

General Studies

Current Affair Test (October-2023)

1. Answer: (B)

Explanation

- Indian pharmaceutical industry is the 3rd largest pharmaceutical industry in the world by volume with current market size of around USD 50 Billions. Hence, statement 1 is correct.
- Recently, the Ministry of Chemicals and Fertilizers has launched initiatives to nurture Innovation, research, and development in the Medical and Pharmaceutical sectors.
- These Initiatives are National Policy on Research and Development and Innovation in Pharma-MedTech Sector in India and Scheme for Promotion of Research and Innovation in Pharma MedTech Sector (PRIP). Hence, statement 2 is correct.

2. Answer: (A)

'CRIIIO 4 GOOD' is a new online, life skills learning modules, to promote gender equality among girls and boys. 'CRIIIO 4 GOOD' is a series of 8 cricket-based animation films to promote gender parity, equip girls with life skills and encourage their participation in sports. The themes of the eight modules are: leadership, problem-solving, confidence, decision-making, negotiation, empathy, teamwork and goal setting and are visualized through state-of-the-art animation using cricketing examples. In-depth research into local nuances has made these films real and relatable. The programme was launched by the Ministry of Education in association with the International Cricket Council, UNICEF, and the Board of Control for Cricket in India at the Narendra Modi Stadium, Ahmedabad.

3. Answer: (C)

Explanation

Statements 1 and 3 are correct. Geospatial intelligence is the collection and integration of data from a network of technologies, including satellites, mobile sensors, ground-control stations and aerial images. It monitors environmental factors like temperature, precipitation, and polar ice to anticipate disturbances. Statement 2 is incorrect. Geospatial intelligence can be used to identify trends and patterns, but it cannot be used to predict the future with certainty.

4. Answer: (D)

Explanation

Statements 1 and 3 are correct. Social Audit is the examination and assessment of a programme/scheme conducted with the active involvement of people and comparing official records with actual ground realities.

The social audit unit only identifies malpractice, and it's the responsibility of state governments to recover funds and hold officials accountable. Statement 2 is incorrect. Social Audits are conducted by a committee that is selected by the Gram Sabha.

5. Answer: (C)

Explanation

Statements 1 and 2 are correct. Five Eyes Alliance is both surveillance-based and tracks signals intelligence (SIGINT). The objective of the Five Eyes alliance has shifted following the collapse of the Soviet Union and the emergence of new global challenges like terrorism and the growing influence of China.

6. Answer: (A)

Explanation

Statements 1 and 3 are incorrect. Pipe Composting Technology is a method of converting organic waste into compost using PVC pipes 8 – 10 inches in diameter and 1.25 metres in length. The pipes are placed vertically keeping them 25-30 cm inside the ground. This composting method is odorless and prevents the attraction of flies, ensuring a pleasant atmosphere. Statement 2 is correct. Pipe composting is eco-friendly, as it doesn't harm the environment.

7. Answer: (B)

The African Union (AU) is a continental union consisting of 55 member states located on the continent of Africa. The AU was announced in the Sirte Declaration in Sirte, Libya, on 9 September 1999, calling for the establishment of the African Union. At the 18th G20 (Group of 20) meeting, held in Delhi, the African Union was admitted as a member to the G20 like the European Union.

8. Answer: (B)

FPI, released by the Food and Agriculture Organization (FAO) is a measure of the monthly change in international prices of a basket of food commodities. It consists of the average of five commodity group price indices – cereals, oilseeds, dairy products, meat and sugar, weighted with the average export shares of each of the groups.

9. Answer: (B)

Hallmarking is like a quality stamp for jewellery and precious metal items. It tells you how pure or good the metal is. The principal objectives of the Hallmarking Scheme are to protect the public against adulteration and to obligate manufacturers to maintain legal standards of fineness. At present two precious metals namely gold and silver have been brought under the

purview of Hallmarking. Mandatory hallmarking order is applicable on 14, 18 and 22 carats of gold jewellery/artefacts only. BIS assigns a unique HUID (Hallmarking Unique ID) number to all hallmarked items.

10. Answer: (C)

- The Indian Census is the largest single source of various statistical information on various characteristics of the people of India.
- The Census of 1881 which was undertaken on 17th February, 1881 by W.C. Plowden, Census Commissioner of India was a great step towards a modern synchronous census. Since then, censuses have been undertaken uninterruptedly once every ten years
- After independence, The responsibility of conducting the decadal census rests with the Office of the Registrar General and Census Commissioner of India, Ministry of Home Affairs, Government of India.
- The Census Act was enacted in the year 1948 to provide a plan for conducting population census along with the duties and responsibilities of census officer

11. Answer: (A)

Explanation :

- Sankalp Saptah is closely linked to the effective implementation of the Aspirational Blocks Programme (ABP).
- The Aspirational Blocks Program (Launched in 2023) takes its cues from the Aspirational District Programme initiated in 2018, encompassing 112 districts across India. The central objective of the ABP is to elevate governance standards and improve the overall quality of life in 500 Aspirational Blocks, spanning 329 districts throughout the country.

Hence statement 1 is incorrect.

- The inaugural program includes approximately 3,000 panchayat and block-level people's representatives and functionaries from across the country at Bharat Mandapam.
- Bharat Mandapam is a massive International Exhibition-cum-Convention Centre in New Delhi, India, managed by ITPO. It hosted the 2023 G20 New Delhi summit, the first G20 summit held in India, from September 9 to 10, 2023.
- Adi Varaha Mandapam, part of the Mahabalipuram rock-cut cave temples, is located near the Shore Temple and Rathas in the hilltop town of Mamallapuram. It represents late seventh-century Indian rock-cut architecture and stands as an excellent specimen of ancient Hindu cave architecture.

Hence statement 2 is incorrect.

- Sankalp Saptah will be observed in all 500

aspirational blocks. Each day of Sankalp Saptah focuses on a specific development theme. The themes for the first six days include "Sampoorna Swasthya," "Suposhit Parivar," "Swachhta," "Krishi," "Shiksha," and "Samridhi Diwas." Hence statement 3 is correct.

12. Answer: (B)

Explanation

- The Protection of Children from Sexual Offences Act (POCSO Act) is a pivotal legal framework in India dedicated to combatting child sexual abuse. Enacted in 2012, this Act falls under the jurisdiction of the Ministry of Women and Child Development (MoWCD). Its primary purpose is to safeguard individuals under the age of 18 from various forms of sexual offenses, including assault, harassment, and pornography. Hence statement 1 is correct.
- The Act was further reviewed and amended in 2019 to introduce more stringent punishment including the death penalty for committing sexual crimes on children, with a view to deter the perpetrators & prevent such crimes against children. Hence statement 2 is incorrect.
- Recently, the Law panel, headed by Justice (Retired) Ritu Raj Awasthi, advised keeping the age of consent at 18 in the Protection of Children from Sexual Offences Act (POCSO Act) but suggested a more lenient approach for cases involving adolescents aged 16 to 18. Hence statement 3 is correct.

