weeks to 17 months to help protect against malaria caused by the parasite *Plasmodium falciparum* only.

3. The vaccine is to be used in areas of the world where malaria is caused by *Plasmodium falciparum* and according to official recommendations in those areas.

4. Countries that have achieved at least 3 consecutive years of zero indigenous cases of malaria are eligible to apply for the WHO certification of malaria elimination.

El Salvador was declared malaria-free country in 2021.

5. India aims to achieve its malaria elimination target by **2030**

**Source:**

<https://indianexpress.com/article/explained/explained-what-is-mosquirix-the-first-malaria-vaccine-to-get-the-whos-backing-7556742/>

<https://www.thehindu.com/news/national/116-districts-in-india-reported-zero-malaria-cases-in-2020-health-minister-harsh-yardhan/article34395473.ece>

<https://www.who.int/news-room/fact-sheets/detail/malaria>

<https://www.ema.europa.eu/en/opinion-medicine-use-outside-EU/human/mosquirix>

**S295. Ans.(c)**

**Sol.** The NIA Act, 2008 makes the National Investigation Agency the only truly federal agency in the country, along the lines of the FBI in the United States and it is more powerful than the CBI.

The NIA Act, 2008 gives the NIA powers to take suo motu cognizance of terror activities in any part of India and register a case, to enter any state without permission from the state government, and to investigate and arrest people.

Under the constitution of India, law and order is a state subject.

There have been questions raised on how NIA is usurping state rights under the guise of fighting terror.

The National Investigation Agency (Amendment) Act, 2019 states that, officers of the NIA will have the power to investigate scheduled offenses committed outside India, subject to international treaties and domestic laws of other countries.

Source:

<https://indianexpress.com/article/explained/explained-what-is-the-nia-act-and-why-is-chhattisgarh-challenging-it-6219106/>

<https://www.thehindu.com/news/national/other-states/nia-raids-premises-of-cross-loc-traders-in-jks-poonch/article36803241.ece>

<https://www.nia.gov.in/about-us.htm>

**S296. Ans.(d)**

**Sol.** The Brahmaputra basin spreads over the countries of Tibet (China), Bhutan, India, and Bangladesh.

In India, it spreads over states of Arunachal Pradesh, Assam, West Bengal, Meghalaya, Nagaland, and Sikkim

The principal tributaries of the river joining from the right are the Lohit, the Dibang, the Subansiri, the Jiabharali, the Dhansiri, the Manas, the Torsa, the Sankosh, and the Teesta whereas the Burhidihing, the Desang, the Dikhow, the Dhansiri, and the Kopili joins it from left

Source:

<https://indiawris.gov.in/wiki/doku.php?id=brahmaputra>

<https://www.thehindu.com/news/national/other-states/british-era-bungalow-turns-brahmaputra-heritage-centre/article36804757.ece>

**S297. Ans.(d)**

**Sol.** Launched by the US the purpose of these Accords is to establish a common vision via a practical set of principles, guidelines, and best practices to enhance the governance of the civil exploration and use of outer space with the intention of advancing the Artemis Program, an An USA - led effort to return humans to the Moon by 2024 and to ultimately expand and deepen space exploration.

The principles set out in these Accords are intended to apply to civil space activities conducted by the civil space agencies of each Signatory.

These activities may take place on the Moon, Mars, comets, and asteroids, including their surfaces and subsurfaces, as well as in orbit of the Moon or Mars, in the Lagrangian points for the Earth-Moon system, and in transit between these celestial bodies and locations.

India is currently not a signatory to this treaty

Source: <https://www.nasa.gov/specials/artemis-accords/img/Artemis-Accords-signed-13Oct2020.pdf>

<https://www.indiatoday.in/science/story/what-is-artemis-accords-nasa-lunar-exploration-moon-1809602-2021-06-01>

**S298. Ans.(c)**

**Sol.** A sharp uptick in power demand as the economy recovers from the Covid-19 pandemic coupled with supply issues have led to the current coal shortage. India consumed 124 billion units of power in August 2021 compared to 106 billion units of power in August 2019 which was not impacted by the pandemic. Coal-fired thermal power plants have also supplied a higher proportion of the increase in demand leading to the share of thermal power in India's power mix to increase to 66.4% from 61.9% in 2019.

**The key reasons for the supply crunch include:**

1. Lower than normal stock accumulation by thermal power plants in the April-June period
2. Continuous rainfall in coal-bearing areas in August and September which led to lower production
3. Lower imports coupled with high international prices of coal

Source:

<https://indianexpress.com/article/explained/india-coal-shortage-explained-7555184/>

**S299. Ans.(a)**

**Sol.** Andhra Pradesh govt has recently launched the Swechha program, which aims to **improve the health and hygiene of adolescent girls studying in government schools and colleges** by providing quality sanitary napkins free of cost

Source:

<https://www.indiatoday.in/india/story/swechha-andhra-govt-free-sanitary-napkins-school-college-girls-1860841-2021-10-05>

**S300. Ans.(c)**

**Sol.** Reaching Zero' is a virtual forum on malaria elimination launched on April 25, the World Malaria Day. It is co-hosted by WHO and the RBM Partnership to End Malaria.

India chaired the "Reaching zero "meet 2021.

India aims to achieve its malaria elimination target by 2030

Source: <https://www.thehindu.com/news/national/116-districts-in-india-reported-zero-malaria-cases-in-2020-health-minister-harsh-varadhan/article34395473.ece>

**S301. Ans.(c)**

**Sol.** The Indian textiles and apparel industry contributed 2% to the GDP, 12% to export earnings and held 5% of the global trade in textiles and apparel in 2018-19

India has built a strong ecosystem in cotton apparel but is lagging in man-made fibre (MMF) apparel manufacturing. Global fashion is moving towards blends

Two-thirds of international trade in textiles is of man-made and technical textiles.

The PLI scheme for textiles aims to promote the production of high-value Man-Made Fibre (MMF) fabrics, garments and technical textiles. **(jute is not included in this)**

Source:

<https://www.thehindubusinessline.com/opinion/a-boost-for-textile-sector/article36438578.ece>

<https://indianexpress.com/article/explained/production-linked-incentive-scheme-textile-sector-explained-7498291/>

<https://www.ibef.org/industry/textiles.aspx>

**S302. Ans.(c)**

**Sol.** Context: The Union Cabinet had recently approved the setting up of seven Mega Integrated Textile Region and Apparel (PM MITRA) parks with a total outlay of ₹4,445 crores in the next five years.

**PM Mega Investment Textiles Parks (MITRA) scheme:**

1. The PM MITRA park will be developed by a Special Purpose Vehicle (SPV), which will be owned by the State Government and the Government of India in a Public-Private Partnership (PPP) Mode.

2. These will be set up at greenfield or brownfield sites located in different willing states.

3. The park will have two components-Development Capital Support which will provide 30% of the estimated project cost of ₹ 1,700 crores for each park with a cap of ₹ 500 crores. For brownfield projects, the support will be capped at ₹ 200 crores. Simultaneously, for the first movers or anchor investors who begin production at these parks, competitive incentive support will be provided.

4. If the investors end up spending more on setting up a plant or working out logistics, competitive incentive support will be given to offset any such expenses on a first-come-first-served basis to those who create at least 100 jobs. Rs 300 crore will be given for each park, which means Rs 2,100 crore will be given to these units. Maximum support of ₹ 10 crores per year for a maximum of three years will be provided to such anchor investors.

**S303. Ans.(a)**

**Sol.** 2021 State of Climate Services report was recently released by the World Meteorological Organization (WMO)

As per the report the Terrestrial water storage (TWS) has dropped at a rate of 1 cm per year in 20 years (2002-2021) all over the globe.

**Worries about India:**

The biggest losses have occurred in Antarctica and Greenland. But many highly populated, lower latitude locations have also experienced TWS losses.

This includes India, where the TWS has been lost at a rate of at least 3 cm per year. In some regions, the loss has been over 4 cm per year too. India has recorded the highest loss in terrestrial water storage if the loss of water storage in Antarctica and Greenland is excluded.

India is, therefore, the 'topmost hotspot of TWS loss', according to the WMO analysis. The northern part of India has experienced the maximum loss within the country

Source:

<https://www.downtoearth.org.in/news/water/globally-india-recorded-the-highest-loss-in-terrestrial-water-storage-79558>

**S304. Ans.(d)**

**Sol.** India is the biggest emitter of greenhouse gases after the US and China and is among the countries most vulnerable to climate change. It plans to reduce its carbon footprint from the 2005 levels by 33-35% by 2030, as part of its commitments to the United Nations Framework Convention on Climate Change adopted by 195 countries in Paris in 2015.

Subsequently, the National Biofuel Policy 2018 was launched in order to replace convention fuel with biofuels. The indicative target under this was :

20% blending of ethanol in petrol and 5% blending of biodiesel in a diesel by 2030. This target has been recently revised to 2025.

Ethanol can be produced from almost anything which has sugar or has the capacity to produce sugar.

During ethanol fermentation, glucose and other sugars in the corn (or sugarcane or other crops) are converted into ethanol and carbon dioxide.

$C_6H_{12}O_6 \rightarrow 2 C_2H_5OH + 2 CO_2 + \text{heat}$

It can be made from very common crops such as hemp, sugarcane, rice, sugar beet, beetroot, potato, cassava and corn. Even Waste fruits can be utilized as bio feed to produce ethanol

Source:

<https://www.livemint.com/news/india/20-ethanol-blended-petrol-target-preponed-to-2025-pm-modi-11622881850274.html>

<https://indianexpress.com/article/business/economy/w-hy-indias-ambitious-ethanol-plan-is-spurring-food-security-fears-7557589/>

**S305. Ans.(c)**

**Sol.** This is a central sector scheme; i.e. - 100% funded by the Central [Government of India](#) under the [Ministry of Tourism](#) under the [Government of India](#). The scheme aims to promote, develop and harness the potential of tourism in India

The entire scheme is based on theme-based tourism. Each theme is called a "circuit" and is composed of various tourist destinations. Tourist Circuit is defined as "*a route having at least three major tourist destinations which are distinct and apart.*"

Eco Circuit-Telangana, Uttrakhand

Ecotourism circuit- Kerala

Tribal circuit-Nagaland

Buddhist circuit- Bihar

Source:

<https://pib.gov.in/newsite/printrelease.aspx?relid=137206>

[ifc.org/wps/wcm/connect/2bdd4697-6d7f-4f78-bca0-269aa100b25a/Buddhist+Circuit+Tourism+Strategy+Final.pdf?MOD=AJPERES&CVID=kC1uny1](http://ifc.org/wps/wcm/connect/2bdd4697-6d7f-4f78-bca0-269aa100b25a/Buddhist+Circuit+Tourism+Strategy+Final.pdf?MOD=AJPERES&CVID=kC1uny1)

**S306. Ans.(d)**

**Sol.** Important sites associated with Budha:

1. Lumbini (in Nepal) – where he was born.
2. Bodhgaya (in Bihar) – where he attained enlightenment under the Bodhi Tree
3. Sarnath (in Uttar Pradesh) – where he delivered his first sermon.
4. Nalanda and Rajgir (in Bihar) – where he lived and taught, and Nalanda, in particular, became the centre of Buddhist learning and teaching.
5. **Vaishali (in Bihar)- Buddha's last sermon delivered.**
6. **Sravasti (in Uttar Pradesh) – Buddha spent twenty-four rainy seasons here at the Jetavan monastery, built by his disciple Sudatta Anathapindika.**
7. **Kushinagar (in Uttar Pradesh) – where Budha achieved mahaparinirvan**
8. Kapilavastu (on India Nepal Border) – Kapilvastu is deeply endowed with the Buddha's origins. It is believed that Buddha spent his first early years here before embarking on the long journey to enlightenment
9. Kausambi (in Uttar Pradesh) – Buddha is believed to have stayed and preached at Kausambi

Source:

[https://www.ifc.org/wps/wcm/connect/2bdd4697-6d7f-4f78-bca0-](https://www.ifc.org/wps/wcm/connect/2bdd4697-6d7f-4f78-bca0-269aa100b25a/Buddhist+Circuit+Tourism+Strategy+Final.pdf?MOD=AJPERES&CVID=kC1uny1)

[269aa100b25a/Buddhist+Circuit+Tourism+Strategy+Final.pdf?MOD=AJPERES&CVID=kC1uny1](https://www.ifc.org/wps/wcm/connect/2bdd4697-6d7f-4f78-bca0-269aa100b25a/Buddhist+Circuit+Tourism+Strategy+Final.pdf?MOD=AJPERES&CVID=kC1uny1)

<https://indianexpress.com/article/india/centre-plans-a-major-infrastructure-push-for-the-buddhist-circuit-7557762/>

**S307. Ans.(a)**

**Sol.** Central Asian Flyway (CAF) covers a large area of Eurasia between the Arctic and Indian Oceans. This flyway comprises several important migration routes of birds. Including India, there are 30 countries under the Central Asian Flyway.

The CAF comprises several important migration routes of waterbirds, most of which extend from the northernmost breeding grounds in Siberia to the southernmost non-breeding wintering grounds in West Asia, India, the Maldives and British Indian Ocean Territory

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=1761522>

**S308. Ans.(b)**

**Sol.** IHS Markit's survey-based Purchasing Managers' Index (PMI) showed that the services sector last month recorded the second-fastest expansion since February 2020, accompanied by the first hiring in 10 months.

The India Services Business Activity Index, which had hit an 18-month high of 56.7 in August, eased to 55.2 in September but was well above its long-run average. A reading above 50 indicates an expansion in activity.

Source: <https://www.thehindu.com/todays-paper/tp-business/services-pmi-flags-first-hiring-since-nov/article36850115.ece>

**S309. Ans.(d)**

**Sol.** The Convention on the Conservation of Migratory Species of Wild Animals, also known as the Convention on Migratory Species (CMS) or the Bonn Convention, is an international agreement that aims to conserve migratory species throughout their ranges.

The Agreement was signed under the auspices of the United Nations Environment Programme and is concerned with the conservation of wildlife and habitats on a global scale. Signed in 1979 in Bonn, West Germany, the Convention entered into force in 1983

The CMS is the only global, and United Nations-based, an intergovernmental organization established exclusively for the conservation and management of terrestrial, aquatic and avian migratory species

India had hosted the 13<sup>th</sup> Conference of Parties (COP) of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) from 17<sup>th</sup> to 22<sup>nd</sup> February 2020 at **Gandhinagar in Gujarat.**

**Note that :**

1. Basel Convention is an international treaty that was designed to reduce the movement of hazardous waste between nations, and specifically to prevent the transfer of hazardous waste from developed to less developed countries (LDCs).

2. **Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade**) promotes shared responsibilities in relation to the importation of hazardous chemicals.

Source:

<https://indianexpress.com/article/explained/convention-of-migratory-species-india-6271330/>

**S310. Ans.(b)**

**Sol.** The S-400 Triumph (NATO reporting name: SA-21 Growler) is a long-range air defence missile system developed by Almaz Central Design Bureau of Russia.

This system is for the Indian Air Force (IAF) and will help in further enhancing the air defence (AD). And India will get five Triumph regimental kits from Russia.

The system can engage all types of aerial targets, including aircraft, unmanned aerial vehicles (UAV), and ballistic and cruise missiles, within the range of 400km at an altitude of up to 30km. The system can simultaneously engage 36 targets.

This system which has four different types of missiles with ranges between 40 km, 100 km, 200-km and 400 km can be can also be deployed in a very short time.

Source:

<https://www.financialexpress.com/defence/india-to-get-worlds-best-air-defence-system-s-400-from-russia-check-details/2234332/>

<https://www.army-technology.com/projects/s-400-triumph-air-defence-missile-system/>

**S311. Ans.(d)**

**Sol.** India has recently joined the High Ambition Coalition for Nature and People, a group of more than 70 countries encouraging the adoption of the global goal to protect at least 30 per cent of the **world's land and ocean** by 2030 (30x30)

HAC members currently include a mix of countries in the global north and south; **European, Latin American, Africa and Asia countries are among the members.**

India is the first of the BRICS bloc of major emerging economies (Brazil, Russia, India, China and South Africa) to join the HAC.

Source:

<https://www.tribuneindia.com/news/nation/30x30-india-joins-high-ambition-coalition-for-nature-and-people-321493>

**S312. Ans.(a)**

**Sol.** The **silvery gibbon** (*Hylobates moloch*), also known as the **Javan gibbon**, is a **primate** in the **gibbon** family Hylobatidae.

The Javan Gibbon wild population is only found in Java, Indonesia. It is not found in India (The hoolock gibbon is the only gibbon found in India).

It is listed as Endangered on the 2009 **IUCN** Red List of Threatened Species,<sup>[2]</sup> with the population appearing more stable than in a 2004 assessment of the species being Critically Endangered,

Habitat destruction on densely populated Java island continues to reduce the natural range of the species. Many gibbons are also lost to the illegal pet trade when adults are hunted so their young can be sold in the markets as pets.

Source:

<https://www.latestly.com/socially/world/indonesia-is-racing-to-preserve-the-last-frontier-for-the-javan-gibbon-a-vanishing-latest-tweet-by-reuters-2929035.html>

[https://wildlifeasia.org.au/project\\_javan\\_gibbon/](https://wildlifeasia.org.au/project_javan_gibbon/)

**S313. Ans.(c)**

**Sol.** Context: Azerbaijan this week instituted proceedings against the Republic of Armenia before the International Court of Justice, for its policy of ethnic cleansing and ethnic violence against Azerbaijanis.

The **International Court of Justice (ICJ)**;

Sometimes known as the **World Court**, is one of the **six principal organs** of the **United Nations (UN)**.

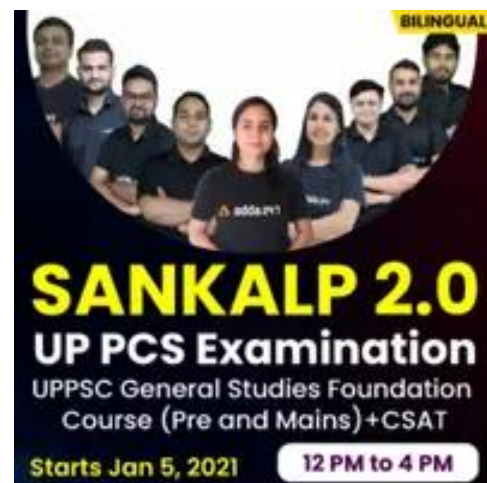
The ICJ is the successor of the **Permanent Court of International Justice (PCIJ)**, which was established in 1920 by the **League of Nations**.

The ICJ consists of a panel of 15 judges elected by the **UN General Assembly** and **Security Council** for nine-year terms

As stated in Article 93 of the UN Charter, all 193 UN members are automatically **parties** to the court's statute. Non-UN members may also become parties to the court's statute under the Article 93(2) procedure, which was used by Switzerland in 1948 and Nauru in 1988, prior to either joining the UN.

Source:

<https://www.eureporter.co/world/united-nations/2021/09/26/azerbaijan-takes-armenia-to-international-court-of-justice-in-the-hague/>



**S314. Ans.(b)**

**Sol.** India is the world's [third-largest producer](#) and [second-largest consumer](#) of electricity.

India has a surplus power generation capacity but lacks adequate transmission and distribution infrastructure. India's electricity sector is dominated by fossil fuels, in particular coal,

Coal-fueled electricity accounts for 53% of India's installed power generation capacity but generates 70% of the output.

The government is making efforts to increase investment in [renewable energy](#)

Indian states with vast reserves of coal and home to India's commercial coal-mining industry is concentrated in—Madhya Pradesh, certain parts of Maharashtra, Jharkhand, Chhattisgarh, and West Bengal

Source: <https://qz.com/india/2069542/is-india-staring-at-a-power-crisis/>

<https://www.ibef.org/industry/power-sector-india.aspx>

**S315. Ans.(a)**

**Sol.** Ports in India are classified as Major and Minor Ports according to the jurisdiction of the Central and State government as defined under the Indian Ports Act, 1908.

Major Ports are owned and managed by the Central Government and Minor ports are owned and managed by the State Governments.

The port of Mundra is located on the north shores of the Gulf of Kutch near Mundra, Kutch district, in the state of Gujarat. It is the **largest private port** and the largest container port in India.

Kandla is a shallower port than Mundra. It has a draft (the distance between the sea level and the sea bed) of 12 metres while Mundra has 14 metres. Dredging is needed to keep the port from silting up and making it shallower

source: <https://www.pppinindia.gov.in/toolkit/ports/module1-oopi-india-so.php?links=oindia1e>

<https://economictimes.indiatimes.com/industry/transportation/shipping/-transport/how-mundra-overtook-kandla-to-become-largest-port-by-tonnage/articleshow/21518665.cms>

<https://www.freepressjournal.in/india/hal-delivers-heaviest-semi-cryogenic-propellant-tank-to-isro>

<https://www.thehindu.com/news/national/lpg-price-hiked-by-15-per-cylinder/article36851883.ece>

**S316. Ans.(c)**

**Sol.** LPG stands for liquefied petroleum gas and it is a mixture of light gaseous hydrocarbons, such as propane, butane and other light petroleum products converted to a liquid by applying very high pressure. LPG is produced during oil refining or is extracted during the production of Natural Gas.