13. Answer: (B)

Explanation

- The Green Revolution came to India in 1961 during a critical period when the nation faced the threat of famine. Driven by the efforts of Norman Borlaug, who was invited to India by Dr. M. S. Swaminathan, an advisor to the Indian Minister of Agriculture, this transformative initiative earned Dr. Swaminathan the title of the "Father of the Green Revolution in India." Guided by Prime Minister Lal Bahadur Shastri, the Green Revolution took full form in 1968, notably boosting food grain production in states like Punjab, Haryana, and Uttar Pradesh. Hence statement 1 is incorrect.
- The word "Green Revolution" was coined by William S. Gaud of the United States Agency for International Development (USAID) in 1968. Hence statement 2 is correct
- India began its own Green Revolution program of plant breeding, irrigation development, and financing of agrochemicals. India soon adopted IR8 a semi-dwarf rice variety developed by the International Rice Research Institute (IRRI) that could produce more grains of rice per plant when grown with certain fertilizers and irrigation. Hence statement 3 is correct.

14. Answer: (C)

Explanation :

- Statement 1 is not correct: The SASTRA Ramanujan Prize is founded by Shanmugha Arts, Science, Technology & Research Academy (SASTRA) located near Kumbakonam, India.
- Statement 2 is not correct: Ruixiang Zhang of the USA will be awarded with the 2023 SASTRA Ramanujan Prize for his outstanding contributions in Mathematics.
- The annual cash prize of USD 10,000 will be given at an international conference in Number Theory during December 20 and December 22 at SASTRA University in Kumbakonam, mathematician Srinivasa Ramanujan's hometown.
- Statement 3 is correct: The age limit for the prize has been set at 32 influenced by Ramanujan's achievements in his brief life of 32 years.

15. Answer: (C)

- Green Hydrogen Fuel Cells are a clean, reliable, quiet, and efficient source of high-quality electric power.
- They use Green Hydrogen as a fuel to drive an electrochemical process that produces electricity, with water and heat as only by-products. Statement 2 is correct.

Green Hydrogen:

- Green hydrogen is a type of hydrogen produced through a process called electrolysis, using renewable energy sources like wind or solar power.
- It involves splitting water (H₂O) into its constituent elements, hydrogen (H₂) and oxygen (O₂), with zero greenhouse gas emissions.

Fuel Cell:

- A fuel cell is an electrochemical device that converts chemical energy (in this case, hydrogen) into electrical energy. Statement 1 is correct.
- It consists of two electrodes (anode and cathode) separated by an electrolyte.

16. Answer: (D)

- A hybrid seed is produced by controlled Cross-Pollination between different varieties of the same plant. Statement 1 is correct.
- The transfer of pollen grains from the anther of one plant to the stigma of another different plant is called cross-pollination.
- These are chosen to enhance the characteristics of the resulting plants including – better yield, greater uniformity, and disease resistance. Since all hybrid seeds in a packet have the same parent plants, which means they will all grow into uniform plants. Statement 3 is correct.
- These are often easier and faster to grow than Heirloom Seeds. Statement 2 is correct.
- Heirloom Seeds come from open-pollinated plants, meaning the plants were pollinated by natural mechanisms like wind, insects, or birds,

rather than through controlled crossbreeding or hybridization.

17. Answer: (B)

- Asia Pacific Forum on Human Rights: It was founded in 1996. Statement 1 is not correct.
- It aims to address significant human rights challenges in the Asia-Pacific region. Statement 2 is correct.
- The APF has 17 full members and eight associate members.
- To be admitted as a full member, a National Human Rights Institution must fully comply with the minimum international standards set out in the Paris Principles.
- Form partnerships with various international agencies, governments, and non-government organizations. Statement 3 is correct.
- Collaborates with organizations such as OHCHR, UNDP, UN Women, and UNFPA.

18. Answer: (C)

- India and Canada both countries are engaged in technical negotiations for a Comprehensive Economic Partnership Agreement (CEPA) including trade in goods, services, investment, and trade facilitation. statement 1 is correct.
- Canada's Intellectual Property Office and India's Department of Industrial Policy and Promotion (DIPP) agreed to strengthen cooperation in the area of Intellectual Property Rights (IPR). statement 2 is correct.
- IC-IMPACTS (the India-Canada Centre for Innovative Multidisciplinary Partnerships to Accelerate Community Transformation and Sustainability) is the first, and only, CanadaIndia Research Centre of Excellence. statement 3 is correct.

19. Answer: (A)

- Iran has launched the imaging satellite Noor-3 into space. Option A is correct.
- Iran has created an imaging satellite.
- It is a spy satellite with possible surveillance capabilities, bolstering Iran's space capabilities.
- Its orbit is 450 kilometers (280 miles) above the Earth's surface.
- The three-stage Qased, or message carrier, launched it.
- The spacecraft's two predecessors, Noor-1 and Noor-2, launched atop Qased rockets in April 2020 and March 2022, respectively.
- Noor-1 returned to Earth in April 2022, however Noor-2 remains functioning and may collaborate with Noor 3 when it becomes operational.
- The launch was carried out by Iran's paramilitary Revolutionary Guard's aerospace branch.

20. Answer: (C)

Explanation

- Taliban seek economic support and recognition

from India ahead of the Kazan meeting under Moscow format.

- Statement 2 is correct: The Moscow format is one of the several dialogue platforms started to attain reconciliation in Afghanistan.
- Statement 1 is correct: It consisted of six member countries — Russia, Afghanistan, China, Pakistan, Iran and India.
- The Kazan chapter of the Moscow format consultations has additional significance because China became the first major power to appoint a new ambassador, Zhao Xing, to Kabul.

21. Answer: (B)

Explanation

- Recently, the union government has extended support under the scheme for Remission of Duties and Taxes on Exported Products (RoDTEP) till 30 June 2024, earlier the support was notified till 30th September 2023.
- The RoDTEP Scheme was introduced by the government as a duty remission scheme on exports and is being implemented from 1 January 2021
- Statement 1 is Correct: RoDTEP is a WTO-compliant scheme. It replaced the Merchandise Exports from India Scheme (MEIS), in response to the US challenging the Indian export subsidies under the MEIS at the WTO.
- Statement 2 is not correct: Every exporter of goods in India is eligible to obtain the benefits under the RoDTEP scheme, subject to certain conditions:
- This scheme is open to both manufacturers and merchant exporters, without any threshold of turnover.
- Statement 3 is Correct: RoDTEP is a fully automated digital credit system that facilitates reimbursements of taxes and duties in transferable electronic scripts and keeps track of the credits in a computerised ledger.

22. Answer: (C)

- The Gems and Jewellery Export Promotion Council (GJEPC) has urged diamond businesses to refrain from importing rough diamonds.
- It is the highest body of India's gem and jewelry sector, funded by the Ministry of Commerce and sector of the Government of India.

The primary function is:

- Its primary role is to introduce and promote Indian gem and jewelry products to the international market.
- To that end, the Council provides its members with market information on foreign trade inquiries, trade and tariff legislation, import duty rates, and information about jewelry fairs and exhibitions.
- Mumbai, Maharashtra, is the company's headquarters.
- It has regional offices across the country and a membership of approximately 7,500 people.

- Co-participation in international jewelry events is being planned.
- Inviting countries to investigate opportunities for collaboration in the supply of rough diamonds, colored gemstones, and finished jewelry.
- Identifying possible foreign partners and buyers through buyer-seller meetings.
- As the Nodal Agency designated by the Government of India, we are carrying out the Kimberly Process Certification Scheme in the country.
- Bringing relevant export-related issues to the attention of the government, ministries, regulatory authorities, and agencies.
- Developing an image through international marketing, publications, and audio-visuals
- Running manufacturing skills, technical, and design excellence training colleges in six cities: Mumbai, Delhi, Surat, Jaipur, Varanasi, and Udupi. All statements are correct.

23. Answer: (A)

- Scientists from the United States have discovered a unique "Dumbo" octopus while exploring the North Pacific Ocean.
- They are the most submerged of all octopus species. Option A is correct.
- *Grimpoteuthis* spp. is the genus.
- Their name comes from their unusual flapping fins, which resemble the large ears of the famed Disney elephant mascot.
- There are roughly 17 species of Dumbo octopus that belong to a group known as "umbrella octopus," since their mantle floats and has an umbrella-like appearance.
- Worldwide distribution in tropical to temperate latitudes.
- Features: They reside on the bottom or just above it at depths ranging from 3000 to 4000 m (9800 to 13000 ft).
- They are little, around 8 inches tall, with a pair of fins on their mantle and webbing between their arms.
- The octopuses also have a single line of 65-68 suckers running down each arm.
- This aquatic organism, unlike most octopuses, lacks ink sacs, which are generally utilized as a defense strategy.
- It propels itself through the water with its ear-like fins and steers with its webbed arms.
- It feeds on snails, worms, and other invertebrates found near the ocean floor.

24. Answer: (C)

- Social bonds, also known as social impact bonds and abbreviated as SIB, are a type of bond in which the bond issuer raises cash for a socially good initiative.
- These bonds are intended to fund projects that address a wide range of social challenges, including

healthcare, education, affordable housing, poverty reduction, and environmental sustainability.

- In 2020, the Pimpri Chinchwad Municipal Corporation (PCMC) in Maharashtra's Pune and the United Nations Development Programme (UNDP) collaborated to build India's first SIB.

NABARD's Social Bonds have the following characteristics:

- This is the country's first externally certified AAA-rated Indian Rupee-denominated SIB. CRISIL and ICRA have assigned the bonds a 'AAA' rating.
- The social bonds had a basic issue size of Rs 1,000 crore, with an option to retain oversubscription up to Rs 2,000 crore, for a total of Rs 3,000 crore.
- Each bond has a face value of one lakh rupees.
- Age at maturity: 5 years
- The coupon rate is 7.63%.

Framework for Sustainability Bonds:

- NABARD recently unveiled a Sustainability Bond Framework with the goal of financing and refinancing new and existing qualifying green and social projects.
- Affordable basic infrastructure, access to critical services, affordable housing, job creation, food security, socioeconomic advancement, and empowerment are all eligible social projects.
- Projects that promise energy efficiency, including green buildings, energy storage, and smart grids, would also be eligible to get funding through the new breed of bonds that NABARD is rolling out. Both statements are correct.

25. Answer: (A)

- It is a blooming plant from the Combretaceae family.
- It is an invasive species of mangrove. Statement 1 is correct.
- This species' trees flower in the winter and disperse pollen throughout the surrounding area.
- Various public agencies in India have employed it as landscaping for road medians, along roadways, and in public gardens.
- Countries in the Arabian Peninsula have utilized the plant to regulate pollution and block sand from desert storms.
- This tree is known for its dark green leaves that remain green all year and its ability to survive tough environmental conditions such as high and low temperatures.
- It is highly adaptable and may grow in locations with significant salinity.
- It consumes more water from the soil than other species and hence endangers groundwater.
- This species burrows deeply into the ground and grows rapidly enough to harm communication wires, drainage systems, and drinking water pipelines.
- It is indigenous to regions of North and South America, as well as Africa.

26. Answer: (D)

- The CBAM is a policy tool aimed at reducing Carbon Emissions by ensuring that imported goods are subject to the same carbon costs as products produced within the EU. Statement 1 is correct.
- CBAM will ensure its climate objectives are not undermined by carbon-intensive imports and spur cleaner production in the rest of the world. Statement 2 is correct.
- It will hurt India's exports of metals such as Iron, Steel and aluminum products to the EU because these will face extra scrutiny under the mechanism. Statement 3 is correct.
- India's major exports to the EU, such as iron ore and steel, face a significant threat due to the carbon levies ranging from 19.8% to 52.7%.

27. Answer: (C)

Explanation

Pension Fund Regulatory and Development Authority (PFRDA) has requested the government to increase the guaranteed pension amount under APY. APY is a flagship social security scheme launched under Ministry of Finance. It, replaced Swavalamban scheme, provides minimum guaranteed pension for people in unorganized sector to all bank account holders in age group of 18 to 40 years. Subscriber would receive guaranteed minimum monthly pension of Rs 1,000 to Rs 5,000 per month after attaining age of 60 years, depending on contribution. It is administered by PFRDA under National Pension System. Hence, all statements are correct.

28. Answer: (D)

Explanation

Recently the India Ageing Report, 2023 was jointly released by the International Institute for Population Sciences and the United Nations Population Fund. By 2050, the share of the elderly in India's total population can reach more than 20%. The number of working age people in the age group of 15-59 years will decrease. Women will live longer than men, due to which the number of older women will be more than older men. The elderly population of India currently estimated to be at 41% and the percentage of elderly population in the country projected to double to over 20% of total population by 2050. By 2046 it is likely that elderly population will have surpassed the population of children (aged 0 to 15 years) in the country. The report called for a special focus on older persons in disaster-preparedness plans that are formulated. Monaco has the highest old age population in the world. In India, Kerala has the highest old age population. Hence, all statements are incorrect.

29. Answer: (B)

Explanation

Sonobuoys are small, disposable devices that are used in underwater acoustics and sonar systems to detect and analyze sound in the ocean, particularly for detecting

submarines and other underwater objects. Sonobuoys are dropped into the ocean from aircraft or launched from ships or submarines. They dive to a predetermined depth and start listening for acoustic signals, assisting in the identification of potential submarine threats. Multiple sonobuoys can be deployed in a pattern to pinpoint a target's exact location. Hence, option (b) is correct.