Source: <https://www.thehindu.com/news/national/lpg-price-hiked-by-15-per-cylinder/article36851883.ece>

**S317. Ans.(c)**

**Sol.** The **Madrid System** or **Madrid Protocol** (officially the **Madrid System for the international registration of marks**) is the primary international system for facilitating the registration of [trademarks](#) in multiple jurisdictions around the world.

Madrid permits the filing, registration and maintenance of trademark rights in more than one jurisdiction, provided that the target jurisdiction is a party to the system. The Madrid system is administered by the International Bureau of the World Intellectual Property Organization (WIPO) in Geneva, Switzerland. There are 90 countries part of the Madrid System.

Recently UAE also becomes the third country in the Gulf Cooperation Council (GCC) alongside Bahrain and Oman to join the Madrid Protocol.

This protocol came into force on 1<sup>st</sup> April 1996. India has joined the Madrid protocol on 8 July 2013.

Source: <https://ssrana.in/ip-laws/trademarks/madrid-protocol-india/>

<https://www.mondaq.com/trademark/1117168/uae-joins-madrid-protocol>

**S318. Ans.(d)**

**Sol.** The Krishna River is the second biggest river in peninsular India after the Godavari River.

- It originates near Mahabaleshwar (Satara) in Maharashtra.
- It runs from four states Maharashtra (303 km), North Karnataka (480 km) and the rest of its 1300 km journey in Telangana and Andhra Pradesh before it empties into the Bay of Bengal.
- Tributaries: Tungabhadra, Mallaprabha, Koyna, Bhima, Ghataprabha, Yerla, Warna, Dindi, Musi and Dudhganga.

Source: <https://www.thehindu.com/news/national/telangana-withdraws-plea-in-sc-on-sharing-of-krishna-water-after-centres-assurance/article36854130.ece>

<https://www.thehindu.com/news/national/telangana-withdraws-plea-in-sc-on-sharing-of-krishna-water-after-centres-assurance/article36854130.ece>

**S319. Ans.(b)**

**Sol.** Launched in July 2017, the Palk Bay scheme under the Pradhan Mantri Matsya Sampada Yojana (PMMSY), being financed by the Union and the State Governments with beneficiary participation, envisages the provision of providing 2,000 vessels in three years to the fishermen of the State and motivate them to abandon bottom trawling.

Department of Fisheries, **Ministry** of Fisheries, Animal Husbandry and Dairying, Government of India is implementing **Pradhan Mantri Matsya Sampada Yojana**

It was planned to have 500 boats built in the first year (2017-18). **Of the unit cost of each vessel (₹80 lakh), 50% would be borne by the Centre, 20% by the State government and 10% by the beneficiary, and the remaining 20% would be met through institutional financing**

The scheme was envisioned as the remedy to the Palk Bay fishing conflict. The Centre feels that deep sea fishing is the “only solution” to promote ecologically sustainable fishing and reduce “fishing pressure” around the close proximity of the International Maritime Boundary Line (IMBL) and the incidents of cross-border fishing.

Source:

<https://www.thehindu.com/news/national/tamil-nadu/palk-bay-scheme-to-get-a-fillip-murugan/article36901746.ece>

**S320. Ans.(b)**

**Sol. Context:** Ministry of Power has recently released a new cybersecurity guideline for the power sector to create a secure power cyber ecosystem.

**Cyber security in the power sector:**

Objectives:

- Creating cyber security awareness
- Creating a secure cyber ecosystem,
- Creating a cyber-assurance framework,
- Strengthening the regulatory framework,
- Developing effective public-private partnerships.
- Implement a national cyber security policy.

Source: <https://www.adda247.com/upsc-exam/cybersecurity-guidelines-for-power-sector/>

**S321. Ans.(c)**

**Sol.** “River ranching program” is introduced as a special activity under Pradhan Mantri Matsya Sampada Yojana PMMSY, scheme under the blue revolution mission, for augmenting and enhancing the fish production and productivity through expansion, intensification, diversification, and productive utilization of land and water.

It is programmed to address increased fish catch, improved the livelihood of fishers, and maintain the cleanliness of the river as they feed on organic remnants. Primarily to uplift the depleted fish stock and to enhance the production of the ranched fish species Department of Fisheries, Ministry of Fisheries has designated the National Fisheries Development Board, Hyderabad as the Nodal Agency under the Central Sector component of PMMSY for implementing River Ranching across the Country.

As a Phase-I programme, NFDB during 2020-21 has targeted major river systems namely the Ganges and its tributaries, Brahmaputra & Barak river tributaries, and Mahanadi & other rivers.

Accordingly, six major Inland states focusing on the length of the river belt namely Uttar Pradesh, Tripura, Chhattisgarh, Odisha, Uttarakhand, and Bihar were selected along with targeted sites for releasing of fish fingerlings.

NFDB sanctioned a total budget of Rs.2.81 crores to ranch 97.16 lakh fingerlings to States as a part of Action plan 2020-21 of Pradhan Mantri Matsya Sampada Yojana PMMSY.

Source:

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1762170>

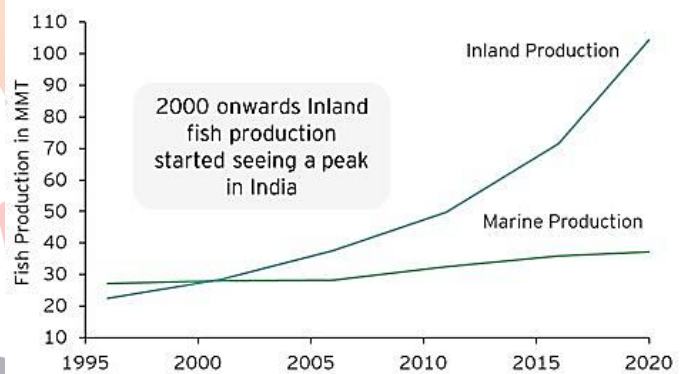
**S322. Ans.(b)**

**Sol.** India is the 3rd largest fish producing and 2nd largest aquaculture nation in the world after China.

The Pradhan Mantri Matsya Sampada Yojana (PMMSY) is a **centrally sponsored** flagship scheme for focused and sustainable development of the fisheries sector in the country with an estimated investment of Rs. 20,050 crores for its implementation during a period of 5 years from FY 2020-21 to FY 2024-25 in all States/Union Territories

It aims to enhance fish production to 220 lakh metric tons by 2024-25 from 137.58 lakh metric tons in 2018-19.

Till 2000, marine fish production dominated India’s total fish production. However, due to the practice of science-based fisheries, Inland fisheries in India have seen a turnaround and presently contribute ~70 % of total fish production.



Source: <https://dof.gov.in/inland-fisheries>

**S323. Ans.(b)**

**Sol.** The National Dairy Development Board was initially registered as a society under the Societies Act 1860 and was launched with the "Operation Flood" in 1965.

It became a statutory body constituted by the National Dairy Development Board Act, 1987.

Currently, It is under the jurisdiction of the Ministry of Fisheries, Animal Husbandry and Dairying NDDB was instrumental in establishing the first Embryo Transfer Technology project in the country in 1987.

Artificial Insemination (AI), in vivo, and in vitro embryo transfer technology (ETT) are the technologies that are crucial for animal breeding and increasing milk production.

Source: <https://www.nddb.coop/about/genesis>  
<https://www.nddb.coop/services/animalbreeding/animalreproduction>  
<https://www.indiacode.nic.in/bitstream/123456789/1913/1/198737.pdf>



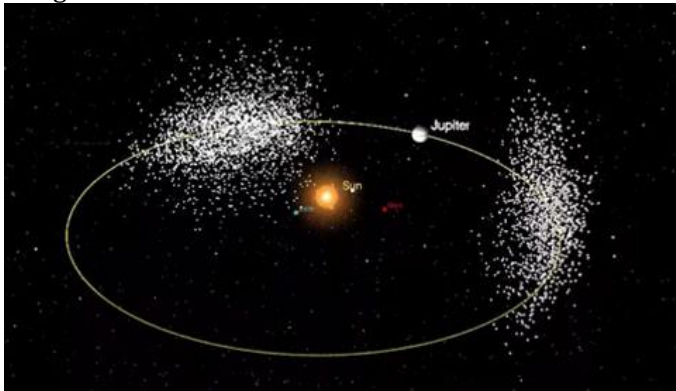
S324. Ans.(a)

**Sol.** The Trojan asteroids are leftovers of the primordial material from which Jupiter and the other outer planets were formed. The Trojan asteroids are said to orbit in the same path as the largest planet in our solar system which is Jupiter. Trojan asteroids “circle the Sun in two swarms, with one group leading ahead of Jupiter in its path, the other trailing behind it.

These space rocks function similar to [time capsules from the earliest days of the solar system](#), about 4.5 billion years ago.

Recently NASA has announced to launch its new mission “Lucy” To study Trojan asteroids.

The Lucy mission could offer new insights into the history of the solar system, including how all of the planets came to be and why they are aligned in their current configuration



Source:

<https://indianexpress.com/article/technology/science/nasa-to-launch-its-lucy-spacecraft-this-week-for-12-year-mission-7565683/>  
<https://www.nbcnews.com/science/space/nasa-lucy-mission-jupiter-trojan-asteroid-rcna2409>

S325. Ans.(b)

**Sol.** The First World Conference on Natural Disasters in [Yokohama](#), Japan from May 23 to 27, 1994, adopted the Yokohama Strategy for a **Safer World: Guidelines for Natural Disaster Prevention, Preparedness and Mitigation and its Plan of Action**, endorsed by the [UN General Assembly](#) in 1994. It was the main outcome of the mid-term review of the International Decade of Natural Disaster Reduction (IDNDR) and provides guidelines for natural disaster prevention, preparedness, and mitigation

Source: <https://www.thehindu.com/opinion/op-ed/stronger-at-the-grassroots/article36884992.ece>

S326. Ans.(b)

**Sol.** Giloy or Guduchi (*Tinospora cordifolia*) is a climbing shrub and an essential herb in Ayurvedic medicine. All its parts are thought to have health benefits.

Ministry of Ayush has recently noticed safety concerns on the use of Guduchi (*Tinospora cordifolia*) that were published in social media and in some scientific journals.

The plant occurs **throughout tropical regions** of India extending from Kumaon to Assam and Myanmar, Bihar, Konkan to Sri Lanka. It is a large climber which grows over the highest trees in the forests.

Source:

<https://www.nmpb.nic.in/sites/default/files/publications/giloe.pdf>  
<https://www.planetaryurveda.com/library/guduchi-giloy-tinospora-cordifolia/>  
[https://medicaldialogues.in/pdf\\_upload/ayush-161593.pdf](https://medicaldialogues.in/pdf_upload/ayush-161593.pdf)  
<https://www.thehindu.com/news/national/giloy-safe-but-be-cautious-of-similar-looking-plants-in-circulation-ayush-ministry/article36899290.ece>

S327. Ans.(a)

**Sol.** Department of Investment and Public Asset Management (DIPAM) deals with all matters relating to the management of Central Government investments in equity including disinvestment of equity in Central Public Sector Undertakings.

The Four major areas of its work are related to Strategic Disinvestment, Minority Stake Sales, Asset Monetisation, and Capital Restructuring. It also deals with all matters relating to the sale of Central Government equity through offer for sale or private placement or any other mode in the erstwhile Central Public Sector Undertakings.

DIPAM is working as one of the Departments under the Ministry of Finance.

Source:

<https://www.thehindubusinessline.com/economy/disinvestment-of-bpcl-shipping-corp-to-be-completed-this-fiscal/article36932183.ece>  
<https://dipam.gov.in/>

S328. Ans.(c)

**Sol.** The Kerala government has recently called off the proposed 163-megawatt Athirappilly hydroelectric power project on the Chalakudy river basin in the Thrissur district.

In 2012, a report by the Western Ghats Ecology Expert Panel (WGEEP) had earlier called the project ‘undesirable’ and [highlighted the threats it would pose](#) to ecology. The subsequent Kasturirangan panel also said it could be carried forward based on its re-evaluation report.

Source:

<https://www.downtoearth.org.in/news/governance/kerala-government-abandons-controversial-athirappilly-hydroelectric-project-amid-widespread-protests-79564>

S329. Ans.(a)

**Sol.** Right to clean, healthy and sustainable environment. In a landmark decision, the UN Human Rights Council has recently recognized, for the first time, that having a clean, healthy, and sustainable environment is a human right.

The Council called on States to work together, and with other partners, to implement this newly recognized right. The resolution on the Human right to a safe, clean, healthy, and sustainable environment was adopted by a vote of 43 in favor, none against, and 4 abstentions. China, India, Japan, and Russian Federation, abstained from voting on the resolution.

The resolution was proposed by five members comprised of Costa Rica, the Maldives, Morocco, Slovenia, and Switzerland. The resolution emphasizes the rights to life, liberty, and security of human rights defenders working in environmental matters, referred to as environmental human rights defenders. The right to a clean environment was rooted in the 1972 Stockholm Declaration,

**Article 48 -A** of the constitution says that “the state shall endeavor to protect and improve the environment and to safeguard the forests and wildlife of the country”.

Source:

<https://www.downtoearth.org.in/news/environment/clean-healthy-and-sustainable-environment-a-universal-right-un-human-rights-council-79624>.

**S330. Ans.(b)**

**Sol. Two pillar solution:**

The OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting (IF) has recently agreed on a two-pillar solution to address the tax challenges arising from the digitalization of the economy. 136 countries including India have signed this historic pact to enforce a minimum corporate tax.

Pillar One aims to ensure a fairer distribution of profits and taxing rights among countries with respect to the largest MNEs, including digital companies. This would entail the reallocation of some taxing rights over MNEs from their home countries to markets where they have a business and earn profits, regardless of whether firms have a physical presence there.

Pillar Two seeks to put a floor on competition over corporate income tax, through a global minimum corporate tax rate that countries can use to protect their tax bases. Pillar Two which was initially proposed to be brought into effect from 2023 has now been deferred to 2024. Background The US loses nearly \$50 billion a year to tax cheats, according to the Tax Justice Network report, with Germany and France also among the top losers. India’s annual loss due to corporate tax abuse is estimated at over \$10 billion

**S331. Ans.(b)**

**Sol.** Unlike the other Nobel prizes, the economics award wasn’t established in the will of Alfred Nobel but by the Swedish central bank in his memory in 1968, with the first winner selected a year later in 1969.

David Card, Joshua D Angrist and Guido W Imbens has won the 2021 Nobel prize for economics for pioneering research on the labour market impacts of minimum wage, immigration and education and for creating the scientific framework to allow conclusions to be drawn from such studies that can’t use traditional methodology.

Source: <https://indianexpress.com/article/world/nobel-prize-winner-2021-economics-7565616/>

**S332. Ans.(b)**

**Sol.** Article 46 in The Constitution Of India deals with the Promotion of educational and economic interests of Scheduled Castes, Scheduled Tribes and other weaker sections.

Under this, The State shall promote with special care the educational and economic interests of the weaker sections of the people, and, in particular, of the Scheduled Castes and the Scheduled Tribes,

The Constitution (**One Hundred and Twenty-Fourth Amendment**) Bill, 2019 was introduced in Lok Sabha in 2019 to provide for the advancement of “economically weaker sections” of citizens and was passed as the **103<sup>rd</sup> constitutional amendment act**.

Article 15 additionally permit the government to provide for the advancement of “economically weaker sections” in addition to socially and educationally backward classes, or for Scheduled Castes and Scheduled Tribes

It also amended Article 16 to permit the government to reserve up to 10% of all posts for the “economically weaker sections” of citizens.

The central government notifies the “economically weaker sections” of citizens on the basis of family income and other indicators of economic disadvantage. Currently this limit has not been linked to any national cost of living. Recently a writ petition has been filed in the Supreme court challenging the 10% reservation to EWS in the all India quota category. The income ceiling for the EWS quota seeking aspirants has been set to 8 lacs as annual income. The supreme court has in return asked the centre to justify the income criteria selected for this beyond looking into other factors like different state per capita income or GSDP or the other economic parameters that could change even within a single State

Source:

<https://www.thehindu.com/news/national/explain-basis-of-fixing-8-lakh-limit-to-determine-ews-category-for-neet-supreme-court-to-centre/article36881374.ece>  
<https://indiankanoon.org/doc/352126/>  
<https://prsindia.org/billtrack/the-constitution-one-hundred-and-twenty-fourth-amendment-bill-2019>

**S333. Ans.(a)**

**Sol.** The primary objective of the monetary policy as per the RBI site is to maintain price stability while keeping in mind the objective of growth.

RBI uses direct tightening tools like MSS (Market stabilisation scheme), CRR hikes, FX swaps or outright OMO sales to suck liquidity from the economy.

A swap auction is being done to increase the supply of rupees in the market. Technically, this activity is termed as a USD/INR buy/sell swap auction

Longer FX Swap auctions i.e for 3 years release durable liquidity in the economy and mitigate the rise in interest rates.

Source:

[https://www.brickworkratings.com/media/BrickworkRatings-FX\\_Swap.pdf](https://www.brickworkratings.com/media/BrickworkRatings-FX_Swap.pdf)

<https://www.goodreturns.in/news/rbi-s-october-monetary-policy-liquidity-management-stance-to-be-key-1226052.html>

**S334. Ans.(d)**

**Sol.** Under the **One Nation, One Grid, One Frequency, One Price**” framework Market-Based Economic Despatch (MBED) was launched by the Central Electricity Regulatory Commission. MBED will ensure that the cheapest generating resources across the country are despatched to meet the overall system demand and will thus be a win-win for both the distribution companies and the generators and ultimately result in significant annual savings for the electricity consumers.

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=1762042>

**S335. Ans.(a)**

**Sol.** The AQEES has been taken up by the Labour Bureau to provide frequent (quarterly) updates about the employment and related variables of establishments, in both organised and unorganised segments of **nine selected sectors employing 10 or more workers**. The Sixth Economic Census (EC) serves as the basis of the QES survey

These sectors altogether account for a majority of the total employment in the non-farm establishments. These nine selected sectors are Manufacturing, Construction, Trade, Transport, Education, Health, Accommodation and Restaurant, IT/ BPO and Financial Services. Of the total employment estimated in the selected nine sectors, Manufacturing accounts for nearly 41 per cent followed by Education with 22 per cent, and Health with 8 per cent. While the QES provides a demand-side picture, the National Sample Survey or Periodic Labour Force Survey (PLFS) gives the supply side picture of the labour market. There are two components under AQEES, Quarterly Employment Survey (QES) and Area Frame Establishment Survey (AFES). Area Frame Establishment Survey (AFES) covers the unorganised segment (with less than 10 workers) through a sample survey

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=1758529>

<https://www.thehindu.com/opinion/op-ed/the-many-questions-arising-from-qes-data/article36932711.ece>

**S336. Ans.(d)**

**Sol. About MPI**

The Multidimensional Poverty Index (MPI) was launched by the UNDP and the OPHI in the year 2010. MPI uses three dimensions and ten indicators including

1. Education: Years of schooling and child enrolment (1/6 weightage each)
2. Health: Child mortality and nutrition (1/6 weightage each)
3. Standard of living: Electricity, drinking water, flooring, sanitation, cooking fuel and assets (1/18 weightage each)

**Indian Scenario**

The Scheduled Tribe group in India, which accounts for 9.4 per cent of the population, is the poorest. Out of 129 million people, 65 million are living in multidimensional poverty.

Source: <https://www.undp.org/press-releases/poverty-index-reveals-stark-inequalities-among-ethnic-groups>

**S337. Ans.(c)**

**Sol.** Pusa Decomposer is a mix of seven fungi that produce enzymes to digest cellulose, lignin and pectin in paddy straw.

**Benefits of Pusa decomposer:**

The fungi which make this pusa decomposer, thrive at 30-32 degrees Celsius, which is the temperature prevailing when paddy is harvested and wheat is sown.

One important element of soil quality is organic carbon content which is present in the stubble and with decomposition is fixed back in the soil, making it extremely fertile and rich. This solution can be deployed at 1/4th- 1/5th cost of other alternative solutions like happy seeder or manual labour which cost Rs 3,000-4,000/acre, while spraying just costs Rs 600/acre which makes it very economical

Source: <https://theprint.in/india/how-an-agritech-firm-is-helping-haryana-punjab-farmers-use-bio-decomposer-to-curb-stubble-burning/748295/>

**S338. Ans.(c)**

**Sol.** Hot Springs (traditional name: Kyam) is a campsite and the location of an Indian border checkpost in the Chang Chenmo River valley in Ladakh near the disputed border with China. It is so named because there is a hot spring at this location. The Line of Actual Control near Kongka Pass is only 3 kilometres to the east of it in Ladakh itself.