30. Answer: (A)

Explanation

Statement 1 is correct. Norman E Borlaug Award is presented every year by the World Food Prize Foundation. It is presented in memory of the Nobel awardee Dr. Norman Borlaug. Statement 2 is incorrect. This award recognizes exceptional, science-based achievement in international agriculture and food production by an individual under the age of 40.

31. Answer: (B)

Explanation

Statement 1 is incorrect. Angel tax is a tax that unlisted companies, usually startups, are liable to pay on the capital they raise through the issue of shares. Angel Tax does not apply to listed companies. Statements 2 and 3 are correct. The term "angel" in Angel Tax refers to individual investors or groups of investors who provide early-stage funding to startups. The scope of Angel Tax was expanded in the Budget to include non-resident investors, whereas previously it applied only to investments made by resident or local investors.

32. Answer: (B)

Explanation

Statement 1 is incorrect. The Business Responsibility and Sustainability Reporting (BRSR) framework is a reporting framework that requires Indian companies to provide quantitative metrics on sustainability-related factors, not financial factors. Statements 2 and 3 are correct. The framework is a mandatory disclosure mechanism for top 1000 listed companies or businesses to report their performance on environmental, social and governance (ESG) aspects and demonstrate their commitment to responsible business practices. It seeks disclosures from listed entities on their performance against the nine principles of the National Guidelines for Responsible Business Conduct (NGRBC).

33. Answer: (C)

Explanation

Statements 1 and 3 are correct. Habitat destruction compels disease-carrying animals to encroach upon human habitats. Human-induced climate change is giving rise to an unprecedented vulnerability to health crises. Statement 2 is incorrect. High temperatures can modify the genetic composition of pathogens, potentially impacting their infectivity and virulence

34. Answer: (C)

Explanation

Statements 1 and 2 are correct. DPDP Act 2023 mandates greater accountability and transparency from

private corporations and government institutions regarding data practices. It gives people more control over their data and includes the right to be forgotten.

35. Answer: (C)

Explanation

Statements 1 and 3 are correct. GOBARdhan Initiative covers the entire gamut of schemes/programmes/policies promoting the conversion of organic waste like cattle dung/ agri-residue etc to biogas/ CBG/ Bio CNG. As per Budget Announcement 2023-24, 500 new 'waste to wealth' plants under GOBARdhan scheme will be established for promoting the circular economy. Statement 2 is incorrect. There is no such aim of the scheme.

36. Answer: (A)

Explanation

Statements 1 and 2 are correct. Bharat Drone Shakti is a collaborative effort between the Indian Air Force and the Drone Federation of India (DFI). During the Bharat Drone Shakti-2023, a compact drone system designed for easy transport on motorbikes was exhibited at the drone show. Statement 3 is incorrect. The Bharat Drone Shakti initiative is a first-of-its-kind drone exhibition cum display that aims to showcase the full potential of the Indian drone industry. It is not focused on developing and manufacturing large-scale drones in India

37. Answer: (C)

Explanation

Statements 1 and 3 are correct. Galactic Tides are caused by gravitational forces within a galaxy arising in the interactions between celestial objects like stars and gas clouds. They can disrupt the orbits of stars, leading to gradual and long-term changes in a galaxy's structure. Statement 2 is incorrect. Galactic tides are forces that can shape and disrupt the evolution of existing galaxies, but they do not create new galaxies.

38. Answer: (C)

Explanation

Statements 1 and 2 are correct. MEME system allows students to drop their course and resume it at a later stage as and when they desire or deem it worth pursuing. MEME is a flexible system that works well in Western countries but may not work well in India due to its high population and the difficulty of predicting student enrollment, which could disrupt the pupil-teacher ratio.

39. Answer: (A)

Explanation

Statement 1 is correct. IWWAGE aims to build on existing research and generate new evidence to inform and facilitate the agenda of women's economic empowerment. Statement 2 is incorrect. IWWAGE was established in 2017 with the support of the Bill & Melinda Gates Foundation. It is an initiative led by IFMR LEAD, an action-oriented research center of IFMR Society.

40. Answer: (C)

- Statement 1 is correct: Collegium system is system of appointment of SC judges and appointment and transfer of judges of high court.
- Statement 2 is not correct:
- The Supreme Court collegium is headed by the Chief Justice of India and comprises four other senior-most judges of the court
- Like the Supreme Court, the high courts, too, have a Collegium, headed by the chief justice of the high court and two senior-most judges as members. The high court Collegium sends its judicial appointments recommendation only to the Supreme Court Collegium.
- Statement 3 is correct: Collegium system has evolved through judgments of the Supreme Court, not by an Act of Parliament or by a provision of the Constitution.

41. Answer: (B)

Odhuvar refers to individuals who perform devotional music and sing hymns in temples, particularly during religious ceremonies and rituals. They can be both men and women. They sing devotional hymns at Hindu temples in Tamil Nadu, but they are not priests. They play an essential role in Saivite temples, as they are responsible for singing from the Thirumurai not only during regular pujas but also during special functions and festivals, ensuring the sacred verses are honored and cherished.

42. Answer: (C)

- Recently, India has been handed over the presidency Global Partnership on Artificial Intelligence (GPAI) for 2022-23 by the outgoing Council Chair, France in its 3rd Annual Summit in Japan. It was launched in June, 2020, with fifteen members. The Global Partnership in Artificial Intelligence is described as the 'fruition of an idea developed within the G7.' It is a multi-stakeholder initiative on artificial intelligence (AI), which aims to fill what it describes as 'the gap between theory and practice on AI,' by supporting cutting-edge research, as well as applied activities, on AI-related priorities.
- There are 29 members as of now.
- At present, GPAI has twenty-nine member states. The founding members are: Australia, Canada, France, Germany, India, Italy, Japan, Mexico, New Zealand, the Republic of Korea, Singapore, Slovenia, the UK, the US, and the EU.

43. Answer: (A)**Explanation**

The scientists have recently figured out the process of the death of the brain cells that can help in Alzheimer's treatment. Cell death usually happens as an immune response to infection or inflammation and rids the body of undesirable cells. When the supply of nutrients collapses, the cells swell up, destroying a

plasma membrane. The cells get inflamed and die off. The amyloid and tau are the abnormal proteins that develop in the brain. Cells in Alzheimer's patients get inflamed when amyloid protein gets into neurons in the brain. The amyloid clumps into so-called plaques and the fiber-like tau protein forms its own bundles, known as tau tangles. Neurons exposed to amyloid plaques and tau tangles initiate a cell death process called necroptosis. Necroptosis or cell death is a direct connection between these abnormal proteins, amyloid and tau. Hence, option (a) is correct.