**Chang Chenmo River** or **Changchenmo River** is a **tributary** of the **Shyok River**, part of the **Indus River** system.

Source: <https://www.hindustantimes.com/india-news/hot-springs-conflict-what-india-and-china-are-discussing-in-13th-round-of-lac-talks-101633841831640.html>

**S339. Ans.(b)**

**Sol.** BepiColombo is a joint mission of the European Space Agency (ESA) and the Japan Aerospace Exploration Agency (JAXA) to the planet Mercury. The mission comprises two satellites launched together: the Mercury Planetary Orbiter (MPO) and Mio (Mercury Magnetospheric Orbiter, MMO).[5] The mission will perform a comprehensive study of Mercury, including characterization of its magnetic field, magnetosphere, and both interior and surface structure. It was launched on an Ariane 5 rocket on 20 October 2018, with arrival at Mercury planned for 5 December 2025,

Source: <https://www.nature.com/articles/d41586-021-02685-2>

**S340. Ans.(c)**

**Sol.** The Lukha river is in the East Jaintia Hills district where most of Meghalaya's coal mines are located. The government in 2019 initiated a pilot project to rejuvenate the Lukha River by using algae to remove the toxic contents from water — a process called phytoremediation.

Phycoremediation has finally improved the pH level of Lukha River a recent report showed.

Source:

<https://www.thehindu.com/news/national/other-states/detoxing-pilot-project-has-brought-a-river-back-from-dead-meghalaya/article36926683.ece>

**S341. Ans.(c)**

**Sol.** Initial studies revealed that the host rock was mainly composed of olivine, an olive-green mineral. Olivine is the most abundant phase in our Earth's upper mantle. By studying the composition of these meteorite fragments, researchers have unraveled the composition expected to be present in the Earth's lower mantle.

Studying the meteorite could also tell us more about how our Earth evolved from being a magma ocean to a rocky planet.

During planetary formation, metal sinks to the center of the body, while lighter material forms a rocky crust and mantle around the outside. So it can let us know that how Earth which was an ocean of magma before the elements crystallized and stabilized, the different layers such as core, mantle were formed. It can let us know how the heavier elements like iron went to the core while the lighter silicates stayed in the mantle. **(Statement 2 is wrong mostly heavy metals like iron are present in the core)**

Source:

<https://indianexpress.com/article/explained/how-an-indian-meteorite-helped-study-earths-formation-7563160/>

**S342. Ans.(b)**

**Sol.** The [Organization for Economic Cooperation and Development](#) (OECD) has recently announced that—effective in 2023—its members have agreed to set a [global corporate minimum tax rate](#) of 15%.

The rate set at 15% will not be raised. Corporations are to pay tax wherever they operate, not just in the HQ country. A total of 136 countries, including India, have agreed to join the historic agreement. This will help reallocate profits of over \$125 billion from over 100 large MNEs to help ensure companies pay a fair share of tax in the countries they operate in. It will also help in Base Erosion and Profit Shifting (BEPS), the tax avoidance strategies which Multinational Corporations (MNCs) employ for reducing their tax bases.

BEPS project was launched by the Organisation for Economic Co-operation and Development (OECD).

Source: <https://www.investopedia.com/global-agreement-reached-on-minimum-corporate-tax-rate-5205235>

**S343. Ans.(c)**

**Sol.** 6G (sixth-generation wireless) is the successor to 5G cellular technology. 6G networks will be able to use higher frequencies than 5G networks and will provide substantially higher capacity with much lower latency.

6G is expected to support data rates of 1 terabyte per second 6G is expected to be 50 times faster than 5G.

On November 6, 2020, China became the first country in the world to successfully launch an experimental test satellite with candidates for 6G technology into orbit, along with 12 other satellites, using a Long March 6 launch vehicle rocket. The satellite is intended to "verify the terahertz (THz) communication technology in space"

**6G applications:**

Threat detection, Health monitoring, Feature, and facial recognition, Decision-making in areas like law enforcement and social credit systems, Air quality measurements, and Gas and toxicity sensing.

Source: <https://www.adda247.com/upsc-exam/6g-technology-in-india/>

**S344. Ans.(a)**

**Sol.** Lok Adalat means ' People's Court ' .This system is based on Gandhian principles.

Lok Adalat is one of the alternative dispute redressal mechanisms where disputes or cases pending in the court of law or at the pre-litigation stage are compromised amicably.

Under the said Act, the award made by the Lok Adalats is deemed to be a decree of a civil court and is final and binding on all parties and no appeal against such an award lies before any court of law. If the parties are not satisfied with the award of the Lok Adalat, there is no provision for an appeal against such an award, however, they are free to initiate litigation by approaching the court of appropriate jurisdiction.

Source: <https://nalsa.gov.in/lok-adalat>  
<https://www.adda247.com/upsc-exam/jurisdiction-of-lok-adalat/>

**S345. Ans.(c)**

**Sol.** It is a Paris-based autonomous intergovernmental organization established in the framework of the Organisation for Economic Co-operation and Development (OECD) in 1974 in the wake of the 1973 oil crisis., India became an associate member of IEA in In March 2017.

Recently The International Energy Agency (IEA) has invited India, the world's third-largest energy consumer, to become its full-time member.

The proposal if accepted will require GoI to raise strategic oil reserves to 90 days requirement. India's current strategic oil reserves equal 9.5 days of its requirement.

**The International Energy Agency** has also released the Global Energy Review report 2021 recently. According to the report, the Carbon Dioxide emissions in India is to be 1.4% higher than the levels recorded in 2019. The coal-fired power generation is to increase by three times higher than the increase in generation from renewables. The coal demand is expected to increase by 9%.

Source: [https://www.business-standard.com/article/economy-policy/international-energy-agency-invites-india-to-become-full-time-member-puri-121101100989\\_1.html](https://www.business-standard.com/article/economy-policy/international-energy-agency-invites-india-to-become-full-time-member-puri-121101100989_1.html)

**S346. Ans.(c)**

**Sol.** It is an industry body consisting of various stakeholders of the Indian space domain. The members of the organization include government bodies such as the Indian Space Research Organisation (ISRO) and private telecom companies.

The Indian Space Association (ISpA) is currently headed by **Jayant Patil**, senior executive vice president - Defence, L&T-NxT as its chairman, and Bharti Airtel's chief regulatory officer Rahul Vatts as its vice-chairman, while Lt Gen. A.K. Bhatt (Retd.) has been appointed as the director-general of the association.

One of the main goals of the organization is to supplement the government's efforts towards making India a global leader in commercial space-based excursions. Of late, ISRO's rockets have been carrying the payload and communication satellites of various countries; now, private players will also look to broach this space with the new organization.

Source: <https://indianexpress.com/article/explained/indian-space-association-narendra-modi-7565248/>  
<https://economictimes.indiatimes.com/tech/tech-bytes/pm-modi-launches-indian-space-association-says-it-is-time-for-exponential-innovation/articleshow/86933819.cms>

**S347. Ans.(c)**

**Sol.** NITI Aayog and UNDP India have recently launched a handbook to promote the sustainable management of plastic waste in the country.it has issued guidelines for the complete functioning of a material recovery facility (MRF), to improve waste management beginning from site identification, construction, and waste processing mechanisms at the MRF.

Material recovery facility (MRF), is a specialized plant that receives, separates, and prepares recyclable materials for marketing to end-user manufacturers.

Source: <https://www.adda247.com/upsc-exam/niti-aayog-handbook-on-sustainable-plastic-management/>

**S348. Ans.(b)**

**Sol.** Recently launched by NITI Ayog, the aim of the Shoonya initiative is to accelerate the adoption of electric vehicles (EVs) in the urban deliveries segment and create consumer awareness about the benefits of zero-pollution delivery.

Source: <https://www.india.com/news/india/niti-aayog-launches-shoonya-program-to-promote-zero-pollution-delivery-vehicles-4959396/>

**S349. Ans.(b)**

**Sol.** The **G20 developing nations** is a **bloc** of **developing nations** established on 20 August 2003.

Its origins date back to June 2003, when foreign ministers from **Brazil**, **India**, and **South Africa** signed a declaration known as the **Brasilia Declaration**, on June 6, 2003, for the reversal of protectionist policies and trade-distorting practices, especially in agriculture.

At the Cancún Ministerial in the same year, 2003 twenty countries proposed an alternative framework to that of the **European Communities** EC and the US on agriculture, Which eventually led to the formation of G-20

Source: <https://indianexpress.com/article/india/pm-modi-g20-summit-afghanistan-terrorism-humanitarian-aid-7568543/>

**S350. Ans.(c)**

**Sol.** Recently, the second edition of the Ecological Threat Register Report was released by the Institute of Economics and Peace where it has alarmed that 1.26 billion people are at the highest risk of conflict and displacement caused by environmental damage.

The Ecological Threat Report 2021 has found that more than 1.26 billion people live in 30 hotspot countries, suffering from both extreme ecological risk and low levels of resilience. These countries are least likely to be able to mitigate and adapt to new ecological threats, which are likely to cause mass displacement.

The main finding from the report is that a cyclic relationship exists between ecological degradation and conflict. It is a vicious cycle, whereby degradation of resources leads to conflict, leading to further resource degradation. Eleven of 15 countries with the worst environmental threat scores are currently classified as being in conflict.

Source: <https://www.adda247.com/upsc-exam/ecological-threat-report-2021/>  
<https://www.downtoearth.org.in/news/governance/around-1-3-billion-people-at-high-risk-of-conflict-and-displacement-report-79613>

**S351. Ans.(b)**

**Sol.** 1. Scientists have considered the possibility of the creation of Intermediate-mass black holes through **mechanisms** involving the collapse of a single star, but there may be little chance of observing such a high-mass supernova remnant. Recent theories suggest that such massive stars which could lead to the formation of intermediate-mass black holes may form in young star clusters via multiple stellar collisions.

A recent theory has suggested that the black holes existing among a dense cluster of stars, the remnant (of a black hole) of a merger can pair up with another black hole close by to form a binary. This can eventually merge to form a second remnant which is more massive. This process, happening in a hierarchical manner, lead to the intermediate-mass black hole formation.

2. Some examples of events that could cause a gravitational wave are:

- when a star explodes asymmetrically (called a supernova)
- when two big stars orbit each other
- when two black holes orbit each other and merge

source: <https://spaceplace.nasa.gov/gravitational-waves/en/>  
<https://www.thehindu.com/sci-tech/science/mergers-of-black-holes-and-kicks-that-hold-a-key-to-puzzles/article36918766.ece>

**S352. Ans.(b)**

**Sol.** Established in 1984 the Centre for Development of Telematics (C-DOT ) is an autonomous body and a premier telecom R&D center of the Department of Telecommunications, under **the Ministry of Communications.**

**It has recently** unveiled an indigenously developed Quantum Key Distribution (QKD) solution, which can support a distance of more than 100 kilometers on standard optical fiber.

It has made C-DOT become the first organization in India to offer a complete portfolio of indigenous Quantum Secure telecom products and solutions to comprehensively address the requirements of telecom service providers as well as strategic and defense sectors in India.

Source: [https://www.domainb.com/technology/20211011\\_launches.html](https://www.domainb.com/technology/20211011_launches.html)

**S353. Ans.(b)**

**Sol.** In 1900 the physicist Max Planck suggested that light was emitted in small, discrete “packages” called quanta. Quantum communication involves encoding information in quantum states, or **qubits**, as opposed to classical communication's use of **bits**. Usually, **photons** are used for these quantum states. Quantum key distribution exploits certain properties of these quantum states to ensure their security.

But the Quantum key distribution is also vulnerable to many attacks some of which examples include :

- Man-in-the-middle attack
- Photon number splitting attack
- Denial of service
- Trojan-horse attack

Source:

[https://www.chalmers.se/en/news/Documents/quantum\\_technology\\_popdescr\\_171114\\_eng.pdf](https://www.chalmers.se/en/news/Documents/quantum_technology_popdescr_171114_eng.pdf)  
[https://en.wikipedia.org/wiki/Quantum\\_key\\_distribution](https://en.wikipedia.org/wiki/Quantum_key_distribution)  
<https://www.nature.com/articles/s41598-017-08279-1>

**S354. Ans.(c)**

**Sol.** The National Green Tribunal has been established on 18.10.2010 under the National Green Tribunal Act 2010 functioning under the administrative aegis of the **Ministry of Environment & Forests and climate change.**

1. The Tribunal is mandated to make and endeavor for disposal of applications or appeals finally within 6 months of the filing of the same
2. The Tribunal is guided by principles of natural justice and not bound by the procedure under the Code of Civil Procedure, 1908 or the Indian Evidence Act, 1872.
3. However, the Tribunal is vested with the powers of a civil court under the Code of Civil Procedure for discharging its functions.
4. The Tribunal has framed its own rules since applications to the tribunal are inherently distinct from civil suits or writ petitions.

Source: <https://greentribunal.gov.in/about-us>  
<https://www.thehindu.com/news/national/national-green-tribunal-neednt-wait-for-godot-to-save-environment-supreme-court/article36949110.ece>

**S355. Ans.(b)**

**Sol.** Geo-heritage refers to the geological features which are inherently or culturally significant offering insight to earth's evolution or history to earth science or that can be utilized for education.

The Digne resolution of UNESCO launched in the 1990s facilitated the efforts to create a formal program promoting a global network of geoheritage sites. These were intended to complement the World Heritage Convention and the UNESCO Man and the Biosphere program. UNESCO provided guidelines for developing national geo-parks so that they become part of the Global Geoparks Network.

Today, there are 169 Global Geoparks across 44 countries.

Source: <https://www.thehindu.com/opinion/op-ed/protecting-indias-natural-laboratories/article36951846.ece>

S3856. Ans.(d)

**Sol.** Superconductors are materials that conduct electricity without resistance. The most promising technologies for building a quantum computer are superconducting circuits using Superconducting qubits which consist of electric circuits without any electrical resistance (= superconducting), where the energy switches between being electric and magnetic.

Massachusetts Institute of Technology Researchers have recently developed a superconducting nanowire that could enable efficient, easy-to-make electronics. The advance could boost quantum computing, as well as magnetic sensors for applications in brain imaging and telescopes

The development of quantum sensors based on QKD technology s will lead to more powerful instruments for measuring electric and magnetic fields both in our environment and inside our bodies. We can also expect to have instruments that can measure local variations in gravitation to find minerals, water, or embedded pipelines and advanced warning systems for earthquakes and volcanic eruptions

Source:

[https://www.chalmers.se/en/news/Documents/quantum\\_technology\\_popdescr\\_171114\\_eng.pdf](https://www.chalmers.se/en/news/Documents/quantum_technology_popdescr_171114_eng.pdf)

S357. Ans.(d)

**Sol.** The Graded Response Action Plan is a set of institutional measures that are to be adopted when the air quality deteriorates in Delhi, Uttar Pradesh, Haryana, and Rajasthan (NCR areas). **(Statement 1 is the wrong Delhi is three-sided bounded by Haryana and the other side by UP)**

It is just an emergency measure. As such, the plan does not include action by various state governments to be taken throughout the year to tackle industrial, vehicular, and combustion emissions.

Prepared by Environment Pollution (Prevention and Control) Authority(EPCA), GRAP aims to prevent Particulate Matter PM 10 and PM 2.5 go beyond “moderate” Air Quality Index. But **statement 2 is wrong as it can't be invoked if the air quality changes for a very short duration of time.** GRAP kicks in only when pollution is moderate to poor instead of starting when the air is good or satisfactory because it is an emergency plan. Moreover, The plan is incremental in nature i.e If air quality reaches the ‘Severe+’ stage, the response under GRAP includes extreme measures such as shutting down schools and implementing the odd-even road-space rationing scheme. So it is not possible to evoke GRAP every single time when air quality deteriorates to specific levels.

Source:

<https://indianexpress.com/article/explained/explained-what-is-grap-delhi-ncrs-action-plan-as-air-pollution-increases-6719746/>.

S358. Ans.(b)

**Sol.** Ministry of Rural Development has recently launched the Climate Resilience Information System and Planning (CRISP-M) tool.

It aims for the integration of climate information in Geographic Information System (GIS) based watershed planning under Mahatma Gandhi NREGA.

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=1763668>

S359. Ans.(d)

**Sol.** India Post has recently launched the e-PLI bond, a digital version of PLI policy bonds. ePLI bond It is made available in collaboration with Digilocker, National eGovernance Division (NeGD), Ministry of Electronics & IT (MeitY) Government of India. DigiLocker has been providing a secure cloud-based platform for storage, sharing, and verification of documents & certificates for various organizations. By securely logging in to the Digilocker, the user can download the digital copy of the Policy bond on their mobile phone. Both the Postal Life Insurance (PLI) as well as the Rural Postal Life Insurance (RPLI) policy bonds are available in the ‘electronic form’.

Source: <https://news.cleartax.in/epli-bond-to-ease-the-process-of-claiming-settlements/7186/>

S360. Ans.(a)

**Sol.** Recently a new cicada species *Platyomia kohimaensis* has been found in the Naga Hills, Nagaland.

Cicadas are hemipteran insects known for their loud, complex, and species-specific acoustic signals or songs. The generic diversity of cicadas in India and Bangladesh ranks the highest in the world, followed by China. Most cicadas are canopy dwellers and are found in natural forests with large trees.

Source: <https://www.downtoearth.org.in/news/wildlife-biodiversity/new-cicada-species-in-nagaland-underscores-need-for-conservation-79655>

**S361. Ans.(a)**

**Sol.** Silicosis occurs most commonly as an occupational disease in people working in the quarrying, manufacturing, and building construction industries.

It is a progressive lung disease caused by the inhalation of silica over a long period of time.

The prevalence of silicosis in India ranges widely from 3.5% in ordnance factories to 54.6% in the slate-pencil industry.

It is a notified disease in Section 25 of the Mines Act, 1952 and Factory act 1948.

Factory act 1948 has been subsumed in the Occupational Safety, Health and Working Conditions (OSHC) Code, 2020 where it is classified as a notified occupational disease under Section 12 of the now-effective law.

**Note:**

**The Occupational Safety, Health And Working Conditions Code, 2020** is a [code](#) to consolidate and amend the laws regulating the [Occupational safety and health](#) and [working conditions](#) of the persons employed in an establishment. It amalgamated [The Factories Act, 1948](#), The Plantations Labour Act, 1951, The Mines Act, 1952, and a total of 13 labor laws.

Source: <https://www.nhp.gov.in/disease/non-communicable-disease/silicosis>  
[https://labour.gov.in/sites/default/files/OSH\\_Gazette.pdf](https://labour.gov.in/sites/default/files/OSH_Gazette.pdf)

**S362. Ans.(d)**

**Sol.** In the third schedule of The Occupational Safety, Health, and Working Conditions Code, 2020 all of the mentioned diseases are listed as notified occupational diseases.

Asbestosis is a chronic fibrotic lung disease that results from the long-term inhalation of respirable asbestos fibers. Silicosis is a respiratory disease caused by the inhalation of silica dust that leads to inflammation and then scarring of the lung tissue.

Byssinosis is a **disease of the lungs**. It is caused by breathing in cotton dust or dusts from other vegetable fibers such as flax, hemp, or sisal while at work.

Anthrax is primarily a **zoonotic disease in herbivores caused** by a bacterium called Bacillus anthracis. Humans generally acquire the disease directly or indirectly from infected animals, or through occupational exposure to infected or contaminated animal products

Source: [https://labour.gov.in/sites/default/files/OSH\\_Gazette.pdf](https://labour.gov.in/sites/default/files/OSH_Gazette.pdf)

**S363. Ans.(d)**

**Sol.** It was released by German Watch. The Global Climate Risk Index (2021) ranked India the seventh-most affected country by weather extremes. It has been topped by Mozambique.

**TEN WORST-AFFECTED COUNTRIES DUE TO EXTREME WEATHER EVENTS IN 2019**



**CUMULATIVE GLOBAL FIGURES FOR PAST 20 YEAR (2000-2019)**

Lives lost:	No. of extreme weather events:	Financial loss (in PPP):
4,75,000	11,000	\$2.56 trillion

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Source: <https://www.thehindu.com/opinion/op-ed/tackling-the-climate-crisis/article36955377.ece>  
<https://timesofindia.indiatimes.com/india/india-among-top-10-worst-hit-countries-due-to-extreme-weather-events-says-a-global-report-on-climate-risk-index/articleshow/80453389.cms>

**S364. Ans.(a)**

**Sol.** Context: Recently, the Ministry of Environment and Climate Change has issued draft rules for the regulation of extended producer responsibility (EPR) under plastic waste management rules 2016

India first introduced EPR to manage electronic waste in 2012. It extended EPR to plastic manufacturers after the Plastic Waste Management Rules 2016 (PWMR) were notified in 2016. The PWMR made producers and importers of plastic as well as brand owners that use plastic for packaging accountable for managing the end waste.

Source: [https://www.business-standard.com/article/current-affairs/govt-releases-new-plastic-waste-management-norms-how-they-fall-short-120100500310\\_1.html](https://www.business-standard.com/article/current-affairs/govt-releases-new-plastic-waste-management-norms-how-they-fall-short-120100500310_1.html)  
<https://www.thehindu.com/sci-tech/energy-and-environment/centre-announces-plastic-waste-recycling-targets/article36973023.ece>

**S365. Ans.(d)**

**Sol.** The Conference on Interaction and Confidence-Building Measures in Asia (CICA) is an inter-governmental forum for enhancing cooperation towards promoting peace, security, and stability in Asia.

The idea of creating the organization was first voiced by Kazakhstan's First President Nursultan Nazarbayev in 1992 at the 47th session of the United Nations General Assembly, while the first CICA summit was held in June of 2002.



The CICA Secretariat has been located in Almaty (Kazakhstan) since June 2006.

Source:

<https://www.thehindu.com/news/national/peace-in-south-asia-not-possible-without-resolution-of-kashmir-issue-says-pak-foreign-minister/article36975652.ece>  
<https://astanatimes.com/2021/10/cica-sixth-ministerial-meeting-kicks-off-in-nur-sultan/>

**S366. Ans.(d)**

**Sol.** PM Gati Shakti National Master Plan has been launched to provide multi-modal connectivity infrastructure to various economic zones with the tag line 'Gati se Shakti' will include projects under existing flagship schemes of different ministries such as Bharatmala, Sagarmala, Udaan, expansion of railway network, inland waterways and Bharat Net by which means providing 4G connectivity in all villages.

The national master plan has fixed targets up to 2024-25 for all infrastructure ministries.

In Civil Aviation, the target is to double the existing aviation footprint to have a total of 220 airports, heliports, and water aerodromes by 2025.

The gas pipeline network in the country is aimed to be doubled to 34,500 km by 2024-25.

All the concerned projects will be mapped on a centralized interface. Forests, eco-sensitive zones, archaeological sites, and land needs will be among the factors which are to be mapped on it.

Source: <https://www.firstpost.com/india/prime-minister-narendra-modi-to-launch-pm-gati-shakti-national-master-plan-today-10047441.html>

<https://www.moneycontrol.com/news/business/economy/explained-the-need-for-pm-gati-shakti-national-master-plan-7577241.html>

<https://timesofindia.indiatimes.com/india/for-better-infra-coordination-pm-modi-to-unveil-gati-shakti-masterplan-today/articleshow/86984359.cms>

**S367. Ans.(c)**

**Sol.** Recently, the Kunming Declaration was adopted by over 100 countries at the ongoing 15th Conference of the Parties to the United Nations Convention on Biological Diversity in China.

It adopted a resolution to Ensure the development, adoption, and implementation of an effective post-2020 global biodiversity framework, that, to reverse the current loss of biodiversity and ensure that biodiversity is put on a path to recovery by 2030 at the latest, towards the full realization of the 2050 Vision of "Living in Harmony with Nature";

Source: <https://www.cbd.int/doc/press/2021/pr-2021-10-13-cop15-hls-en.pdf>

<https://www.reuters.com/world/china/countries-adopt-kunming-declaration-boost-biodiversity-china-says-2021-10-13/>

**S368. Ans.(b)**

**Sol.** A unique, lesser-known fish species the *Hoplosebastes Armatus* which was till now thought to be found only in the Pacific Ocean has been recently found in the Indian Ocean too.

*Hoplosebastes Armatus*, also known as the flower scorpionfish, belongs to the order of ray-finned fish that is also known as *Scorpaeniforme*. The *Hoplosebastes Armatus* was discovered in the Pacific Ocean off Japan almost a century ago in 1929. The species had not been found in the Indian Ocean. That is till two specimens of *Hoplosebastes* were collected by scientists from the harbor of Digha in West Bengal's Purba Medinipur on February 12, 2019.



Source: <https://www.downtoearth.org.in/news/wildlife-biodiversity/fish-species-found-only-in-the-pacific-discovered-in-the-bay-of-bengal-79691>

**S369. Ans.(c)**

**Sol.** The Department of Public Enterprises (DPE), Ministry of Finance is the nodal department for all the Central Public Sector Enterprises (CPSEs) and classifies them Maharatna, Navratna, or Miniratna status to them.

Recently the Centre has accorded the prestigious 'Maharatna' status to the state-owned Power Finance Corporation Ltd (PFC).it Becomes the 11th public sector enterprise to get the status in the country

Source:

<https://www.thehindubusinessline.com/companies/power-finance-corporation-gets-maharatna-status/article36966908.ece>

**S370. Ans.(b)**

**Sol.** *Recently* The Centre has accorded the prestigious 'Maharatna' status to the state-owned Power Finance Corporation Ltd (PFC).it has now become the 11th public sector enterprise to get this status in the country.

**Criteria for grant of Maharatna status to CPSEs**

The CPSEs meeting the following criteria are eligible to be considered for grant of Maharatna status.

- i. Having Navratna status

- ii. Listed on Indian stock exchange with minimum prescribed public shareholding under SEBI regulations
- iii. An average annual turnover of more than Rs. 25,000 crore during the last 3 years
- iv. An average annual net worth of more than Rs. 15,000 crore during the last 3 years
- v. An average annual net profit after tax of more than Rs. 5,000 crore during the last 3 years
- vi. Should have a significant global presence/international operations.

vii. Source: <https://www.thehindubusinessline.com/companies/power-finance-corporation-gets-maharatna-status/article36966908.ece>

viii. <https://pib.gov.in/PressReleasePage.aspx?PRID=1594624>

**S371. Ans.(b)**

**Sol.** Context: The latest IHS Markit India Manufacturing Purchasing Managers' Index (PMI) survey showed that the headline index stood at **53.7 in September**, up from 52.3 in August. A bounce back in new orders and output sub-components of the PMI aided the up move in the headline index.

The PMI is based on five major survey areas: **new orders, inventory levels, production, supplier deliveries, and employment.**

Source: <https://www.livemint.com/market/mark-to-market/rebound-in-india-s-manufacturing-sector-pmi-offers-little-comfort-11633282881604.html>  
<https://www.investopedia.com/terms/p/pmi.asp>

**S372. Ans.(b)**

**Sol.** The 42nd Amendment to the Indian Constitution of 1976 moved forests from the State List to the **Concurrent List** of the Constitution.

Forest Conservation Act (FCA), 1980 deals with four categories of forests- **reserved forests, village forests, protected forests, and private forests.**

Under the provisions of this Act, **prior approval of the Central Government** is required for the diversion of forestlands for non-forest purposes.

1. **Reserved Forests:** Reserve forests are the most restricted forests and are constituted by the State Government on any forest land or wasteland which is the property of the Government.

2. **Protected Forests:** The State Government is empowered to constitute any land other than reserved forests as protected forests over which the Government has proprietary rights and the power to issue rules regarding the use of such forests.

3. **Village forest:** Village forests are the ones in which the State Government may assign to 'any village community the rights of Government to or over any land which has been constituted a reserved forest'.

Source: <https://www.thehindu.com/sci-tech/energy-and-environment/explainer-what-are-the-proposed-amendments-to-the-forest-conservation-act-about/article36840926.ece>

**S373. Ans.(d)**

**Sol.** Recently, Global Hunger Index 2021 was released by Concern Worldwide and Welt Hunger Hilfe India has been ranked at 101 in the Global Hunger Index Report (GHI) for 2021, down from 94 in the previous year.

GHI indicators The GHI score is based on four indicators— undernourishment; child wasting or the share of children under the age of five who have low weight for their height, reflecting acute undernutrition; child stunting or the number of under-5 children who have low height for their age, reflecting chronic undernutrition; and child mortality.

Source: <https://www.adda247.com/upsc-exam/global-hunger-index-2021/>

**S374. Ans.(d)**

**Sol.** Tamil Nadu's Karuppur kalamkari paintings and the Kallakurichi wood carvings are the latest artistic creation to have earned the distinction of geographical indication (GI) tags. The artistic creations are both traditional in the sense they are made on a cotton cloth piece with pens and brushes made up of bamboo tree and coconut tree stems. The wood carving is characterized by traditional designs drawn on temple-related items and furniture.

Tamil Nadu Handicrafts Development Corporation (Poompuhar) moved the application to register the Karuppur kalamkari paintings for the GI tag. The tag for the Kallakurichi wood carvings was jointly applied by the Kallakurichi Wood Carving Handicrafts Industrial Cooperative Limited Society and the Chinnasalem and Vriksha Association of Wood Carving Artisans self-help group.

Source: <https://www.news18.com/news/buzz/karuppur-kalamkari-paintings-kallakurichi-wood-carvings-of-tamil-nadu-get-gi-tags-4317704.html>

**S375. Ans.(b)**

**Sol.** The International Energy Agency (IEA) has recently published its World Energy Outlook 2021 (WEO) report. The goal of the report is to assess progress made by countries on their clean energy transitions ahead of the 26th Conference of Parties meeting in Glasgow next month. Investment in Clean Energy: The report mentioned that to achieve the Paris Agreement's 1.5-degree goal, investments in clean energy must reach \$4 trillion by 2030, 70% of which will focus on developing countries

Source: <https://www.iea.org/reports/world-energy-outlook-2021>

**S376. Ans.(b)**

**Sol.** The Commission for Air Quality Management was formed by an ordinance in October 2020, the “Commission for Air Quality Management (CAQM) in National Capital Region and Adjoining Areas Ordinance 2020”

States under Its jurisdiction are **is Delhi, Haryana, Punjab, Rajasthan, and Uttar Pradesh**

Chairperson: To be chaired by a government official of the rank of Secretary or Chief Secretary. The Commission will supersede bodies such as the central and state pollution control boards of Delhi, Punjab, Haryana, UP, and Rajasthan. It will have the power to issue directions to these state governments on issues pertaining to air pollution.

Source:

<https://www.thehindu.com/news/national/significant-decrease-in-stubble-burning-events-in-punjab-haryana-and-ncr-districts-of-uttar-pradesh/article37002419.ece>

**S377. Ans.(d)**

**Sol.** India has recently been re-elected to U.N. Human Rights Council for the 2022-24 term India got 184 votes in the 193-member assembly, while the required majority was 97

The UNHCR Council has 47 members elected for staggered three-year terms on a regional group basis. The headquarters of the Council is in Geneva, Switzerland.

The members of the Council shall serve for a period of three years and shall not be eligible for immediate re-election after two consecutive terms. The membership is based on equitable geographical distribution, and seats are distributed among regional groups Group of African States (13), Group of Asia-Pacific States (13), Group of Eastern European States (6), Group of Latin American and Caribbean States (8) and Group of Western European and other States (7).

Source:

<https://www.thehindu.com/news/national/india-gets-re-elected-to-un-human-rights-council-for-2022-24-term/article36999783.ece?homepage=true>

**S378. Ans.(a)**

**Sol.** The protection of geo-heritage sites requires legislation. Unfortunately, India does not have any legislation or policy for the conservation of geoheritage parks. Though the Geological Survey of India (GSI) has identified 32 sites as National Geological Monuments, there is not a single geo-park in India that is recognized by UNESCO. This is even though India is a signatory to the establishment of UNESCO Global Geoparks.

**S379. Ans.(c)**

**Sol.** The BSF is a central armed police force (CAPF) that functions under the Union government. It was raised in 1965 in the aftermath of the India-Pakistan war.

the BSF is deployed along the **Pakistan and Bangladesh borders**. It is also deployed in areas affected by **Left Wing Extremism (LWE)** and is routinely deployed for election and other law and order duties at the request of State governments.

The violations against which the BSF carries out search and seizure include smuggling of narcotics, prohibited items, illegal entry of foreigners, and offenses punishable under any other Central Act.

**The BSF does not have police powers;** after apprehending a suspect it can only conduct “preliminary questioning” and has to hand over a seized consignment or the suspect to the local police within 24 hours. It does not have the power to prosecute crime suspects. **Police is a State subject under the Constitution.**

Source:

<https://www.thehindu.com/news/national/explain-d-enhanced-powers-of-border-security-force/article37006209.ece>

**S380. Ans.(a)**

**Sol. Salient features of India’s INDC**

- To put forward and further propagate a healthy and sustainable way of living based on traditions and values of conservation and moderation.
- To adopt a climate-friendly and cleaner path than the one followed hitherto by others at the corresponding level of economic development.
- To reduce the emissions intensity of its GDP by 33 to 35 percent by 2030 from the 2005 level.
- To achieve about 40 per cent cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030, with the help of the transfer of technology and low-cost international finance, including from Green Climate Fund.
- To create an additional carbon sink of 2.5 to 3 billion tonnes of CO<sub>2</sub> equivalent through additional forest and tree cover by 2030.
- To better adapt to climate change by enhancing investments in development programs in sectors vulnerable to climate change, particularly agriculture, water resources, Himalayan region, coastal regions, health, and disaster management.
- To mobilize domestic and new and additional funds from developed countries to implement the above mitigation and adaptation actions in view of the resource required and the resource gap.
- To build capacities, create a domestic framework and international architecture for quick diffusion of cutting edge climate technology in India and for joint collaborative R&D for such future technologies.

Source:

<https://www.thehindu.com/news/national/morning-digest-october-12-2021/article36956541.ece>  
<https://vikaspedia.in/energy/environment/climate-change/indias-intended-nationally-determined-contribution>

**S381. Ans.(a)**

**Sol.** Context: Recently China has reportedly tested a nuclear-capable hypersonic missile.

The hypersonic missile is a vehicle that achieves a speed five times faster than the speed of sound, crossing Mach 5. They can travel much faster than current nuclear-capable ballistic and cruise missiles at low altitudes, can switch direction in flight, and do not follow a predictable arc like conventional missiles, making them much harder to track and intercept.

Hypersonic weapons use two main types are hypersonic [cruise missiles](#) and hypersonic [glide vehicles](#). But most hypersonic vehicles primarily use scramjet technology.

Hypersonic weapons, which are powered by [scramjet](#), are limited to below 100,000 feet (30,000 m); hypersonic glide vehicles can travel higher. Compared to a ballistic (parabolic) trajectory, a hypersonic vehicle would be capable of large-angle deviations from a parabolic trajectory and is difficult to intercept on the radar.

Source:

<https://www.indiatoday.in/science/story/explained-what-is-hypersonic-glide-missile-that-china-likely-tested-1866049-2021-10-18>  
<https://indianexpress.com/article/explained/chinas-hypersonic-glide-vehicle-test-7577005/>

**S382. Ans.(d)**

**Sol.** The Department of Biotechnology (DBT), Ministry of Science and Technology, GoI has recently supported a mega consortium on 'One Health'.

This program envisages carrying out surveillance of important bacterial, viral and parasitic infections of zoonotic as well as transboundary pathogens in India, including the North-eastern part of the country.

Source:

<https://www.biospectrumindia.com/news/77/19767/dbt-unveils-countrys-first-one-health-consortium.html>

**S383. Ans.(c)**

**Sol.** Price Stabilisation Fund is the fund created to absorb extreme [volatility](#) in selected commodity prices.

In 2014-15, the Price Stabilisation Fund (PSF) was established under the Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW) to regulate the cost volatility of essential agricultural commodities, such as onion, potatoes, and pulses.

The PSF scheme provides for the advancement of interest-free loans to State Governments/Union Territories (UTs) and Central Agencies to [finance](#) their working [capital](#) and other expenses, which they may incur in the [procurement](#) and distribution of such commodities.

The Price Stabilisation Fund will be centrally managed by a Price Stabilisation Fund Management Committee (PSFMC) that will approve all State Government's and Central Agencies' proposals.

Small Farmers Agribusiness Consortium (SFAC), a society promoted by the Ministry of Agriculture for linking agriculture to private enterprises, investment, and technology, maintains the PSF as a central [corpus](#) fund. SFAC assumes the role of the Fund Manager.

Source: [business-standard.com/article/pti-stories/to-rein-in-rising-inflation-govt-to-set-up-a-price-stabilisation-fund-for-key-staples-120020101083\\_1.html](https://www.business-standard.com/article/pti-stories/to-rein-in-rising-inflation-govt-to-set-up-a-price-stabilisation-fund-for-key-staples-120020101083_1.html)

**S384. Ans.(c)**

**Sol.** Ebola virus disease (EVD), formerly known as Ebola hemorrhagic fever, is a rare but severe, often fatal illness in humans.

**The virus is transmitted to people from wild animals and spreads in the human population through human-to-human transmission**

Ebola spreads through human-to-human transmission via direct contact (through broken skin or mucous membranes) with:

Blood or body fluids of a person who is sick with or has died from Ebola

Objects that have been contaminated with body fluids (like blood, feces, vomit) from a person sick with Ebola or the body of a person who died from Ebola

**Vaccines to protect against Ebola have been developed and have been used to help control the spread of Ebola outbreaks**

Source: <https://www.who.int/news-room/fact-sheets/detail/ebola-virus-disease>

**S385. Ans.(d)**

**Sol.** Among the important scientific discoveries of the last century was the first immortal human cell line known as "HeLa" — a remarkably durable and prolific line of cells obtained during the treatment of Henrietta's cancer.

This cell line has contributed to many medical breakthroughs, from research on the effects of zero gravity in outer space and the development of the polio vaccine to the study of leukemia, the AIDS virus, and cancer worldwide.

In the 1960s, HeLa cells were sent on the Soviet satellite [Sputnik-6](#) and human space missions to determine the long-term effects of space travel on living cells and tissue. Scientists discovered that HeLa cells divided even more quickly in zero gravity.

HeLa cells have also been instrumental in the development of [human papillomavirus](#) (HPV) vaccines and polio vaccines.

HeLa cells were used by [Jonas Salk](#) to test the first [polio vaccine](#) in the 1950s.

Source:

<https://www.hopkinsmedicine.org/henriettalacks/importance-of-hela-cells.html>

**S386. Ans.(b)**

**Sol.** Dengue viruses (DV) belong to the family *Flaviviridae* and there are four serotypes of the virus referred to as DV-1, DV-2, DV-3, and DV-4.

It is transmitted mainly by the *Aedes aegypti* mosquito and also by *Ae. albopictus*

When a mosquito carrying the dengue virus bites a person, the virus enters the skin together with the mosquito's saliva. Once inside the skin, the dengue virus binds to [Langerhans cells](#) (a population of [dendritic cells](#) in the skin that identifies pathogens) in the epidermis layer of the skin.

Remember skin has three layers, **The epidermis**, the outermost layer of skin, provides a waterproof barrier and creates our skin tone. **The dermis**, beneath the epidermis, contains tough connective tissue, hair follicles, and sweat glands. The deeper **subcutaneous tissue (hypodermis)** is made of fat and connective tissue

In dengue, the platelet count drops because of the following reasons:

# Platelet count in dengue decreases as it suppresses bone marrow, which is the platelet-producing area.

# Platelet count in dengue decreases because of blood cells affected by the disease.

# Antibodies that are produced during this period lead to the massive destruction of platelets in dengue.

Source:

<https://indianexpress.com/article/explained/antibodies-produced-during-dengue-lead-to-massive-destruction-of-platelets-doctor-7575573/>

**S387. Ans.(b)**

**Sol.** Terrestrial water storage (TWS) has dropped at a rate of 1 cm per year in 20 years (2002-2021), according to a new report *2021 State of Climate Services* released by the World Meteorological Organization (WMO).

TWS is the sum of all water on the land surface and in the subsurface, ie surface water, soil moisture, snow and ice, and groundwater.

Source:

<https://www.downtoearth.org.in/news/water/globally-india-recorded-the-highest-loss-in-terrestrial-water-storage-79558>

**S388. Ans.(b)**

**Sol.** The government of India had created the RIDF in NABARD in 1995-96, with an initial corpus of Rs.2,000 crore.

At present, there are 37 eligible activities under RIDF as approved by GoI. . The eligible activities are classified under three broad categories i.e. Agriculture and related sector Social sector Rural connectivity

Source:

<https://www.nabard.org/content1.aspx?id=573&catid=8&mid=8>

<https://www.constructionweekonline.in/projects-tenders/19818-nabard-sanctions-rs-206-cr-for-rural-development-in-odisha>

**S389. Ans.(a)**

**Sol.** TReDS is an electronic platform for facilitating the financing / discounting of trade receivables of Micro, Small, and Medium Enterprises (MSMEs) through multiple financiers. These receivables can be due from corporates and other buyers, including Government Departments and Public Sector Undertakings (PSUs).

Only MSMEs can participate as sellers in TReDS.

Corporates, Government Departments, PSUs, and any other entity can participate as buyers in TReDS.

Source:

<https://m.rbi.org.in/scripts/FAQView.aspx?Id=132>

**S390. Ans.(c)**

**Sol.** The Houthi movement:

Houthis is an Islamist political and armed movement that emerged from north Yemen in the 1990s. The Houthi movement is a predominately Zaidi Shia force, whose leadership is drawn largely from the Houthi tribe in Yemen.