44. Answer: (C)**Explanation**

In botany, an ephemeral plant can be defined as one that has one or more generations per year, growing only during favourable periods (such as when adequate moisture is available) and passing the unfavourable periods in the form of seeds. Some species' seed coats contain a growth inhibitor that can only be washed away by a large amount of water, preventing germination after only a brief shower. Ephemerals produce tough seeds that withstand drought and other extreme conditions in harsh environments. Ephemerals are certain plant species wait throughout the year to bloom only during the monsoon. Ex: Ground orchids, lilies, wild yam etc. These flowers act as an important source of nectar and pollen for native pollinators, thus preserving ecosystem. Hence, both statements are correct.

45. Answer: (B)**Explanation :**

- Statement 1 is correct: During the ongoing U.N. General Assembly session, the "L-69" grouping of developing countries, in a meeting hosted by India, gave a renewed call for the reform of the United Nations Security Council.
- It focuses upon the inclusion of both more permanent and non-permanent members in the council.
- Statement 2 is not correct: The L-69 is a grouping that includes countries from Africa, Asia, Latin America and the Caribbean, and Pacific Island states.

46. Answer: (D)

- Researchers from the Indian Institute of Science Education and Research Bhopal (IISER Bhopal) recently identified a unique circular RNA (circRNA) called 'ciTRAN' that plays an important role in the multiplication of the AIDS-causing HIV-1 virus within the human body.
- Ribonucleic acid is a substance found in living cells that transports genetic information and aids in protein creation. Option D is correct.
- In general, RNAs have straight-chain, free-end structures, while circular RNA ('circRNA') has a closed-loop structure.
- The circRNA regulates gene expression and is required for a variety of biological functions.

- For a long time, its involvement in HIV-1 replication was unknown.
- Characterizing circular RNA can be tricky because it usually is less abundant, making it further challenging to detect in the native form.
- There is so much information from the virus during viral infections that it can be difficult to locate the less common ones, such as circular RNA.
- The researchers used a unique technique called 'circDR-Seq' to successfully extract circRNAs from HIV-1 infected T-cells (white blood cells) and identified a specific circRNA called ciTRAN, which plays a crucial role in viral replication.
- HIV-1 viral protein R (VpR) is a multifunctional protein that plays distinct roles in many stages of the HIV-1 viral life cycle and influences immune cell anti-HIV capabilities.
- It was also shown that HIV-1 infection increases ciTRAN expression in a Vpr-dependent manner, and that ciTRAN interacts with SRSF1, a protein known to suppress HIV-1 transcription."
- The findings indicate that HIV-1 hijacks ciTRAN, which is changed during immune signaling, inflammation, and viral infection.
- It also stops (SRSF1) from performing its function, enabling effective viral transcription.
- Furthermore, researchers showed that an SRSF1-inspired mimic can suppress viral transcription regardless of ciTRAN induction.
- The hijacking of a host circRNA indicates a previously unknown aspect of monkey lentiviruses' ability to overcome transmission constraints.

47. Answer: (C)

- The docking of the first ship at the Vizhinjam International Seaport was recently postponed.
- It is situated in Vizhinjam, a coastal town in Kerala's Thiruvananthapuram District.
- It is primarily intended for container transshipment, as well as multi-purpose and broken bulk goods.
- It is being built using a landlord model with a Public Private Partnership component on a design, build, finance, operate, and transfer ("DBFOT") basis.
- The private partner, Concessionaire M/s Adani Vizhinjam Port Private Limited, began building on December 5, 2015.
- The Port is only a 10-mile detour from the international east-west shipping route, and it is also near the national/regional road and rail networks.
- It is the only transshipment center on the Indian subcontinent, located centrally on the Indian coastline and closest to international shipping routes.
- The maritime route accounts for around 95% of India's foreign trade. In terms of value, this equates to 70% of total foreign commerce.
- Almost 30% of freight transit occurs via the international shipping route south of the Indian peninsula, which passes 10 nautical miles off Vizhinjam.

- India currently lacks a deep-water container transshipment terminal and relies on the ports of Colombo, Singapore, and Salalah.
- This causes a huge loss of foreign money and revenue, estimated at Rs 2,500 crore each year. Both statements are correct

48. Answer: (A)

- Workers in the Gaza Strip recently discovered scores of ancient burials, including two lead Sarcophagi, in a cemetery going back nearly 2,000 years to the Roman Empire.
- It is a stone container above the earth for a coffin or dead body that is often embellished with paintings, inscriptions, and sculptures. Statement 1 is correct.
- Sarcophagus is derived from the Greek words "sarx" for "flesh" and "phagien" for "to eat," therefore it literally translates as "eater of flesh."
- The sarcophagus was first utilized in Ancient Egypt and Greece, and it progressively spread throughout the ancient world.
- It was commonly used for high-ranking members of the clergy, administration, or aristocracy in later European civilizations.
- They differ slightly from one culture to the next.
- They are nearly always made of stone, the most common being limestone, but they can also be made of granite, sandstone, or marble.
- They were often created by being ornately carved, ornamented, or manufactured.
- Some were constructed to stand alone above ground as part of an ornate burial or tombs. Others were designed for burial or crypt placement.
- Archaeologists and historians value sarcophagi because they reveal insights into the art, culture, and beliefs of the people who constructed them.
- Sarcophagi carvings and inscriptions frequently convey important historical information.
- The most famous Egyptian sarcophagus is perhaps King Tutankhamun's golden sarcophagus.

49. Answer: (B)

- The United Nations Climate Ambition Summit (CAS) held in United Nations Headquarters, New York on 20th September 2023, aimed to accelerate climate action as a prelude to the 28th Conference of Parties (COP28) to the United Nations Framework Convention on Climate Change (UNFCCC). Statement 1 is correct.
- China, the US, and India, who collectively account for about 42% of global greenhouse gas emissions and are the top three emitters in that order, were all absent from the CAS. Statement 2 is not correct
- In COP 26, India pledged to achieve net-zero emissions by 2070. Statement 3 is correct.

50. Answer: (C)

- The Tamil Nadu Forest Department conducted combing operations in the Mukurthi National Park and other forest regions to ensure that no illegal movement of people or poachers occurred.

- It is situated in the northwest part of Tamil Nadu, in the western corner of the Nilgiris Plateau.
- The park was established to safeguard its flagship species, the Nilgiri tahr. Statement 1 is correct.
- The Pykara and Kundah rivers and several perennial streams that start in the park and drain into the Bhavani Puzha run through the park. Statement 2 is correct.
- It has been named a UNESCO World Heritage Site. Statement 3 is correct.
- The Park's vegetation is characterized by montane grasslands and shrublands interspersed with sholas in a high-altitude area with abundant rainfall.
- Flora: Shrubs such as Gaultheria fragrantissima, Helichrysum, and Berberis tinctoria can be found here. Rhododendrons, Cinnamon, Mahonia, Satyrium, Raspberries, and other plants can also be observed here.
- Fauna: The park is home to endangered natural species such as Nilgiri tahr, Indian elephants, Nilgiri Langur, Bengal tiger, and bonnet macaque, among others.