Recently Iran and Saudi Arabia have decided to normalize their foreign relations.

Yemeni rebels, known as [Houthis](#), who are a politically infused religious rebel group based in Yemen, crossed into Saudi Arabia in the 1990s and had seized the Saudi territory, including the strategically important Mount al-Doud.

This triggered the largest Saudi military operation since the Iraqi invasion of Kuwait in 1990. Yemen's government, as well as the Arabs, accused Iran of arming the Houthis. Iran has heavily criticized Saudi Arabia for its intervention in the [Houthi insurgency in Yemen](#).

[Iran](#) and [Saudi Arabia](#) had no [diplomatic relations](#) following the [attack on the Saudi embassy](#) in [Tehran](#) in January 2016.

Source:

<https://www.thehindu.com/news/international/saudi-arabia-intercepts-houthi-drones/article36315039.ece>

<https://menaaffairs.com/does-iran-want-to-normalize-relations-with-saudi-arabia/>

**S391. Ans.(d)**

**Sol.** According to data released by the Central Electricity Authority, as of Wednesday, India's 135 thermal power plants overall had on average coal stock that would last just four days.

India relies on coal to meet over 70% of its power needs, and Coal India Limited (CIL) supplies over 80% of the total coal.

CIL is under the ownership of the Ministry of Coal, Government of India headquartered in Kolkata, West Bengal, India. It is the largest coal-producing company in the world and a Maharatna public sector undertaking.

**Criteria for Maharatna:**

1. Three years with an average annual net profit of over ₹2,500 crores, OR
2. The average annual Net worth of ₹10,000 crores for 3 years, OR
3. Average annual Turnover of ₹20,000 crores for 3 years
4. Should be listed on Stock exchange
5. Should have a significant international operational presence

**S392. Ans.(b)**

**Sol.** Central Electricity Authority (CEA) is a statutory organization originally constituted under Section 3(1) of the repealed Electricity (Supply) Act, 1948 since substituted by Section 70 of the Electricity Act, 2003.

The **Central Electricity Authority of India** (CEA) advises the government on policy matters and formulates plans for the development of electrical systems.

It is chaired by a person nominated by the central govt.

Under the Electricity Act 2003, CEA prescribes the standards on matters such as the construction of electrical plants, electric lines and connectivity to the grid, installation, and operation of meters, and safety and grid standards.

The CEA is also responsible for the concurrence of hydropower development schemes of central, state, and private sectors taking into consideration the factors which will result in the efficient development of the river and its tributaries for power generation, consistent with the requirement of drinking water, irrigation, navigation, and flood control.

As per **Central Electricity Authority of India** data, out of 135 thermal plants that use coal for power generation, 106 or nearly 80 percent are either in the critical or supercritical stage, i.e. they have stocks only for the next 6-7 days.

Source: <https://cea.nic.in/functions/?lang=en>  
<https://www.thehindu.com/business/Economy/explained-what-is-the-extent-of-indias-coal-crisis/article37032323.ece>

**S393. Ans.(a)**

**Sol.** Sir Syed Ahmad Khan :

He was a “loyal servant” of the British administration before the revolt of 1857. He even penned a pamphlet titled *The Causes of the Indian Revolt* to explain the reasons for the revolt from a “native perspective”.

Sir Syed Ahmad Khan is best known for the Aligarh Movement — a systemic movement aimed at reforming the social, political, and educational aspects of the Muslim community. He founded the Scientific Society in 1863 to translate major works in the sciences and modern arts into Urdu. He released two journals to this end — *The Aligarh Institute Gazette*, which was an organ of the Scientific Society, and the *Tehzibul Akhlaq*, known as the Mohammedan Social Reformer in English.

Sir Syed’s concept of nation was inextricably woven with secular ideals. Sir Syed believed in multiculturalism under which all cultural communities must be entitled to equal status under the state.

Sir Syed laid out his vision for Hindu-Muslim unity in a speech in January 1883 where he said, “India is like a bride which has got two beautiful and captivating eyes — Hindus and Muslims.”

He was critical of the Congress and talked about how it was essentially a party of Bengali Hindus who could not best represent the viewpoint of a Muslim population. He called for greater representation of Muslims.

Hence it is erroneously believed by some historians that the Hindu-Muslim divide in India was the by-product of the two-nation theory which supposedly had its origin in Sir Syed’s ideology.

He gave special attention to Muslims as Hindus had embarked on the path to scientific education much earlier than Muslims.

His most notable contribution to the field of education is establishing the Madarsatul Uloom in Aligarh in 1875, now known as the Aligarh Muslim University, a premier educational institution of the country.

Source: <https://theprint.in/theprint-profile/sir-syed-ahmad-khan-for-whom-educational-reform-way-of-life/306520/>  
<https://www.thehindu.com/opinion/op-ed/the-founder-of-a-mini-india/article37044994.ece>

**S394. Ans.(a)**

**Sol.** WEEE Directive: Initiated by the EU commission this Directive was implemented in February 2003, focusing on recycling electronic waste. This Directive offered many electronic waste collection schemes free of charge to the consumers.

The EU commission has classified ‘Waste Electrical & Electrical Equipment (WEEE)’ as the waste generated from electrical devices and household appliances like refrigerators, televisions, and mobile phones, etc.

**S395. Ans.(a)**

**Sol.** It is one of the three Flexible Mechanisms defined in the Kyoto Protocol. The CDM, defined in Article 12 of the Protocol, was intended to meet two objectives:

(1) to assist non-Annex I countries (predominantly developing nations) achieve sustainable development and reducing their carbon footprints; and

(2) to assist Annex I countries (predominantly industrialized nations) in achieving compliance with their emissions reduction commitments (greenhouse gas emission caps)

The CDM addressed the second objective by allowing the Annex I countries to meet part of their emission reduction commitments under the Kyoto Protocol by buying Certified Emission Reduction units from CDM emission reduction projects in developing countries

**S396. Ans.(b)**

**Sol.** Recently, a newly discovered plant *Allium negianum*, in Uttarakhand has been confirmed to belong to the genus that includes many staple foods such as onion and garlic. *Allium* is one of the largest genera in Amaryllidaceae. Amaryllidaceae is a family of herbaceous (connected with plants that have soft stems), mainly perennial and bulbous flowering plants. The genus *Allium* contains about 1,100 species worldwide, including many staple foods like onion, garlic, scallion, shallot, and chives.

Source:

<https://indianexpress.com/article/explained/what-is-allium-negianum-an-onion-species-from-the-uttarakhand-himalayas-7578891/>

**S397. Ans.(a)**

**Sol.** Earthshot Prize:

Context: Established in 2020, 2021 was the first year when awards were handed out to finalists for their contributions towards the five UN Sustainable Development Goals.

It is also dubbed as the "Eco Oscars".

The Earth shot Prize is an award set up by Prince William and the Royal Foundation, the charity founded by the Duke and Duchess of Cambridge, and historian David Attenborough to honor five finalists between 2021 and 2030 for developing solutions to fight the climate crisis.

India's Vidyut Mohan's technology that recycles agricultural waste to create fuel was named among the winners of the earth shot prize.

Source:

<https://indianexpress.com/article/explained/earthshot-prize-prince-william-1-million-award-explained-7577540/>

**S398. Ans.(a)**

**Sol.** As opposed to ordinary bail, which is granted to a person who is under arrest, in anticipatory bail, a person is directed to be released on bail even before an arrest is made.

The provision of anticipatory bail under Section 438 was introduced when CrPC was amended in 1973.

The Supreme Court (SC) in the *Sushila Aggarwal v. State of NCT of Delhi* (2020) case has delivered a significant verdict, ruling that no time limit can be set while granting anticipatory Bail and it can continue even until the end of the trial.

It is issued only by the Sessions Court and High Court but as per the recent observations made by the Supreme court it has stated that HCs and SCs are given powers to grant anticipatory bail to the accused due to the Constitution bearing posed under the right to liberty under Article 21.

The grant or rejection of an application under CrPC has a direct bearing on the right to life and liberty of an individual. Therefore, the provision needs to be read liberally and considering its beneficial nature. The courts must not read in restrictions that the legislature has not explicitly provided for. In doing so, the court may also exercise its powers under Article 142 of the Constitution to pass such an order.

Source:

<https://timesofindia.indiatimes.com/india/supreme-court-hcs-cant-refuse-pre-bail-stay-arrest/articleshow/83053699.cms>

**S399. Ans.(a)**

**Sol.** Mudumalai Tiger Reserve is located in the Nilgiris District of Tamil Nadu state, at the tri-junction of three states, viz, Karnataka, Kerala, and Tamil Nadu.

It has a common boundary with Wayanad Wildlife Sanctuary (Kerala) on the West, Bandipur Tiger Reserve (Karnataka) on the North, and the Nilgiris North Division on the South and East and Gudalur Forest Division on the South West, together forming a large conservation landscape for flagship species such as Tiger and Asian Elephant.

Source:

<https://www.thehindu.com/news/national/tamil-nadu/tiger-mdt23-captured-after-22-day-long-search/article37003076.ece>

**S400. Ans.(b)**

**Sol.** The UHI effect is caused due to increase in hardscapes such as building materials including concrete, steel, and glass, both on the buildings and streetscapes or open spaces. Curtailment of wind flow which often occurs in urban areas due to closely built vertical structures can also lead to temperature build-up. So such practices must not be promoted.

UHI mitigation can be prevented by roof-top gardening, vertical gardening, and planting trees at the community level.

Source:

<https://www.freepressjournal.in/mumbai/urbanisation-eats-up-mumbais-greenery>

#### S401. Ans.(d)

**Sol.** The 1865 census of the North-West Provinces is sometimes referred to as the first proper census in India. By 1872, the only administrative area of British India where there had not been an attempt to conduct a region-wide enumeration was Bengal Province.

The various limited exercises conducted prior to 1869 have been described as "fragmentary, hardly systematic and lack any uniformity".

In 1872, the British Raj authorities concluded the first "all-India census

Between 1872-1931, every census collected caste-based data and included questions on various castes in India.

The first synchronous decennial census was conducted in 1881 and has continued thus since then

1931 was the last caste census conducted in British India.

1941 caste-based data was collected but not published due to the onset of world war 2.

Source: <https://www.adda247.com/upsc-exam/caste-based-census-in-india/>

<https://www.adda247.com/upsc-exam/india-needs-a-caste-count-social-integration-for-creating-casteless-society/>

#### S402. Ans.(a)

**Sol.** A committee headed by ecologist Madhav Gadgil also known as the Western Ghats Ecology Expert Panel (WGEEP) in 2011 recommended that approx. 68% of the Western Ghats be declared as the Ecological Sensitive Areas (ESA) with only limited development allowed in graded zones.

The panel had classified the Western Ghats into Ecologically Sensitive Zones (ESZ) 1, 2, and 3 of which ESZ-1 is a high priority, almost all developmental activities (mining, thermal power plants, etc) were restricted in it. Further, no new dams based on large-scale storage be permitted in ESZ 1.

The panel also recommended a National-level authority, Western Ghats Ecology Authority (WGEA).

The committee was criticized for being too environment friendly so in 2012 new committee was set up under K.Kasturirangan.

The Kasturirangan report sought to bring just 37% of the Western Ghats under the Ecologically Sensitive Area (ESA) zones — down from the 64% suggested by the Gadgil report

Source:

<https://www.adda247.com/upsc-exam/untimely-heavy-rainfall-causes-preparedness-the-hindu-editorial-19th-october-2021/>

<https://economictimes.indiatimes.com/news/india/thing-s-getting-worse-in-western-ghats-says-madhav-gadgil/articleshow/87129471.cms>

#### S403. Ans.(c)

**Sol.** The **Brundtland Commission**, formerly the **World Commission on Environment and Development**, was a sub-organization of the **United Nations** (UN) that aimed to unite countries in pursuit of **sustainable development**. It was founded in 1983 when **Javier Pérez de Cuéllar**, the **Secretary-General of the United Nations**, appointed **Gro Harlem Brundtland**, former **Prime Minister of Norway**, as chairperson of the commission.

The Brundtland Commission officially dissolved in 1987 after releasing **Our Common Future**, also known as the **Brundtland Report**. The document popularized the term "sustainable development"

#### S404. Ans.(b)

**Sol.** Recently, the Climate Transparency Report was released by Climate Transparency to provide a comprehensive overview of G20 countries on their journey towards a net-zero emissions economy.

The report draws on the latest emissions data and covers 100 indicators on decarbonization, climate policies, finance, and vulnerability to the impacts of climate change.

Source: <https://www.adda247.com/upsc-exam/climate-transparency-report-2021/>

#### S405. Ans.(d)

**Sol.** The GFS Index is designed and constructed by London-based Economist Impact.

The Global Food Security Index 2021 is the 10th edition that looks back over the past 10 years of data to assess the action towards the UN Sustainable Development Goal of Zero Hunger by 2030. With a score of 57.2 points, India ranked 71st on the Global Food Security Index 2021 out of 113 countries.

Ireland has topped the index followed by Australia.

The GFSI 2021 noted that global food security has declined for the second year in a row after seven years of progress towards the Goal of Zero Hunger.

Source: <https://indianexpress.com/article/india/india-at-71st-on-global-food-security-index-2021-of-113-nations-7580637/>



**S406. Ans.(d)**

**Sol.** One Sun, One World, One Grid" (OSOWOG) is a trans-national electricity grid supplying solar power across the globe.

it aims is to unlock US\$ 1 trillion of investments in solar by 2030 while reducing the cost of the technology and its financing which supported by the World Bank which will provide it concessional soft loans under a Blended Financial Risk Mitigation Facility.

The ambitious OSOWOG will connect 140 countries through a common grid that will be used to transfer solar power. "The vision behind the OSOWOG mantra is 'The Sun Never Sets' and is a constant at some geographical location, globally, at any given point of time. With India at the fulcrum, the solar spectrum can easily be divided into two broad zones viz. far East, which would include countries like Myanmar, Vietnam, Thailand, Lao, Cambodia, etc, and far West, which would cover the Middle East and Africa Region,"

Source:

<https://isolaralliance.org/uploads/docs/69d7d9fa726beae47c318737fa0c8d.pdf>

[https://www.business-standard.com/article/economy-policy/all-you-need-to-know-about-one-world-one-sun-one-grid-plan-120082101244\\_1.html](https://www.business-standard.com/article/economy-policy/all-you-need-to-know-about-one-world-one-sun-one-grid-plan-120082101244_1.html)

**S407. Ans.(c)**

**Sol.** The Fugitive Economic Offenders Act, 2018 empowers any special court to confiscate all properties and assets of economic offenders who are charged in offenses measuring over INR 100 crores and are evading prosecution by remaining outside the jurisdiction of Indian courts.

**S408. Ans.(b)**

**Sol.** *The Enforcement Directorate was established in the year 1956. Its Headquarters is situated in New Delhi.*

**ED is responsible for enforcement of the Foreign Exchange Management Act, 1999 (FEMA),** and certain provisions under the Prevention of Money Laundering Act (PMLA).

The Directorate is under the administrative control of the Department of Revenue (under the Ministry of Finance) for operational purposes.

**S409. Ans.(d)**

**Sol.** Phyto-Pharma Plant Mission aims at the conservation and cultivation of endangered and threatened endemic medicinal plants.

The mission also aims to discover new botanical drugs for unmet medical needs using the rich traditional ethnobotanical knowledge and biodiversity of these states. The mission at the same time also aims to improve the availability of authentic and quality botanical raw material on a sustainable basis for a boom in the phyto-pharmaceutical industry. **Through this Mission, the government expects to enable farmers from NE states and the phyto-pharmaceutical industry to become global leaders in the production and export of some quality botanical drugs for unmet medical needs.** For this Mission, the Department of Biotechnology (DBT) under the Ministry of Science & Technology will be the nodal coordinating and implementing department.

**S410. Ans.(d)**

**Sol.** NITI Aayog in collaboration with the Indian Space Research Organisation (ISRO) has developed a broad Geographical Information System (GIS) Energy Map of India.

The GIS Map provides a complete image of all resources of the country, creating a visual of plants and renewable energy resource portal, through 27 thematic layers. The map identifies and locates all primary and secondary sources of energy and their transportation. Hence providing a comprehensive view of energy production and distribution.

Source: <https://www.businesstoday.in/latest/story/niti-aayog-launches-geospatial-energy-map-of-india-309772-2021-10-19>

**S411. Ans.(c)**

**Sol.** The SDR is an international reserve asset, created by the IMF in 1969 to supplement its member countries' official reserves.

The SDR is neither a currency nor a claim on the IMF. Rather, it is a potential claim on the freely usable currencies of IMF members. SDRs can be exchanged for these currencies

The SDR basket is reviewed every five years, or earlier if warranted, to ensure that the basket reflects the relative importance of currencies in the world's trading and financial systems.

These currency amounts remain fixed over the five-year SDR valuation period but the actual weights of currencies in the basket fluctuate as cross-exchange rates among the basket currencies move. The value of the SDR is determined daily based on market exchange rates.

Source:

<https://www.imf.org/en/About/Factsheets/Sheets/2016/08/01/14/51/Special-Drawing-Right-SDR>

**S412. Ans.(d)**

**Sol.** Astamahasthanas are the eight great holy *places associated with the life of Buddha*. These include four pilgrimage sites related to the life of Gautama Buddha viz. Lumbini, Bodhgaya, Sarnath and Kushinagar and four other sites viz. Sravasti, Sankasya, Rajgir and Vaishali.

**Bodhgaya**

It is located in Bihar on the bank of river Neranjana {this river was known as Uruwela at that time}. It is known as a place of enlightenment of Buddha

**Sarnath:**

(formally [Isipathana](#), [Uttar Pradesh](#), [India](#)) where Gautama Buddha delivered his first sermon ([Dhammacakkappavattana Sutta](#)), and He taught about the [Middle Way](#), the [Four Noble Truths](#) and [Noble Eightfold Path](#).

**Kushinagar:**

Kushinagar or Kushinagara is located in the Kushinagar district of Uttar Pradesh. It is the site of Buddha's death and mahaparinirvana.

**S413. Ans.(b)**

**Sol.** Bhaskarabda began when Bhaskaravarman was crowned ruler of the Kamrupa kingdom. He was a contemporary and political ally of northern Indian ruler Harshavardhana.

The Harsha Charita of Bana gives a detailed account of Hangsavega's meeting with Harsha. Plying him with gifts and praise, the diplomat was able to effect an offensive and defensive alliance between the two kings.

Recently Assam govt has decided that in addition to Saka and Gregorian, Bhaskarabda will be used in the official calendar by it.

Source:

<https://www.thehindu.com/news/national/other-states/bhaskarabda-to-be-added-to-official-assam-calendar/article37068273.ece>

**S414. Ans.(b)**

**Sol.** The Anglo-Manipur War was fought between the Manipur kingdom and the British in 1891.

The main cause behind this was the interference of the British in the internal matters of the state.

According to the Manipur State Archives, the royal family of Manipur was already divided into two factions after the accession of Prince Surchandra to the throne in 1886. Surchandra's younger brothers -- Kulachandra and Tikendrajit -- revolted against him. Surchandra sought the help of the Britishers in Calcutta. Taking advantage of the internal discord among the princes, the British interfered in the administration. Kulachandra, who had ascended the throne by then, rejected the aggressive imposition of British law in the state. This led to the Anglo-Manipur War of 1891.

As a result of the war, Manipur became a princely state under the rule of the British empire.

Source: <https://www.cnbtctv18.com/india/honouring-our-heroes-andamans-mount-harriet-is-now-mount-manipur-11168572.htm>

**S415. Ans.(c)**

**Sol.** Currencies included in the SDR basket have to meet two criteria: the export criterion and the freely usable criterion. A currency meets the export criterion if its issuer is an IMF member or a monetary union that includes IMF members, and is also one of the top five world exporters. For a currency to be determined "freely usable" by the IMF, it has to be widely used to make payments for international transactions and widely traded in the principal exchange markets. Freely usable currencies can be used in Fund financial transactions.

Source:

<https://www.imf.org/en/About/Factsheets/Sheets/2016/08/01/14/51/Special-Drawing-Right-SDR>

**S416. Ans.(c)**

**Sol.** It is estimated that nearly 60% of all crude in the world is priced in terms of Brent Crude, with only the US and Canadian oil being priced in WTI crude.

The Indian Crude Basket is a weighted average of Dubai and Oman (sour) as well as the Brent Crude (sweet) crude oil prices.

The reason Brent is more popular as an oil benchmark is that it is a more efficient representative of oil prices. While Brent oil wells are in the sea, WTI oil wells are landlocked. US oil has to be moved by rail, so the pricing of WTI becomes relatively inefficient compared to Brent. Since Brent Crude is largely sent via sea, it is more economical and better reflects oil prices.

**Additional info:****Sweet versus sour crude:**

This classification is based on sulphur content. Oil with low sulphur content is considered sweeter while oil with higher sulphur content is considered sour. For sulphur content, the benchmark is 0.5%. Lower than 0.5% sulphur content is considered sweet crude and higher than 0.5% is sour crude. Sweet crude is more suited to premium petroleum products. The crude classification normally ranges from Heavy Sour Crude to Light Sweet Crude. Brent Crude is sour and heavier while WTI crude is sweeter and lighter.

Source: [https://www.indiaonline.com/article/general-blog/eight-questions-on-brent-crude-versus-wti-crude-121061800208\\_1.html](https://www.indiaonline.com/article/general-blog/eight-questions-on-brent-crude-versus-wti-crude-121061800208_1.html)

**S417. Ans.(c)**

**Sol.** Articles 93 and 178 provides that the election of Speaker and Deputy Speaker is mandatory, it must be held at the earliest. It does not clearly define the time frame within which this process has to be completed.

In Lok Sabha, the election of Deputy Speaker is governed by Rule 8 of The Rules of Procedure and Conduct of Business in Lok Sabha. According to the Rule, the election “shall be held on such date as the Speaker may fix”, and the Deputy Speaker is elected once a motion proposing his name is carried.

Once elected, the Deputy Speaker usually continues in office until the dissolution of the House.

Under Article 94 (Article 179 for state legislatures), the Speaker or Deputy Speaker “shall vacate his office if he ceases to be a member of the House of the People”.

They may also resign, or “maybe removed from...office by a resolution of the House of the People passed by a majority of all the then members of the House”.

Source:

<https://indianexpress.com/article/explained/uttar-pradesh-assembly-deputy-speaker-election-nitin-agrawal-7582446/>

**S418. Ans.(d)**

**Sol.** The first virtual summit of the foreign ministers of the US, India, Israel, and UAE was recently held. At the end of the meet, the four nations agreed to form a new international economic forum to utilise the “unique array of capabilities, knowledge and experience” that each offers.

The group is already being dubbed the ‘New Quad’ or the ‘Middle-Eastern Quad’ on the lines of the Quadrilateral Security Dialogue (QSD)

The group is intended as an “international economic forum” that will work on furthering the economic and political ties between the four countries and breaking the hegemony of China in the global arena.

Source:

<https://indianexpress.com/article/opinion/columns/india-and-the-new-quad-in-west-asia-7578842/>

**S419. Ans.(c)**

**Sol.** According to NASA, the new Webb telescope is a collaboration effort between the American space agency, the European Space Agency (ESA), and the Canadian Space Agency (CSA).

NASA also says that the Webb telescope will study the first luminous glow after the big bang, then the formation of the solar systems that allow sustaining of life (like Earth), and finally the evolution of the solar system that our planet resides in.

Note that the CIBER-2 Mission of NASA aims to count the stars which exist in-universe.

The Hubble Space Telescope orbits around the Earth at an altitude of ~570 km above it. Webb will not actually orbit the Earth, instead, it will sit at the Earth-Sun L2 Lagrange point, 5 million km away. At the L2 point, Webb’s solar shield will block the light from the Sun, Earth, and Moon which will help Webb stay cool, which is very important for an infrared telescope.

Source:

<https://tech.hindustantimes.com/tech/news/nasas-new-space-telescope-will-let-humans-see-the-universe-like-never-before-71634799861019.html>

**S420. Ans.(c)**

**Sol.** The secured overnight financing rate (SOFR) is a benchmark interest rate for dollar-denominated derivatives and loans that is replacing the London interbank offered rate (LIBOR).

While SOFR is becoming the benchmark rate for dollar-denominated derivatives and loans, other countries have sought their own alternative rates, such as SONIA and EONIA.

SONIA (Sterling OverNight Index Average) is the effective reference for overnight indexed swaps for unsecured transactions in the Sterling market

SONIA was launched in March 1997 by WMBA Limited and is endorsed by the British Bankers Association (BBA) The Euro Overnight Index Average (EONIA) is a **benchmark reference rate for the euro**. It is calculated using a weighted average that measures overnight unsecured lending transactions that take place in the interbank market in the European Union

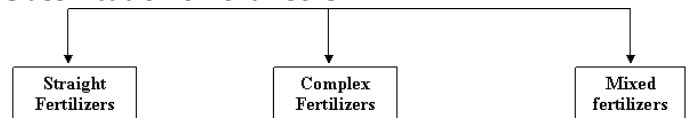
Source:

<https://www.investopedia.com/secured-overnight-financing-rate-sofr-4683954>  
<https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/euro-overnight-index-average-eonia/>

**S421. Ans.(d)**

**Sol.** DAP is a complex fertiliser and it is the second most commonly used fertilizer in India after urea.

**Classification of fertilisers:**



**1. Straight fertilizers:** Straight fertilizers are those which supply only one primary plant nutrient, namely nitrogen or phosphorus or potassium.  
eg. Urea, ammonium sulphate, potassium chloride and potassium sulphate.

**2. Complex fertilizers:** Complex fertilizers contain two or three primary plant nutrients of which two primary nutrients are in chemical combination. These fertilisers are usually produced in granular form.

eg. Diammonium phosphate, nitrophosphates and ammonium phosphate.

3. **Mixed fertilizers:** are physical mixtures of straight fertilisers. They contain two or three primary plant nutrients. Mixed fertilisers are made by thoroughly mixing the ingredients either mechanically or manually. Fertilisers can also be classified based on the physical form:

1. Solid
2. Liquid fertilizers

Source:

[https://agritech.tnau.ac.in/agriculture/agri\\_nutrientmgt\\_fertilizers.html](https://agritech.tnau.ac.in/agriculture/agri_nutrientmgt_fertilizers.html)

**S422. Ans.(a)**

**Sol.** The report, first launched by UNEP in 2019, measures the gap between governments' planned production of coal, oil, and gas and the global production levels consistent with meeting the Paris Agreement temperature limits.

The 2021 Production Gap Report provides country profiles for 15 major producer countries: Australia, Brazil, Canada, China, Germany, India, Indonesia, Mexico, Norway, Russia, Saudi Arabia, South Africa, the United Arab Emirates, the United Kingdom, and the United States.

The report finds out that the world's governments plan to produce around 110% more fossil fuels in 2030 than would be consistent with limiting warming to 1.5°C, and 45% more than consistent with 2°C. The size of the production gap has remained largely unchanged compared to our prior assessments.

Source:

<https://www.hindustantimes.com/environment/unep-report-climate-change-fossil-fuel-use-net-zero-ambition-paris-agreement-101634740658850.html>

**S423. Ans.(c)**

**Sol.** World Meteorological Organisation (WMO) has recently endorsed a water declaration to accelerate the implementation of SDG 6 which provides for "clean water and sanitation for all". The resolutions reflect the top priority given to water by the World Meteorological Organization (WMO) in the face of growing water stress and water-related hazards, coupled with the inadequate and fragmented capacity to meet the challenges.

As per WMO More than half of the world's population will be living under water-stressed conditions by 2030.

**Water present on earth:**

Oceans, Seas, & Bays> Ice caps, Glaciers, & Permanent Snow> Groundwater> Ground Ice & Permafrost> Lakes> Atmosphere> Swamp Water> Rivers> Biological Water

Water source	Water volume, in cubic miles
Oceans, Seas, & Bays	321,000,000
Ice caps, Glaciers, & Permanent Snow	5,773,000
Groundwater	5,614,000
<i>Fresh</i>	2,526,000
<i>Saline</i>	3,088,000
Soil Moisture	3,959
Ground Ice & Permafrost	71,970
Lakes	42,320
<i>Fresh</i>	21,830
<i>Saline</i>	20,490
Atmosphere	3,095
Swamp Water	2,752
Rivers	509
Biological Water	269

Source: <https://www.usgs.gov/special-topic/water-science-school/science/how-much-water-there-earth?qt-science-center-objects=0#qt-science-center-objects>

<https://www.downtoearth.org.in/news/water/by-2030-early-warnings-on-floods-and-droughts-to-be-available-for-all-wmo-79786>

<https://www.adda247.com/upsc-exam/water-declaration/>

**S424. Ans.(a)**

**Sol.** The **Black Sea** is bordered by Bulgaria, Georgia, Romania, Russia, Turkey, and Ukraine



Source:

<https://www.thehindu.com/news/international/pentagon-chief-urges-more-black-sea-security-ties/article37098012.ece>

#### S425. Ans.(d)

**Sol. The Financial Action Task Force (FATF) is an inter-governmental body established in 1989 on the initiative of the G7.** The FATF is a global money laundering and terrorist financing watchdog that sets international standards to prevent illegal activities in the economic and financial channels of a country and its interconnected linkages across the world.

The FATF Secretariat is housed at the OECD headquarters in Paris.

The CBI is designated as the National Central Bureau of India for ICPO-INTERPOL but the Interpol is not an agency of FATF.

The ED is the nodal agency to undertake investigations under the Prevention of Money Laundering Act (PMLA) in the country.

**Black List of FATF:** Countries known as Non-Cooperative Countries or Territories (NCCTs) are put on the blacklist. These countries support terror funding and money laundering activities. The FATF revises the blacklist regularly, adding or deleting entries.

**Grey List of FATF:** Countries that are considered a heaven for supporting terror funding and money laundering are put in the FATF grey list. This inclusion serves as a warning to the country that it may enter the blacklist.

#### S426. Ans.(b)

**Sol.** Recently the wildlife wing of Odisha's forest department has decided to relocate around 420 families from four zero-connectivity villages in Debrigarh wildlife sanctuary, Bargarh district. The move is aimed to reduce man-animal conflict and provide better living conditions to the relocated families.

The Debrigarh wildlife sanctuary is located near Hirakund dam

Wild animals like leopards, elephants, gaur, wild boar, Sambar, Deer, a host of birds and other animals are found in the thick and dense forests of the Debrigarh sanctuary

Source:

<https://www.downtoearth.org.in/news/governance/odisha-to-relocate-420-families-from-debrigarh-wildlife-sanctuary-in-bargarh-district-79799>

#### S427. Ans.(b)

**Sol.** The SDN1 (site-directed nuclease 1) and SDN2 (site-directed nuclease 2) are two new techniques that have been adopted by ICAR which aims to bring precision and efficiency into the breeding process of crops using gene-editing tools such as CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats), whose developers won the Nobel Prize for Chemistry in 2020.

SDN genome editing involves the use of different DNA-cutting enzymes (nucleases) that are directed to cut the DNA at a predetermined location by a range of different DNA binding systems. After the cut is made, the cell's own DNA repair mechanism recognizes the break and repairs the damage, using one of two pathways that are naturally present in cells. It involves the use of gene-editing tools to directly tweak (improve/change) the plant's own genes instead.

Source: <https://www.thehindu.com/sci-tech/agriculture/guidelines-for-non-transgenic-gene-editing-techniques-pending-since-january-2020/article37113370.ece>

#### S428. Ans.(d)

**Sol.** The hashing algorithm is basically a secure cryptographic algorithm that is used for database indexing and retrieval which is usually quicker and easier to search for an individual in the original records.

Recently the country's first mobile e-voting platform was tested by the Telangana State Election Commission (TSEC) in Khammam municipal corporation elections and it was a success. The enrolment was made through the DLT-based e-Voting application. It used hashing algorithm to filter out the fake IDs.

A cryptographic hash function is also able to withstand all known types of cryptanalytic attack hence it can be used in the digital signature generation and verification, Password verification and can also serve as a means of reliably identifying any file.

The secured feature of Hashing algorithm makes it the best technology for bitcoin mining.

#### S429. Ans.(a)

**Sol.** The conservation of hornbills is of prime significance since they have a symbiotic relationship with a number of cover bushes in tropical forests. They're interested in such bushes for meals and in flip, they scatter their seeds, creating orchards

Hornbills can disperse as much as 12,000 massive seeds per day per sq. kilometre in patches the place they happen in massive numbers, thereby creating fruit orchards.

A recent study has noted that the variety of dispersed seeds was highest in patches with the best abundance of hornbills which has earned them the perfect title of being gardeners of the tropical forests.

Source: <https://www.thetimesoftruth.com/save-hornbills-for-theyre-the-gardeners-of-tropical-forests-research/>  
<https://www.downtoearth.org.in/news/wildlife-biodiversity/save-hornbills-for-they-are-the-gardeners-of-tropical-forests-study-79680>

**S430. Ans.(c)**

**Sol.** World Meteorological Organisation (WMO) has recently endorsed a water declaration to accelerate the implementation of SDG 6. WMO has also endorsed a Water and Climate Coalition to promote the sharing and access to integrated hydrological, cryosphere, meteorological and climate information. The objective is to plan and operate resilient and sustainable water resources systems at local, national, regional and river basin scales.

It has also approved a new vision and strategy for hydrology and an associated plan of action. It identifies target outcomes to WMO's eight long-term ambitions to achieve SDG 6.

Source: <https://reliefweb.int/report/world/wmo-endorses-water-declaration-including-water-and-climate-coalition>  
<https://www.adda247.com/upsc-exam/water-declaration/>

**S431. Ans.(d)**

**Sol. Why in news:**

The Central Empowered Committee (CEC), constituted by the Supreme Court, has recently asked the Assam government to take action on illegal construction in the identified wildlife corridors of the Kaziranga National Park and Tiger Reserve.

Kaziranga National Park and Tiger Reserve:

The park is home to large breeding populations of elephants, wild water buffalo, and swamp deer. Kaziranga is recognized as an Important Bird Area by BirdLife International for the conservation of avifaunal species. The Indian state of Assam is home to the largest population of greater-one horned rhinos, with more than 90% in **Kaziranga National Park**.

Located on the edge of the [Eastern Himalaya biodiversity hotspot](#), the park combines high species diversity and visibility.

In 1985, Kaziranga was declared a [World Heritage Site](#) by [UNESCO](#) for its unique natural environment.

Source: <https://www.thehindu.com/news/national/other-states/sc-panel-tells-assam-to-take-action-on-illegal-construction-in-kaziranga-animal-corridors/article37105351.ece>

**S432. Ans.(c)**

**Sol. Why in news:**

GoI has recently decided to allow a discount of `50 (Rupees Fifty only) per gram from the issue price to those investors who apply online and pay digitally

**Sovereign Gold Bond Scheme:**

1. The 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 the yellow metal into financial savings.

2. The bonds are sold through banks (except small finance banks and payment banks), Stock Holding Corporation of India Limited (SHCIL), designated post offices, and recognized stock exchanges

3. The minimum permissible investment is 1 gram of gold. The maximum limit of subscription is 4 kg for individuals, 4 kg for HUFs, and 20 kg for trusts and similar entities per fiscal (April-March).

4. The price of the bond is fixed in Indian rupees on the basis of a simple average of the closing price of gold of 999 purity, published by the India Bullion and Jewellers Association Limited for the last three working days of the week preceding the subscription period.

5. The bonds are denominated in multiples of gram (s) of gold with a basic unit of 1 gram. The tenor of the bond is for a period of 8 years with an exit option after the 5th year to be exercised on the next interest payment dates.

Source:

<https://www.livemint.com/market/commodities/sovereign-gold-bond-issue-price-fixed-at-rs-4-765-gm-subscription-opens-monday-11634976532734.html>

**S433. Ans.(b)**

**Sol.** Recently GoI has renamed Mount Harriet to the mount Manipur in attribute to war heroes of the Anglo-Manipur War of 1891 who were exiled here.

Mount Harriet is the third highest peak in the Andaman and Nicobar Islands and served as the summer headquarters of the Chief Commissioner during British Raj.

It is believed to be named after British artist and photographer, Harriet Christina Tytler, who was the wife of Robert Christopher Tytler, a soldier who served in the British Indian Army.

The picture on the backside of the ₹ 20 note is taken from Mount Harriet National Park.

The park is also a [butterfly hotspot](#).

Source:

<https://indianexpress.com/article/explained/andaman-and-nicobar-islands-mount-harriet-mount-manipur-7581032/>



Source:

<https://www.thehindu.com/news/international/43-countries-call-on-china-at-un-to-respect-ughur-rights/article37130917.ece>

**S439. Ans.(c)**

**Sol.** Barbados has elected its first-ever president to replace the United Kingdom’s Queen Elizabeth as head of state in a decisive step towards shedding the Caribbean island’s colonial past. Barbados is a former British colony that gained independence in 1966, the nation had long maintained ties with the British monarchy. But calls for full sovereignty and homegrown leadership have risen in recent years. Barbados was claimed by the British in 1625. In September 2020, Barbados has finally announced the break with Britain



Source:

<https://www.indiatoday.in/world/story/barbados-elects-first-president-british-queen-replaced-head-of-state-1867718-2021-10-22>

**S440. Ans.(d)**

**Sol.** This report was recently released by Virginia Tech’s College of Agriculture and Life Sciences of United States in conjunction with the World Food Prize Foundation’s annual conference.

As per the report, Total factor productivity (TFP) is growing at an annual rate of 1.36 percent (2020-2019) which is below the Global Agricultural Productivity Index that has set an annual target of 1.73 percent growth to sustainably meet the needs of consumers for food and bioenergy in 2050.

TFP tracks changes in how efficiently agricultural inputs such as land, labor, fertilizer, feed, machinery, and livestock are transformed into outputs like crops, livestock, and aquaculture products.

Source:

<https://www.downtoearth.org.in/news/agriculture/global-agricultural-productivity-not-growing-as-fast-as-food-demand-report-79805>

**S441. Ans.(d)**

**Sol.** Every year on 21 October, the anniversary of the formation of Azad Hind fauj is celebrated across the country. First established in 1942 by Mohan Singh, Azad Hind Fauj or the Indian National Army (INA) was revived by [Subhas Chandra Bose](#) on 21 October 1943. The Azad Hind Fauj was initiated during World War II to secure complete Indian independence from British rule. Captain-General Mohan Singh was the first to establish the Azad Hind Fauj in 1942 in Singapore with Indian prisoners of war of the British Indian army, but it later got disbanded. Bose with the help of Indians living in Southeast Asia, formed the INA again and proudly took charge of it.

In moirang , Manipur INA hoisted tricolor on april 14,1944

Source: <https://www.firstpost.com/india/azad-hind-formation-anniversary-interesting-facts-about-azad-hind-fauj-and-subhas-chandra-bose-10071231.html>

**S442. Ans.(d)**

**Sol.** Tea grows in a moderately hot and humid climate, which is preferred for better yield, crop distribution, and quality. An ambient temperature within 13°C and 28-32°C is conducive for the growth of tea. In India, the temperature in winters is around or below 12°C and there is hardly any growth during this period. This is called **Winter Dormancy**.

India comes in second in the tea cultivation list after china at a tea production rate of 1.2 million tons

**Iran** is the largest export destination for Indian tea by a margin of 26%.

Source:

<https://www.thehindubusinessline.com/economy/agri-business/tea-exports-may-decline-on-high-prices/article35371976.ece>

<https://www.worldatlas.com/articles/the-worlds-top-10-tea-producing-nations.html>

<https://www.dripcapital.com/resources/blog/tea-exports-from-india>

**S443. Ans.(b)**

**Sol.** Osaka Track is the G20 leader's declaration on “Innovation: Digitization, Data Free Flow with Trust”. Indonesia, Egypt India, and South Africa are the countries that have not signed this declaration.

India is among the many countries that have stressed data localisation, following the Reserve Bank of India which has issued a directive that mandated [foreign firms to store their payments data](#) within the country for “unfettered access...for supervisory purposes”

Source: <https://www.livemint.com/news/world/india-boycotts-osaka-track-at-g20-summit-1561897592466.html>



**S444. Ans.(a)**

**Sol.** October 23 is celebrated as international snow leopard day

Snow leopards live in the mountainous regions of central and southern Asia.

The snow leopard is listed as Vulnerable on the IUCN-World Conservation Union's Red List of the Threatened Species. In addition, the snow leopard, like all big cats, is listed on Appendix I of the Convention on International Trade of Endangered Species (CITES), which makes trading of animal body parts (i.e., fur, bones, and meat) illegal in signatory countries.

Do you know?

Snow leopards do not roar

Source:

[https://www.wwf.org/about\\_wwf/priority\\_species/snow\\_leopard/about\\_snow\\_leopard/](https://www.wwf.org/about_wwf/priority_species/snow_leopard/about_snow_leopard/)

**S445. Ans.(c)**

**Sol.** SECURE Himalaya: Global Environment Facility (GEF)-United Nations Development Programme (UNDP) funded the project on conservation of high-altitude biodiversity and reducing the dependency of local communities on the natural ecosystem. The project promotes the sustainable management of alpine pastures and forests in the high range Himalayan ecosystems to secure the conservation of globally significant wildlife, including endangered snow leopard and their habitats to ensure sustainable livelihoods

This project is now operational in four snow leopard range states, namely, Jammu and Kashmir, Himachal Pradesh, Uttarakhand, and Sikkim.