51. Answer: (B)

Explanation :

- IFC is an international financial institution that offers investment, advisory, and asset management services to encourage private sector development in developing countries. It was established in 1956 as the private sector arm of the World Bank Group to advance economic development by investing in strictly for-profit and commercial projects that purport to reduce poverty and promote development. The IFC is owned and governed by its member countries, but has its own executive leadership and staff that conduct its normal business operations. It is a member of the World Bank Group and is headquartered in Washington, D.C., United States.
- Other members of the World Bank Group:
- International Bank for Reconstruction and Development (IBRD)
- International Development Association (IDA)
- Multilateral Investment Guarantee Agency (MIGA)
- International Centre for Settlement of Investment Disputes (ICSID)
- India is a member of all World Bank institutions except ICSID. Hence, statement 3 is incorrect.

52. Answer: (C)

Explanation

- Super Blue Moon is the convergence of three lunar occurrences - a full Moon, a Super Moon, and a blue Moon. Blue moon refers to the second full moon within a single month — a rare event since full moons typically occur once a month. When a season experiences four full moons, the third full moon is deemed the blue moon. Super moon happens when the moon is passing through or is

close to its perigee, and is also a full moon. Full moon at perigee (super moon) is about 14% bigger and 30% brighter than a full moon at apogee (called a “micro moon”). The next Super Blue moon will occur in January 2037. Hence, both statements are correct.

53. Answer: (B)

Explanation

Statement 1 is incorrect. Global Fund is an international financing and partnership organization that aims to attract, leverage and invest additional resources to end the epidemics of HIV/AIDS, tuberculosis and malaria to support attainment of the Sustainable Development Goals established by the United Nations. Statements 2 and 3 are correct. Global Fund raises resources from governments, private sector partners, foundations, and individuals. Its Secretariat is in Geneva, Switzerland.

54. Answer: (C)

Explanation

Statements 1 and 3 are correct. The Project 17A frigates are being built by Mazagon Dock Shipbuilders Limited (MDL) and Garden Reach Shipbuilders & Engineers (GRSE). A total of seven ships were built under Project 17-A. These are 1) INS Nilgiri 2) INS Himgiri 3) INS Udaygiri 4) INS Dunagiri 5) INS Taragiri 6) INS Vindhyagiri and 7) INS Mahendragiri. Statement 2 is incorrect. The Project 17A frigates are based on the Shivalik-class frigates.

55. Answer: (A)

Explanation

Statement 1 is correct. ABRY aims to incentivize employers for creation of new employment and restoration of loss of employment during Covid-19 pandemic. Statement 2 is incorrect. ABRY is open to all establishments registered with the Employees' Provident Fund Organization (EPFO).

56. Answer: (A)

Explanation

Statements 1 and 2 are correct. One of the primary goals of the Aditya L1 mission is to study the dynamics of the solar atmosphere, including the chromosphere and corona. The Aditya L1 mission will enhance our understanding of how the Sun influences Earth's climate. Statement 3 is incorrect. The Aditya L1 mission will be placed in a halo orbit around the Sun-Earth Lagrange point 1 (L1).

57. Answer: (A)

Explanation

Statement 1 is correct. SSE is a platform that allows social enterprises to raise funds from the public. Social enterprises are businesses that have a social mission, such as providing affordable housing or education, or protecting the environment. Statements 2 and 3 are incorrect. SSE is designed to support social enterprises of all sizes and stages, including those that are not yet profitable. Its goal is to provide social enterprises with

access to capital, regardless of their financial status. Zero coupon zero principal instruments are debt instruments that do not pay interest and do not have a principal repayment. They are designed to be used by social enterprises that do not have a clear track record of generating profits.

58. Answer: (C)

The Mekedatu project is a multipurpose project involving the construction of a balancing reservoir near Kanakapura in Ramanagara district, Karnataka. Mekedatu, meaning goat's leap, is a deep gorge situated at the confluence of the rivers Cauvery and its tributary Arkavathi. Its primary objectives are to provide drinking water to Bengaluru and neighboring areas, totaling 4.75 TMC, and generate 400 MW of power.

59. Answer: (C)

The Central government had introduced the MACP scheme in 2008 to provide relief to government employees from career stagnation. It allows the employees to be upgraded to a higher grade pay thrice: on the completion of 10, 20, and 30 years of service.

60. Answer: (C)

The Institute of Mathematical Sciences (IMSc), founded by Alladi Ramakrishnan on 3rd January 1962. It is located in South Chennai, in the Adyar-Taramani area. It is an autonomous national institution for fundamental research in the areas of Theoretical Physics, Mathematics, Theoretical Computer Science and Computational Biology. It is governed by a Board and an Academic Council. Research at IMSc is supported by the Department of Atomic Energy of the Government of India and by the Government of Tamil Nadu.

61. Answer: (B)

Explanation :

- Recently, India, Greece upgraded ties to strategic partnership, aiming to double trade by 2030.
- Greece is located in the southeastern region of the European continent, on the far southern edge of the Balkan Peninsula.
- Greece lies at the juncture of the continents of Europe, Asia and Africa. It is positioned both in the Northern and Eastern hemispheres of the Earth.
- Greece is bordered by North Macedonia and Bulgaria in the north, Albania in the northwest, and Turkey in the northeast.
- It is also bounded by the Aegean Sea in the east, Ionian Sea in the west, the Cretan Sea and the Mediterranean Sea in the south.

62. Answer: c

Explanation :

- Consumer Price Index for Industrial Workers for July, 2023 increased by 3.3 points and stood at 139.7.

- The CPI is computed by averaging the prices of goods and services in a basket based on their share of household spending.
- Statement 1 is not correct: It is prepared by the Central Statistics Office(CSO)which works under the Ministry of Statistics and Programme Implementation.
- Statement 2 is not correct: WPI gives high weightage to manufacturing commodities (around 63%), whereas the CPI gives high weightage to food items and other primary products (57%).
- Statement 3 is correct: Services like housing, education, recreation are covered in CPI basket along with the goods.
- Statement 4 is not correct: WPI includes goods that businesses and consumers purchase but does not include services. CPI does not include those purchased by businesses.

63. Answer: (B)

Gravitational redshift is a consequence of Einstein's theory of general relativity. When light passes through a region with a strong gravitational field, like near a massive celestial body such as a planet or star, its frequency decreases. This means that the light shifts towards the red end of the electromagnetic spectrum, which is why it's called "gravitational redshift." Option B is correct.

64. Answer: (B)

- Jupiter, the fifth planet in line from the Sun, is by far the largest planet in the solar system, more than twice as massive as all the other planets combined.
- Jovian or Gas Giant Planets are Jupiter, Saturn, Uranus, and Neptune.
- Jupiter's weak system was found by the Voyager mission in 1979. Statement 1 is correct.
- Jupiter has been visited by nine spacecraft. Seven passed by, and two orbited the gas giant.
- The most recent, Juno, arrived at Jupiter in 2016.
- Juno is a solar-powered NASA spacecraft that makes long, looping orbits around the giant planet Jupiter. Statement 3 is not correct.
- JUICE is a mission of the European Space Agency (ESA) to explore Jupiter and its icy moons, namely Ganymede, Callisto, and Europa.
- JUICE is an acronym for Jupiter Icy Moons Explorer. Juno was launched on 5th August 2011. The spacecraft traveled roughly 3 billion kilometers before arriving at Jupiter in 2016. Recently, Juno conducted its 53rd close flyby of Jupiter, capturing a remarkable image of Jupiter and its volcanic moon Io, on 31st July 31, 2023. It is known for its intense volcanic activity, with hundreds of erupting volcanoes spewing molten lava and sulfurous gasses. It is slightly larger than Earth's Moon and is tidally locked to Jupiter. Statement 2 is correct.

65. Answer: (B)

- Elephant corridors are stretches of land that allow elephants to traverse between two or more friendly

habitats. According to the central government's Elephant Corridor report, West Bengal leads the way with 26 corridors, accounting for 17% of the total. Statement 1 is correct.

Elephants in India:

- Elephants are both keystone species and India's Natural Heritage Animal.
- India has the most Asian elephants in the wild. The country's elephant population is believed to be about 30,000.
- Karnataka has India's largest elephant population. Statement 2 is correct.

Conservation Status:

- Convention of the Migratory Species (CMS): Appendix I
- Wildlife (Protection) Act, 1972: Schedule I
- International Union for Conservation of Nature (IUCN) Red List of threatened species:
 - Asian Elephant: Endangered
 - African Forest Elephant: Critically Endangered
 - African Savanna Elephant: Endangered
- Statement 3 is not correct.

66. Answer: (B)

- According to marine biologists, certain sections of the Gulf of Thailand have more than ten times the typical number of plankton, which turns the water a vivid green and kills marine life.
- The term "plankton" is derived from the Greek word meaning "drifter" or "wanderer."
- If a creature is transported by tides and currents and cannot swim well enough to move against these forces, it is classified as plankton.
- Plankton is classified into two types: phytoplankton (plants) and zooplankton (animals).
- Although phytoplankton are small plants, they play a significant role in the marine food web.
- Phytoplankton, like plants on land, use photosynthesis to turn the sun's rays into energy, and they take in carbon dioxide and generate oxygen.
- Microscopic organisms (krill, sea snails, pelagic worms, and so on), the young of larger invertebrates and fish, and feeble swimmers like jellyfish are all examples of zooplankton. The majority of zooplankton consume phytoplankton.

Facts about the Gulf of Thailand

- It is a shallow inlet of the South China Sea in the Pacific Ocean's western hemisphere. Statement 1 is correct.
- Thailand, Cambodia, and Vietnam encircle it on all sides. Statement 2 is incorrect.
- The Gulf was once known as the Gulf of Siam, and in modern Thai, it is known as Ao Thai ("Thai Gulf").
- Many notable rivers, including the Chao Phraya River and its tributaries the Bang Pakong, Tha Chin, and Mae Klong rivers, flow freshwater and sediments into the Gulf of Thailand. Statement 3 is correct.

67. Answer: (A)

Explanation

Statement 1 is correct. Adopt a Heritage 2.0 Programme is a public-private partnership initiative of the Archaeological Survey of India (ASI) that encourages individuals and organizations to adopt and restore heritage sites in India. Statement 2 is incorrect. Under the programme, corporate stakeholders can utilize their Corporate Social Responsibility (CSR) funds to enhance the amenities at the historical sites.

68. Answer: (B)

Explanation

Statement 1 is incorrect. International Institute for Population Sciences (IIPS) is the nodal agency for conducting the survey. Statements 2 and 3 are correct. The questions on disability were included for the first time in the NFHS-5. Based on the NFHS-5 report, it was observed that disability prevalence was only 1% for rural areas and 0.9% for urban areas. The survey collects data on a wide range of topics related to health and family welfare, including fertility, mortality, reproductive health, nutrition, and child health.

69. Answer: (C)

Explanation

Statements 1 and 2 are correct. Indian Heritage app will showcase the heritage monuments of India. It will feature state-wise details of monuments along with photographs, list of public amenities available, geo-tagged location and feedback mechanism for citizens.

70. Answer: (A)

Explanation

Statements 1 and 2 are correct. Asia Cup tournament is organized by the Asian Cricket Council (ACC). It is the only continental championship in cricket. Statement 3 is incorrect. India has won the Asia Cup a record 8 times, followed by Pakistan with 5 titles. Sri Lanka has won the tournament 3 times, while Bangladesh and Afghanistan have won it once each. The first Asia Cup was held in 1984 in Sharjah, United Arab Emirates

71. Answer: (B)

Explanation

Statements 1 and 3 are correct. Edicts of Ashoka mention the diplomatic, trade and cultural relations between Seleucus I and Chandragupta Maurya. India primarily exports products like petroleum products, automobile parts, cars, SUVs, and flat rolled steel items to Greece. Statement 2 is incorrect. Bamiyan Buddha, Gandhara school and Greco-Buddhist art are examples of ancient cultural exchanges between India and Greece.

72. Answer: (B)

It is an independent intergovernmental body established in 2012. This independent body inspired by the Intergovernmental Panel on Climate Change

(IPCC) and the Millennium Ecosystem Assessment. India is a member country of this organization. It provides policymakers with objective scientific assessments about the state of knowledge regarding the planet's biodiversity, ecosystems and the benefits they provide to people, as well as the tools and methods to protect and sustainably use these vital natural assets. It is not a United Nations body. However, at the request of the IPBES Plenary and with the authorization of the UNEP Governing Council in 2013, the United Nations Environment Programme (UNEP) provides secretariat services to IPBES.

73. Answer: (A)

- Statement 1 is correct: The LIGO-India project will be built by the Department of Atomic Energy (DAE) and the Department of Science and Technology (DST), Government of India, with a Memorandum of Understanding (MoU) with the National Science Foundation (NSF), USA, along with several national and international research and academic institutions. The project is being led by four institutions:
- Statement 2 is not correct: Recently, Union Cabinet's cleared the approval to set up a gravitational-wave detection facility in project Hingoli District, Maharashtra
- Note: India-based Neutrino Observatory is a particle physics research project under construction to primarily study atmospheric neutrinos in a 1,200 meters deep cave under INO Peak near Theni, Tamil Nadu, India.

74. Answer: (B)

Explanation

Pace of laying out optical fibre in the country has increased since the launch of 5G services. Fiberisation is the process of connecting radio towers with each other via optical fibre cables. It facilitates full utilisation of network capacity and carries large amounts of data used in 5G services. It will also aid in providing additional bandwidth and stronger backhaul support. In India, currently around 38% of the towers are fiberised, compared to 80%-90% in U.S., Japan and China. Hence, statement 3 is incorrect.