It was launched by the **Union Ministry of Environment, Forests and Climate Change (MoEFCC)**

Source:

<https://www.in.undp.org/content/india/en/home/projects/securing-livelihoods-in-the-himalayas.html>

**S446. Ans.(b)**

**Sol.** It was created in accordance with a provision of the Narcotic Drugs and Psychotropic Substances Act, 1985, had a nominal corpus of ₹23 crores. Under the NDPS Act, the sale proceeds of any property forfeited, grants made by any person and institution, and income from the investments of the fund, go towards the fund.

The funds can be utilized to meet the expenditure incurred in connection with the measures taken for:

- Combating illicit traffic in narcotic drugs, psychotropic substances, or controlled substances;
- Controlling the abuse of narcotic drugs and psychotropic substances;
- Identifying, treating, rehabilitating addicts;

d) Preventing drug abuse;

e) Educating public against drug abuse; and

f) Supplying drugs to addicts where such supply is a medical necessity.

Source:

<https://www.thehindu.com/news/national/social-justice-ministry-for-decriminalising-possession-of-small-amount-of-drugs-for-personal-use/article37148042.ece>  
<https://dor.gov.in/sites/default/files/NFCDA-GUIDELINES.pdf>

**S447. Ans.(c)**

**Sol.** The Ministry of Social Justice and Empowerment has formulated and is implementing a National Action Plan for Drug Demand Reduction (NAPDDR) for 2018-2025. The Plan **aims at reducing of adverse consequences of drug abuse through** a multi-pronged strategy.

The activities under the NAPDDR, inter-alia, include awareness generation programs in schools/colleges/Universities, workshops/seminars/with parents, community-based peer-led interactions intervention programs for vulnerable adolescents and youth in the community, provisioning of treatment facilities and capacity building of service providers.

The Ministry has launched Nasha Mukta Bharat Abhiyaan in 272 most affected districts

Source:

<https://pib.gov.in/PressReleaseDetailm.aspx?PRID=1656959>

**S448. Ans.(a)**

**Sol.** Recently the CDC Group, Britain's official development finance institution and impact investor, has invested \$70 million into the Green Growth Equity Fund (GGEF), the country's first dedicated climate change fund. The GGEF is a pioneer in the green infrastructure space in the country.

The fund is managed by EverSource Capital, a joint venture between the private equity fund Everstone Group and Lightsource BP, British Petroleum's renewable energy platform.

Source:

<https://www.thehindu.com/business/Industry/britains-cdc-group-invests-70-million-in-first-dedicated-climate-finance-fund/article37125368.ece>

**S449. Ans.(a)**

**Sol.** Recently Turkey has been put on the grey list of FATF along with Pakistan. There are now 23 countries in the FATF grey list, officially referred to as "jurisdictions with strategic deficiencies". The FATF also took two countries — Botswana and Mauritius — out of the grey list.



Source:

<https://indianexpress.com/article/explained/financial-action-task-force-turkey-7584633/>

**S450. Ans.(b)**

**Sol.** India's military will, for the first time, be operating with a fifth-generation fighter — the Royal Navy's (RN's) F-35B Lightning II — as the army, navy, and air force participate in the India-UK joint Exercise Konkan Shakti in the Arabian Sea that began recently

Source: [https://www.business-standard.com/article/current-affairs/india-uk-joint-exercise-5th-gen-fighters-to-debut-over-arabian-sea-121102201707\\_1.html](https://www.business-standard.com/article/current-affairs/india-uk-joint-exercise-5th-gen-fighters-to-debut-over-arabian-sea-121102201707_1.html)

**S451. Ans.(a)**

**Sol.** A white dwarf is a star that has exhausted their nuclear fuel

NASA's Transiting Exoplanet Survey Satellite (TESS) has recently discovered a white dwarf in a part of a binary system called TW Pictoris, where a star and a white dwarf orbit each other.

The two objects are so close to each other that the star transfers material to the white dwarf. As this material approaches the white dwarf it forms an accretion disk or a disk of gas, plasma, and other particles around it.

In a binary system, the donor star in orbit around the white dwarf keeps feeding the accretion disk. As this material approaches the white dwarf it forms an accretion disk or a disk of gas, plasma, and other particles around it. As the accretion disk material slowly sinks closer towards the white dwarf it generally becomes brighter.

Source:

<https://indianexpress.com/article/explained/explained-white-dwarf-switch-on-and-off-7587606/>

**S452. Ans.(d)**

**Sol.** The Mullaperiyar dam is constructed at the confluence of the Periyar and Mullayar rivers. It is located entirely in the state of Kerala but it feeds nearby state Tamilnadu.

This dam is operated by Tamil Nadu following an 1886 lease indenture for 999 years (the Periyar Lake Lease Agreement) that was signed between the Maharaja of Travancore and the Secretary of State for India for the Periyar Irrigation works. Constructed between 1887 and 1895, the dam redirected the river to flow towards the Bay of Bengal, instead of the Arabian Sea and provide water to the arid rain region of Madurai in Madras Presidency.

Source: <https://www.thehindu.com/news/national/sc-directs-panel-to-specify-maximum-water-level-at-mullaperiyar-dam/article37159073.ece>

**S453. Ans.(d)**

**Sol.** It amends the Inter-State River Water Disputes Act, 1956, and provides for the adjudication of disputes relating to waters of inter-state rivers and river valleys.

**Disputes Resolution Committee:** Under the Bill, when a state puts in a request regarding any water dispute, the central government will set up a Disputes Resolution Committee (DRC), to resolve the dispute amicably within one year (extendable by six months).

If a dispute cannot be settled by the DRC, the central government will refer it to the Inter-State River Water Disputes Tribunal.

**Tribunal:** The central government will set up an Inter-State River Water Disputes Tribunal, for the adjudication of water disputes.

**Time frames:** Under the Bill, the proposed Tribunal must give its decision on the dispute within two years, which may be extended by another year.

**Data bank:** Under the Act, the central government maintains a data bank and information system at the national level for each river basin.

Source: <https://prsindia.org/billtrack/the-inter-state-river-water-disputes-amendment-bill-2019>

**S454. Ans.(c)**

**Sol.** Recently European Parliament has conferred the Sakharov prize for 2021 to the jailed Russian opposition politician Alexei Navalny.

The Sakharov Prize for Freedom of Thought, commonly known as the Sakharov Prize, is an honorary award for individuals or groups who have dedicated their lives to the defense of human rights and freedom of thought. Named after Russian scientist and dissident Andrei Sakharov, the prize was established in December 1988 by the European Parliament.

Nelson Mandela was the first recipient of Sakharov prize who was awarded in 1988.

Source:

<https://www.thehindu.com/news/international/no-respect-for-navalnys-sakharov-prize-kremlin/article37115826.ece>

**S455. Ans.(c)**

**Sol.** Adjusted Gross Revenue (AGR) is the usage and licensing fee that telecom operators are charged by the Department of Telecommunications (DoT). It is divided into spectrum usage charges and licensing fees, pegged between 3-5 percent and 8 percent respectively.

Source:

<https://indianexpress.com/article/business/economy/pending-spectrum-adjusted-gross-revenue-payments-airtel-opts-4-moratorium-pay-dues-7590640/>

**S456. Ans.(b)**

**Sol.** The Telecom Regulatory Authority of India (TRAI) was, thus, established with effect from 20th February 1997 by an Act of Parliament, called the Telecom Regulatory Authority of India Act, 1997, to regulate telecom services, including fixation/revision of tariffs for telecom services which were earlier vested in the Central Government.

TRAI regularly issues orders and directions on various subjects such as tariffs of internet, mobile networks cable and satellite network, interconnections, quality of service, Direct To Home (DTH) services, and mobile number portability.

Source: <https://www.trai.gov.in/about-us/history>

**S457. Ans.(c)**

**Sol.** The **Balfour Declaration** was a public statement issued by the British government in 1917 during the **First World War** announcing support for the establishment of a "national home for the Jewish people" in **Palestine**, then an **Ottoman** region with a small minority **Jewish** population.

Palestine was inhabited by a Jewish minority and Arab majority during the ottoman empire.

Jews favored the idea while the Palestinians rejected it. Almost 6 million Jews lost their lives in the Holocaust which also ignited further demand for a separate Jewish state. Jews claimed Palestine to be their natural home while the Arabs too did not leave the land and claimed it. In 1947, the UN voted for Palestine to be split into separate Jewish and Arab states, with Jerusalem becoming an international city. This eventually marked the beginning of the Israel Palestine conflict.

It was in the year 1948 that Britain lifted its control over the area and Jews declared the creation of Israel. Although Palestinians objected, Jews did not back out which led to an armed conflict. Israeli forces captured East Jerusalem and the West Bank, various areas of Syrian Golan Heights, Gaza, and the Egyptian Sinai Peninsula in the year 1967.

**S458. Ans.(c)**

**Sol.** Dadasaheb Phalke Award was introduced by the government in 1969 and it was awarded for the first time to Devika Rani,

Dadasaheb Phalke directed India's first feature film Raja Harischandra (1913). He is known as the "Father of Indian Cinema". 51st Dadasaheb Phalke Award was recently presented to Rajinikanth.

It is presented annually at the National Film Awards ceremony by the Directorate of Film Festivals, an organisation set up by the Ministry of Information and Broadcasting.

Source:

<https://indianexpress.com/article/entertainment/rajini-gets-dada-saheb-phalke-award-7590766/>

**S459. Ans.(a)**

**Sol. Context:** Administrative organizations and tribunals in news

In order to bring in functional clarity and strengthen the regulatory framework and the disputes settlement mechanism in the telecommunication sector, the TRAI Act of 1997 was amended in the year 2000 and TDSAT was set up to adjudicate disputes and dispose of appeals

The Tribunal consists of a Chairperson and two Members appointed by the Central Government. The Chairperson should be or should have been a Judge of the Supreme Court or the Chief Justice of a High Court.

Source:

<https://tdsat.gov.in/admin/introduction/uploads/TDSAT%20INTRO.pdf>

**S460. Ans.(c)**

**Sol.** The Defence Research and Development Organisation (DRDO) has recently successfully flight-tested the High-speed Expendable Aerial Target (HEAT)- ABHYAS, from the Integrated Test Range (ITR), Chandipur off the coast of Bay of Bengal in Odisha. The target aircraft is equipped with a MEMS-based Inertial Navigation System (INS) for navigation along with the Flight Control Computer (FCC) for guidance and control.

ABHYAS is designed & developed by DRDO laboratory, Aeronautical Development Establishment (ADE), Bengaluru, for the Indian Armed Forces. The air vehicle ABHYAS can be used as an aerial target for the evaluation of various missile systems. The vehicle is programmed for fully autonomous flight. The check-out of air vehicles is done using a laptop-based Ground Control Station (GCS).

Source:

<https://currentaffairs.adda247.com/drdo-successfully-flight-tests-expendable-aerial-target-abhyas/>

**S461. Ans.(d)**

**Sol.** Department of School Education and Literacy has recently constituted the National Steering Committee (NSC) under the chairmanship of Dharmendra Pradhan for the implementation of the NIPUN Bharat Mission.

**NIPUN Bharat Mission:**

National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat), aims that every child in the country should necessarily attain foundational literacy and numeracy by the end of Grade 3, by 2026-27.

This Mission has been launched under **the aegis of the centrally sponsored scheme of Samagra Shiksha.**

NIPUN Bharat aims to cover the learning needs of children in the age group of 3 to 9 years by developing basic language; literacy and numeracy skills which will help them develop into better readers and writers.

The unique feature is that the goals of the Mission are set in the form of Lakshya Soochi or Targets for Foundational Literacy and Numeracy.

Source:

<https://pib.gov.in/PressReleasePage.aspx?PRID=1732830>

<https://currentaffairs.adda247.com/national-steering-committee-for-nipun-bharat-mission-setup-by-govt/>

**S462. Ans.(d)**

**Sol.** Asian Infrastructure Investment Bank (AIIB) is a multilateral development bank with a mission to improve social and economic outcomes in Asia and beyond. Its membership is not limited to Asian countries. Established in 2016 The bank currently has 103 members which includes members from Europe Latin America, Oceania, and North America.

China is the largest shareholder with 26.61 % voting shares in the bank followed by India (7.6%), Russia (6.01%), and Germany (4.2 %).

Source: <https://www.aiib.org/en/about-aiib/basic-documents/download/articles-of-agreement/basic-document-english-bank-articles-of-agreement.pdf>

**S463. Ans.(a)**

**Sol.**



**S464. Ans.(d)**

**Sol.** What is net-zero?

It is primarily carbon neutrality. It means the aggregate carbon emissions of a country should be zero on a given date. If a country emits a certain amount of carbon every year, it will have to offset it through forest absorption or carbon capturing or buying carbon credits. In a way, a country can achieve negative emissions, if removal and absorption exceed the actual emissions.

India has not yet agreed to a net-zero emission target.

To date, 137 of 192 countries that are part of the UN Climate Convention and representing 80% of global emissions have committed to net zero emissions targets. They include the world's two largest emitters – the US and China. The third biggest emitter, India, is yet to announce a net-zero target year. China has a net-zero target of 206

Source:

<https://www.hindustantimes.com/environment/all-you-need-to-know-about-net-zero-101629451204587.html>

**S465. Ans.(b)**

**Sol.** Extra Neutral Alcohol (ENA) is the primary raw material for making alcoholic beverages. It is colorless food-grade alcohol that does not have any impurities. It has a neutral smell and taste and typically contains over 95 percent alcohol by volume. It is derived from different sources — sugarcane molasses and grains — and is used in the production of alcoholic beverages such as whisky, vodka, gin, cane, liqueurs, and alcoholic fruit beverages.

Alcohol manufacturers have recently written to NITI Aayog asking for a reduction in import duty . Anticipating a shortage of domestic supplies, they have sought a reduction in duty to make it cost-effective for them to import Extra Neutral Alcohol from global markets.

Source:

<https://indianexpress.com/article/explained/explained-what-is-extra-neutral-alcohol-ena-6151528/>

**S466. Ans.(c)**

**Sol.** The Uyghurs are a Turkic ethnic group originating from and culturally affiliated with the general region of Central and East Asia. The Uyghurs are recognized as native to the Xinjiang Uyghur Autonomous Region in Northwest China.

Forty-three countries have recently called on China to “ensure full respect for the rule of law” for the Muslim Uighur community in Xinjiang, in a statement read at the United Nations that sparked outrage from Beijing.

The declaration, signed by the United States as well as several European and Asian member states and others, accused China of a litany of human rights violations against the Uighurs, including torture, forced sterilization, and forced disappearances.

Source:

<https://www.thehindu.com/news/international/43-countries-call-on-china-at-un-to-respect-uighur-rights/article37130917.ece>

**S467. Ans.(a)**

**Sol.** On the Indonesian island of Sulawesi, museum scientists have discovered 28 new species of beetles. One of them has been named *Trigonopterus corona*. This reflects the large impact of the [Covid-19](#) pandemic on this project,

SourceL=:

<https://indianexpress.com/article/explained/beetles-species-named-after-corona-7590632/>

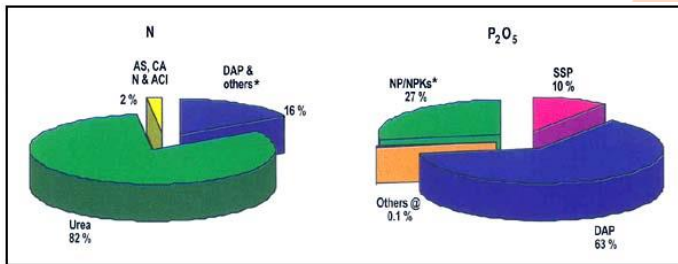
**S468. Ans.(b)**

**Sol.** The history of the Indian fertilizer industry dates back to 1906 when the first fertilizer factory opened at Ranipet (Tamil Nadu).

The fertilizer industry in India is in the core sector and second to steel in terms of investment.

While India uses many types of fertilizers, urea accounts for most of the consumption of N and DAP for most of that of P<sub>2</sub>O<sub>5</sub>. Urea accounts for 82 percent of the total consumption of straight N fertilizers

DAP accounts for 63 percent of total P<sub>2</sub>O<sub>5</sub> consumption and other complex fertilizers for 27 percent.



Source: <https://www.fao.org/3/a0257e/A0257E03.htm>

**S469. Ans.(b)**

**Sol.** Mahari is a ritualistic dance form from the eastern Indian state of Odisha that used to be performed at the temple of Lord Jagannatha at Puri by devadasi dancers called maharis.

Source:

<https://www.thehindu.com/entertainment/dance/tahia-odissis-beautiful-headgear/article36493794.ece>

**S470. Ans.(d)**

**Sol.** The Climate Vulnerability Index released was recently released by the Council on Energy, Environment, and Water (CEEW).

The states of Assam, Andhra Pradesh, Maharashtra, Karnataka, and Bihar are the most vulnerable to extreme climate events such as floods, droughts, and cyclones in India.

More than 80 percent of Indians live in districts vulnerable to climate risks, that is, 17 of 20 people in the country are vulnerable to climate risks, out of which every five Indians live in areas that are extremely vulnerable finds the report.

Source: <https://indianexpress.com/article/india/new-climate-vulnerability-index-finds-assam-and-andhra-most-at-risk-kerala-least-7591307/>

**S471. Ans.(a)**

**Sol.** The East Asia Summit (EAS) is the Indo-Pacific's premier forum for strategic dialogue. It was established in Kuala Lumpur on 14 December 2005.

ASEAN leads the forum, and the chair position rotates between the ASEAN Member States annually. Hence India has never hosted EAS.

The EAS has 18 members– Ten ASEAN countries (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Vietnam) and Australia, China, India, Japan, New Zealand, the Republic of Korea, Russia and the United States.

Source: <https://www.adda247.com/upsc-exam/16th-east-asia-summit-eas-2021/>

**S472. Ans.(c)**

**Sol.** It is found both in forests and near human habitations. They inhabit areas between 2,200-4,000 metres above mean sea level in the subtropical, tropical moist temperate, alpine, coniferous and broadleaved forests and scrublands. Distribution: It is distributed in a varied habitat including dry savannah and tropical rainforests. In the Indian Subcontinent, their distribution is reported in Bhutan, northern India and Nepal.

Protection Status:

IUCN Red List: Least Concern

CITES: Appendix-I

Wildlife Protection Act, 1972: Schedule-I

Source: <https://www.downtoearth.org.in/blog/wildlife-biodiversity/save-the-himalayan-grey-langur-65828>  
<https://www.downtoearth.org.in/news/wildlife-biodiversity/troop-of-blue-langurs-spotted-in-gujarat-s-chemical-paradise-ankleshwar-79864>

**S473. Ans.(a)**

**Sol.** Judicial review is recognized as a necessary and a basic requirement for the construction up of a novel civilization in order to safeguard the liberty and rights of individuals. The power of judicial review is significantly vested upon the High Courts and the Supreme Court of India. Under Article 13 of the Indian Constitution, the compulsion of judicial review was described in fundamental rights in Part III. It is stated that the State of the Union shall not make such rules that takes away or abridges the essential rights of the people. If any law made by the Parliament or the State Legislature contravenes the provisions of this Article, shall be void.

The influence of judicial assessment has been mentioned under Articles 226 and 227 in the case of the High Court and Articles 32 and 136 of the Constitution of India for the review.

Source: <https://www.legalserviceindia.com/legal/article-746-judicial-review-in-india.html>  
<https://www.thehindu.com/news/national/supreme-court-judgment-on-pegasus/article37184269.ece>

**S474. Ans.(a)**

**Sol.** Launched by the ministry of power and Ministry of New and renewable energy, the GDAM will enable electricity generation and distribution companies to buy or sell renewable energy through open access.

The Green Day-ahead market will operate in an integrated way with the conventional day-ahead market. The Exchanges will offer the market participants to submit bids together for both conventional and renewable energy through the separate bidding windows.

The clearance will take place in a sequential manner — renewable energy bids will be cleared first in accordance with the must-run status of the renewables, followed by the conventional segment. This mechanism will allow renewable energy sellers to subsequently bid in the conventional segment should their bids remain uncleared in the green market. There will be separate price discoveries for both conventional and renewables.

Source:

<https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1766372>

<https://www.firstpost.com/india/power-minister-launches-green-day-ahead-market-portal-how-new-reform-will-boost-indias-renewable-energy-capacity-10086691.html>

**S475. Ans.(d)**

**Sol.** Registrar General and Census Commissioner of India was founded in 1961 by the Government of India Ministry of Home Affairs, for arranging, conducting and analysing the results of the demographic surveys of India including Census of India and Linguistic Survey of India.

Presently, the registration of births and deaths is done by the local registrar appointed by States.

Recently Centre has proposed amendments to the Registration of Births and Deaths Act, 1969 that will enable it to “maintain the database of registered birth and deaths at the national level”.

Source:

<https://www.thehindu.com/news/national/centre-wants-to-keep-birth-death-database/article37203036.ece>

**S476. Ans.(d)**

**Sol.** As per the latest Sample Registration System (SRS) report by Registrar General of India (RGI) for the last three years, the Maternal Mortality Ratio (MMR) of India has reduced from 130 per 100,000 live births in SRS 2014-16 to 122 in SRS 2015-17 and to **113 per 100,000 live births** in SRS 2016-18

The current infant mortality rate for India in 2021 is **28.771** deaths per 1000 live births, a **3.61% decline** from 2020.

India has committed itself to the latest UN target for the Sustainable Development Goals (SDGs) for MMR at 70 per 1,00,000 live births by 2030. As per NHP (National Health Policy) 2017, the target for MMR is **100 per 1,00,000 live births** by 2020.

Source:

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1697441>

**S477. Ans.(d)**

**Sol.** The Asian Development Bank (ADB) is a regional development bank established on 19 December 1966. The members of ADB are not limited to Asia Continent. It has varied membership from Asia pacific region.

Japan and the United States each holds the largest proportion of shares at 15.571%. China holds 6.429%, India holds 6.317%, and Australia holds 5.773%.

Recently The Government of India has applied for loans from the Asian Development Bank (ADB) and the Asian Infrastructure Investment Bank (AIIB) to procure as many as 667 million doses of COVID-19 vaccines. The vaccines will be purchased by the Government of India through a competitive process and the ADB will be administering the purchasing system and implementing it under ADB's APVAX, or Asia-Pacific Vaccine Access Facility, mechanism.

Source:

<https://www.thehindu.com/news/national/india-applies-for-adb-aiib-loans-to-procure-667-million-doses-of-covid-19-vaccines/article37196769.ece>

[https://en.wikipedia.org/wiki/Asian\\_Development\\_Bank](https://en.wikipedia.org/wiki/Asian_Development_Bank)

**S478. Ans.(c)**

**Sol.** The National Oceanic and Atmospheric Administration (NOAA) Annual Greenhouse Gas Index (AGGI) shows that from 1990 to 2020, radiative forcing by long-lived greenhouse gases (LLGHGs) increased by 47%, with CO2 accounting for about 80% of this increase.

Source: <https://www.thehindu.com/sci-tech/energy-and-environment/carbon-dioxide-emissions-in-2020-above-decadal-average/article37167104.ece>

**S479. Ans.(c)**

**Sol.** Health Ministry is planning to start the “Har Ghar Dastak” (Knock Every Door) campaign in districts with low vaccination rates to enthuse and motivate people towards getting their jab.

Source:

<https://www.thehindu.com/news/national/coronavirus-knock-every-door-campaign-to-boost-second-dose-vaccination/article37200885.ece>

**S480. Ans.(a)**

**Sol.** The Ministry of Civil Aviation has recently launched the Krishi Udan 2.0 scheme under which cargo-related infrastructure will be built in airports of northeast, hilly and tribal regions to assist farmers in transporting agriculture products.

The Centre, under Krishi Udan 2.0, has stated that a full waiver of airport charges would be granted at select airports even if the agricultural cargo is less than 50 per cent of the total chargeable weight carried.

**S481. Ans.(c)**

**Sol.** National Mission on Cultural Mapping is a mission mode project of the Ministry of Culture, Government of India.

1. It is aimed to address the necessity of preserving the threads of rich Indian Art and Cultural Heritage, convert the vast and widespread cultural canvas of India into an objective Cultural Mapping while creating a strong “Cultural Vibrancy” throughout the nation.

2. It can create a database that anybody can plug into, thus becoming a resource for the media, researchers, and funders.

3. Born in 2015, the National Mission on Cultural Mapping was created with an outlay of ₹3,000 crore

4. It will identify, collect and record cultural assets and resources. It correlates this to planning and strategizing.

5. A portal and database listing organizations, spaces, facilities, festivals, and events will be created

Source: <https://journalsofindia.com/national-mission-on-cultural-mapping-and-roadmap/>

**S482. Ans.(d)**

**Sol.** Swachh Survekshan is a ranking exercise taken up by the Government of India to assess rural and urban areas for their levels of cleanliness and active implementation of Swachhata mission initiatives in a timely and innovative manner.

The Ministry of Urban Development, Government of India takes up the Swachh Survekshan in urban areas and the **Ministry of Drinking Water and Sanitation in rural areas.**

The **Quality Council of India (QCI)** has been commissioned the responsibility of carrying out the assessment.

Source: <https://vikaspedia.in/health/sanitation-and-hygiene/swachh-survekshan>

<https://www.moneycontrol.com/news/business/real-estate/housing-minister-hardeep-puri-launches-7th-edition-of-swachh-survekshan-2022-7513981.html>

**S483. Ans.(c)**

**Sol.** Sohrai – Khovar Painting was given GI tag in 2020 to Jharkhand

Chokuwa rice and Judima Rice wine Are GI tag products of Assam.

Chokuwa rice was given GI Tag in 2020 and Judiam rice has recently received GI Tag status.

A local fermented drink made with rice, Judima derives its name from ju which means wine and Dima means ‘belonging to the Dimasa’. It is a pale yellow or reddish (depending on the color of rice) drink that is slightly cloudy in appearance, has a mellow fragrance, and is sweet to taste.

It is made from three different types of saul (rice): red or white bora (the glutinous sticky variety), non-bora (the everyday non-sticky variety), and finally the bairing rice, a unique variety cultivated in Jhum style (terrace farming) only by the Dimasa people. Bairing rice is cultivated solely for preparing Judima. For the Dimasa people, judima is an important part of their tradition, to be used in ceremonies that celebrate the birth and mourn death.

1. Sohrai – Khovar Painting-Jharkhand
2. Chokuwa Rice- Assam
3. rice wine Judima- Assam

Source:

<https://www.thehindu.com/news/national/judima-dimasa-people-judima-rice-wine-of-dimasa-people-gi-tag/article36708733.ece>

**S484. Ans.(c)**

**Sol. Context:** Nimaben Acharya, became the first woman Speaker of Gujarat Legislative Assembly t recently

**Speaker of loksabha and legislative assembly:**

According to the **book Practice and Procedure of Parliament, published by the Lok Sabha Secretariat**, the Speaker is “the principal spokesman of the House, he represents its collective voice and is its sole representative to the outside world”. The Speaker presides over the House proceedings and joint sittings of the two Houses of Parliament.

**The Constitution neither sets a time limit nor specifies the process for these elections.** It leaves it to the legislatures to decide how to hold these elections. In Lok Sabha and state legislatures, the President/Governor sets a date for the election of the Speaker, and it is the Speaker who decides the date for the election of the Deputy Speaker.

The Constitution provides that the office of the Speaker should never be empty. So, he continues in office until the beginning of the next House, except in the event of death or resignation.

It is the Speaker’s decision that determines whether a Bill is a Money Bill and therefore outside of the purview of the other House.

Source:

<https://indianexpress.com/article/explained/explained-electing-a-speaker-deputy-speaker-7399970/>

<https://indianexpress.com/article/cities/gandhinagar/gujarat-nimaben-acharya-appointed-first-woman-speaker-7538373/>

**S485. Ans.(a)**

**Sol.** Context: Trials of AGNI-V being conducted by DRDO recently

**What are ICBMs?**

Intercontinental ballistic missiles or ICBMs are guided missiles that can deliver nuclear and other payloads. ICBMs have a minimum range of 5,500 km, with maximum ranges varying from 7,000 to 16,000 km.

- Only a handful of countries, including Russia, United States, China, France, India, and North Korea, have ICBM capabilities

*The Agni-V, a three-stage solid-fueled missile, has an approximate range of 5,500-5,800 kilometers [the exact range remains classified, but it is assumed that the missile has a range of 6,000-7,500 kilometers], and can carry a 1,500-kilogram (3,300-pound) nuclear warhead. It is India's most advanced ICBM*

Source:

<https://www.news18.com/news/explainers/explained-as-india-plans-agni-v-test-heres-how-itll-boost-deterrence-and-why-china-is-not-amused-4241852.html>

**S486. Ans.(b)**

**Sol.** Buddha asked his followers to avoid the two extremes of indulgence in worldly pleasure and the practice of strict abstinence and asceticism. He ascribed instead the 'Madhyam Marg' or the middle path which was to be followed.

His teachings were written down around 25 B.C.E. in Pali. The Abhidhamma Pitaka is a philosophical analysis and systematization of the teaching and the scholarly activity of the monks. The Sutta Pitaka consists of the main teaching or Dhamma of Buddha.

Source: <https://www.thehindu.com/news/national/national-museum-to-open-buddha-galleries-soon-arms-gallery-in-2-months/article36570651.ece>

**S487. Ans.(b)**

**Sol.** Every year, the Finance Minister announces the quantum of funds that will be raised by the government by borrowing from the market. This amount and the interest due on it are reflected in the government debt. Off-budget borrowings are loans that are taken not by the Centre directly, but by another public institution that borrows in the direction of the central government. Such borrowings are used to fulfill the government's expenditure needs.

But since the liability of the loan is not formally on the Centre, the loan is not included in the national fiscal deficit. This helps keep the country's fiscal deficit within acceptable limits.

The government can ask an implementing agency to raise the required funds from the market through loans or by issuing bonds.

**Food subsidy is one of the major expenditures of the Centre.** In the Budget presentation for 2020-21, the government paid only half the amount budgeted for the food subsidy bill to the Food Corporation of India. The shortfall was met through a loan from the National Small Savings Fund.

Source:

<https://indianexpress.com/article/explained/why-govt-borrows-off-budget-and-how-7162925/>

**S488. Ans.(b)**

**Sol.** Manipur's most famous Hathei chili and Tamenglong orange have been awarded the GI Tag recently.

Hathei chilly, commonly known as the Sirarakhong chilly, is almost 9-inches in size and bright red in color. This specific variety of chili thrives well only in the climatic condition of the Sirarakhong village of the Ukhrul district. Another Indian food that bagged its GI Tag is the Tamenglong Orange. This orange variant belongs to the Tamenglong district of Manipur, which is also known as 'The Orange Bowl of Manipur'.

Source: <https://timesofindia.indiatimes.com/life-style/food-news/manipurs-hathei-chilli-and-tamenglong-orange-get-gi-tag/photostory/86365811.cms?picid=86365870>

**S489. Ans.(d)**

**Sol.** Kathaprasangam (lyrical narrative or storytelling performance) is a performing art of Kerala, India.

It combines speaking, acting, and singing to present a story. Costumes, make-up, or settings are not used. The main artist, the *Kaadhikan*, tells the story, acts, and sings with two or three accompanying instrumentalists.

Source:

<https://www.thehindu.com/news/national/kerala/katha-prasangam-artiste-kollam-babu-dead/article36415803.ece>  
<https://www.thehindu.com/news/cities/kozhikode/reinventing-kathaprasangam-for-modern-times/article36682128.ece>

**S490. Ans.(d)**

**Sol.** Pradhan Mantri Sahaj Bijli Har Ghar Yojana – "Saubhagya" is a scheme to ensure electrification of all willing households in the country in rural as well as urban areas.

1. Pradhan Mantri Sahaj Bijli Har Ghar Yojana – Saubhagya, was launched in October 2017.

2. **Ministry of power is the nodal agency for it.**

3. The beneficiaries for free electricity connections would be identified using Socio-Economic and Caste Census (SECC) 2011 data. However, un-electrified households not covered under the SECC data would also be provided electricity connections under the scheme on payment of Rs. 500 which shall be recovered by DISCOMs in 10 installments through electricity bill.



4. The solar power packs of 200 to 300 Wp with battery bank for un-electrified households will be located in remote and inaccessible areas, comprising Five LED lights, One DC fan, One DC power plug. It also includes Repair and Maintenance (R&M) for 5 years.

Source: <https://powermin.gov.in/en/content/saubhagya>  
<https://vikaspedia.in/energy/policy-support/pradhan-mantri-sahaj-bijli-har-ghar-yojana>  
[https://www.business-standard.com/article/current-affairs/saubhagya-scheme-sees-electrification-in-2-82-crore-households-121092500319\\_1.html](https://www.business-standard.com/article/current-affairs/saubhagya-scheme-sees-electrification-in-2-82-crore-households-121092500319_1.html)

#### S491. Ans.(c)

**Sol.** The EC has the power to register parties under the **Representation of the People Act, 1951**, it **does not have** the power to deregister parties that are inactive.

The EC has raised concern over the possible misuse of the income tax exemption by parties that don't contest elections. EC had raised the concern that the **Income Tax exemption on donations given to registered parties under Section 13 A of the Income-tax Act** could be misused by some.

Additional info:

On the latest list of parties are eight national recognized parties — the All-India Trinamool Congress, the Bahujan Samaj Party, the BJP, the CPI, the CPI(M), the INC, the NCP, and the National People's Party, which is the latest addition, and 54 recognized State parties, some of which are recognized in multiple States.

Source: <https://www.thehindu.com/news/national/ec-awaits-law-ministry-nod-to-deregister-inactive-parties/article36666104.ece>

#### S492. Ans.(b)

**Sol. Context:** 28th September is the birth anniversary of revolutionary freedom fighter Bhagat Singh.

Bhagat Singh and B.K. Dutt threw a bomb on 8 April 1929 in the Central Legislative Assembly, in protest against the passing of two repressive bills, the Public Safety Bill and the Trade Dispute Bill.

In the leaflet he threw in the Central Assembly on 8 April 1929, he stated: "It is easy to kill individuals but you cannot kill the ideas. Great empires crumbled, while the ideas survived.

#### **Bhagat Singh:**

1. Bhagat Singh was born in 1907 in Lyallpur district (now in Pakistan), and grew up in a Sikh family deeply involved in political activities. In 1923, Bhagat Singh joined the National College, Lahore which was founded and managed by Lala Lajpat Rai and Bhai Parmanand.

2. In 1924 in Kanpur, he became a member of the Hindustan Republican Association (HRA), started by Sachindranath Sanyal a year earlier. In 1928, HRA was renamed from Hindustan Republican Association to the Hindustan Socialist Republican Association (HSRA).

3. In 1925-26 Bhagat Singh and his colleagues started a militant youth organization called the Naujawan Bharat Sabha. In 1927, he was first arrested on charges of association with the Kakori Case accused of an article written under the pseudonym Vidrohi (Rebel).

4. In 1928, Lala Lajpat Rai had led a procession to protest against the arrival of the Simon Commission. The police resorted to a brutal lathi-charge, in which Lala Lajpat Rai was severely injured and later succumbed to his injuries.

5. To take revenge for the death of Lala Lajpat Rai, Bhagat Singh and his associates plotted the assassination of James A. Scott, the Superintendent of Police. However, the revolutionaries mistakenly killed J.P. Saunders. The incident is famously known as the Lahore Conspiracy case (1929).

6. Bhagat Singh and B.K. Dutt threw a bomb on 8 April 1929 in the Central Legislative Assembly, in protest against the passing of two repressive bills, the Public Safety Bill and the Trade Dispute Bill.

Source:

<https://indianexpress.com/article/opinion/columns/what-would-todays-government-have-done-with-gandhi-and-bhagat-singh-7538274/>

<https://www.latestly.com/socially/india/news/once-bhagatsingh-was-asked-in-jail-why-he-didnt-defend-himself-in-the-case-against-him-latest-tweet-by-pib-india-2894755.html>

#### S493. Ans.(c)

**Sol.** The National Disaster Management Authority (NDMA), headed by the Prime Minister of India, is the apex body for Disaster Management in India.

It was constituted on 27th September 2006, under the Disaster Management Act, 2005.

With regard to potential bioterrorism, the country currently has no dedicated policy that deals with the risks of the intentional release of dangerous organisms. Multiple ministries are empowered to ensure the protection of plants, animals, and humans from disease-causing organisms.

For example, one of MoHFW's mandates is to prevent the export and import of plants and livestock that can pose risks to agricultural and animal biosecurity, respectively. MoEFCC takes charge of the import and export of plants for commercial purposes. Similarly, MoHFW is tasked to ensure the availability of safe and wholesome food to strengthen human biosecurity in the country. The problem here is that these different ministries often do not coordinate and share data with each other.

Source:

<https://www.downtoearth.org.in/blog/governance/untold-risks-india-needs-full-time-body-to-tackle-biological-threats-76194>

**S494. Ans.(d)**

**Sol.** The Akash Prime is a medium-range mobile surface-to-air missile (SAM) system developed by the DRDO and produced by Bharat Dynamics Limited (BDL).

The Akash SAM was developed to replace the Russian 2K12 Kub (SA-6 Gainful) missile system, currently in service.

The initial version of the Akash has an operational range of 27-30 km and a flight altitude of around 18 km. The Akash Prime, which underwent its maiden flight test on Monday from Integrated Test Range (ITR), Chandipur, Odisha, has the same range as that of the earlier version but has a crucial new addition — that of an indigenous active Radio Frequency (RF) seeker for improved accuracy to hit aerial targets.

Other improvements in the system ensure more reliable performance under low-temperature environments at higher altitudes.

The Akash system is fully mobile and capable of protecting a moving convoy of vehicles. The launch platform has been integrated with both wheeled and tracked vehicles

Source: <https://www.hindustantimes.com/india-news/akash-prime-range-of-missile-test-fired-successfully-101632760274970.html>  
<https://www.livemint.com/news/india/ladakh-drdo-akash-prime-adds-more-firepower-to-india-s-missile-arsenal-5-points-11632804492239.html>  
<https://indianexpress.com/article/explained/explained-two-advanced-versions-of-akash-missile-7539643/>

**S495. Ans.(a)**

**Sol.** The Indian Agricultural Research Institute (IARI) has developed the country's first-ever **non-GM** (genetically modified) herbicide-tolerant rice varieties that can be directly seeded and significantly save water and labor compared to conventional transplanting.

The varieties — Pusa Basmati 1979 and Pusa Basmati 1985 — contain a mutated acetolactate synthase (ALS) gene making it possible for farmers to spray Imazethapyr, a broad-spectrum herbicide, to control weeds.

**Importance of these new varieties:**

Imazethapyr, effective against a range of broadleaf, grassy, and sedge weeds, can't be used on normal paddy, as the chemical does not distinguish between the crop and the invasive plants. The ALS gene in rice codes for an enzyme (protein) that synthesizes amino acids for crop growth and development. The herbicide sprayed on normal rice plants binds itself to the ALS enzymes, inhibiting their production of amino acids.

The new basmati varieties contain an ALS gene whose DNA sequence has been altered using ethyl methanesulfonate, a chemical mutant. As a result, the ALS enzymes no longer have binding sites for Imazethapyr and amino acid synthesis isn't inhibited. The plants can also now "tolerate" the application of the herbicide, and hence it kills only the weeds.

Source: <https://indianexpress.com/article/india/india-gets-first-herbicide-tolerant-launch-today-7538299/>

**S496. Ans.(c)**

**Sol.** The Tenth Schedule of the Constitution, popularly known as the anti-defection law, specifies the circumstances under which changing of political parties by legislators invites action under the law. The law covers three scenarios with respect to the shifting of political parties by an MP or an MLA. Three Scenarios Elected Member - The first is when a member elected on the ticket of a political party "voluntarily gives up" membership of such a party or votes in the House against the wishes of the party. Independent Candidate - The second is when a legislator who has won his or her seat as an independent candidate joins a political party after the election. In both these instances, the legislator loses the seat in the legislature on changing (or joining) a party. Nominated Member - The third scenario relates to nominated MPs. In their case, the law gives them six months to join a political party, after being nominated. If they join a party after such time, they stand to lose their seat in the House.

**S497. Ans.(c)**

**Sol.** A "Cyclonic Storm" or a "Cyclone" is an intense vortex or a whirl in the atmosphere with very strong winds circulating around it in an anti-clockwise direction in the Northern Hemisphere and in the clockwise direction in the Southern Hemisphere. Tropical Cyclones (TCs) are warm-core low-pressure systems having a large vortex in the atmosphere, which is maintained by the release of latent heat by convective clouds that form over warm oceans. In the northern hemisphere, the winds in a cyclone blow anticlockwise in the lower troposphere and clockwise in the upper troposphere. However, in the southern hemisphere, the winds of the cyclone blow in the opposite direction i.e. clockwise in the lower levels and anticlockwise in the upper levels.

A full-grown cyclone is a violent whirl in the atmosphere with 150 to 1000 km diameter and 10 to 15 km height. The following factors are considered favorable for cyclogenesis. These are:

- i. Coriolis Parameter
- ii. Low-level positive vorticity
- iii. Weak vertical wind shear of horizontal winds
- iv. Warm Sea surface temperature (> 26.5° Celsius)
- v. Large convective instability
- vi. Large relative humidity at lower and middle troposphere

Source: <https://www.thehindu.com/news/national/other-states/odisha-sounds-high-alert-over-cyclone-gulab/article36663018.ece>  
[https://mausam.imd.gov.in/imd\\_latest/contents/pdf/cyclone\\_sop.pdf](https://mausam.imd.gov.in/imd_latest/contents/pdf/cyclone_sop.pdf)