75. Answer: (C)

Explanation

ISRO has successfully tested the CE-20 Cryogenic engine to be used in "Mission Gaganyaan". Cryogenic engines use fuels at cryogenic temperatures (-150 to -273 degree C) and are comparatively more powerful than solid and liquid propellant engines. It is the first cryogenic engine to use a Gas-generator cycle using Liquid Oxygen and Liquid Hydrogen propellants combination. It has a capacity of 28 tonnes of fuel and will be used as the upper stage of Geosynchronous Satellite Launch Vehicle Mk III (LVM3). Hence, both statements are correct.

76. Answer: (B)

Explanation :

Selling and purchasing of Government Securities-

- Open market operations are carried out by the central bank in association with the commercial banks. For conducting such operations, there is no involvement of the public.
- Government bonds are mostly bought by commercial banks, financial institutions, high net worth individuals, and large business corporations. All these entities maintain accounts with the bank, and whenever these entities purchase bonds, the amount gets transferred to the central bank.
- Thus, it can be said that open market operations have an impact on the deposits and reserves of the bank and also play a role in their ability to provide credit. When a central bank wants to reduce the availability of money to the public, it will sell government bonds and securities with the help of commercial banks.
- This step reduces the money supply in the economy and restricts banks from offering credit to individuals. It impacts both the supply and demand of the credit.
- Similarly, at times when the liquidity conditions are tight, the central bank buys back the securities, which gives the commercial banks and public easy access to the credit facilities that help in injecting liquidity into the system and stabilizing the market.
- Hence, statement 1 is not correct.
- RBI used to sell or purchase the dollar as per the demand of market conditions. When it is needed to decrease the demand of dollars to abstain rupee from depreciation in comparison to dollars, RBI is likely to sell dollars and vice-versa.
- Hence, statements 2 and 3 are correct.
- The impact of a series of rate hikes by the Reserve Bank of India (RBI) is expected to become more pronounced. These rate hikes, aimed at curbing inflation, may initially moderate economic growth before affecting inflation rates. Hence, statement 4 is correct.
- Hence, option (b) is correct.

77. Answer: (C)

Explanation :

- The G20 DRR Working Group aims to integrate risk reduction measures into public and private sector investment decisions and policy making to reduce existing risk, prevent the creation of new risk and, ultimately, build resilient economies, societies, and natural systems. Hence, statement 2 is correct.
- Current economic choices and development pathways are not in line with the commitments to reduce risk contained in the Sendai Framework as well as the 2030 Agenda and the Paris Agreement. The G20 DRR Working Group is committed to changing this through the development of policy guidance, exchange of technical knowledge, promotion of capacity building, and identification

of new approaches to financing that prioritize risk reduction and resilience. Hence, statement 1 is correct.

- Additional Informations – India has taken a pioneering step by establishing the inaugural G20 Disaster Risk Reduction Working Group. This initiative is significant as G20 member countries collectively account for approximately 85% of the global GDP and roughly two-thirds of the world's population. Recognizing the strong link between economic choices and human vulnerability to disasters, the G20 is uniquely positioned to shape a new approach to decision-making that incorporates disaster risk considerations.

Hence, option (c) is correct.

78. Answer: (B)

Explanation :

The genesis of India's RTI legislation can be traced back to 1986 when the Supreme Court issued a landmark judgment in the case of Mr. Kulwal v/s Jaipur Municipal Corporation. In this case, the Supreme Court directed that the freedom of speech and expression guaranteed under Article 19 of the Constitution inherently includes the Right to Information. This recognition was based on the understanding that without access to information, the exercise of freedom of speech and expression by citizens would remain incomplete.

What is Indira Sawhney Case –

In the Indra Sawhney case, the Government notice reserving 10% of government posts for economically depressed classes among the upper castes was invalidated by the Supreme Court while preserving the 27% quota for lower castes. The ruling in Indra Sawhney vs Union of India, 1992 & Ors by the Supreme Court marked a significant turning point in India's history of backward class reservation. In the Indra Sawhney case, the fact was reiterated that providing reservations to 60%, while 40% of them without a reservation will lead to an imbalance in the structure of the society. Through the Indra Sawhney case ruling and its stipulation that reservations for underprivileged groups should only apply to initial appointments and not promotions, the term "creamy layer" also acquired popularity.

Hence, statement 1 is not correct.

The Right to Information (Amendment) Act, of 2019, granted the Union Government unilateral powers over the appointment and compensation of information commissioners, raising concerns about their independence.

Hence, statement 2 is correct.

Hence, option (b) is correct.

79. Answer: (D)

- Statement 1 is correct: National Green Tribunal is a statutory body which was 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.

- Statement 2 is correct: 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.
- Statement 3 is correct: NGT is empowered to enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto

80. Answer: (B)

The Psyche mission is a journey to a unique metal asteroid orbiting the Sun between Mars and Jupiter. What makes the asteroid Psyche unique is that it appears to be the exposed nickel-iron core of an early planet, one of the building blocks of our solar system. The mission is led by Arizona State University. NASA's Jet Propulsion Laboratory is responsible for mission management, operations and navigation.

81. Answer: (A)

"Ecocide" is a term used to describe extensive and severe environmental damage or destruction, often as a result of human activities. It refers to actions or processes that cause widespread harm to ecosystems, biodiversity, and the natural environment on a scale that significantly disrupts the balance of nature and poses a threat to life on Earth. Ecocide is crime in 11 countries. India has not fully embraced ecocide in its environment laws.

82. Answer: (B)

- Kurmis are a landowning farming community whose status varies from place to place.
- They are referred to as "progressive farmers" who "avail of maximum benefits of all the development schemes available in the area and region. Kurmis are distributed across several states — Uttar Pradesh, Bihar, Odisha, Maharashtra, Gujarat, Chhattisgarh, Madhya Pradesh, West Bengal, Jharkhand, Goa, and Karnataka.
- Kurmali language is a language spoken by the Kurmi community, primarily in the Indian states of Bihar, Jharkhand, and Odisha. The Kurmali language is a member of the Indo-Aryan language family and belongs to the Bihari language family. It shares some similarities with Maithili and Magahi. It has its own script called "Kurmi Kudali" which is a modified version of the Devanagari script.

83. Answer: (A)

Statement 1 is correct:

- Central Banks enact monetary policy to keep inflation, unemployment, and economic growth stable and positive.
- When the economy overheats central banks raise interest rates and take other contractionary measures to slow things down – this can discourage

investment and depress asset prices.

Statement 2 is correct:

- Capital flight can drive up the interest costs as there is reduced money supply in the system.
- Thus, it would lead to increase in the interest cost of firms that have external commercial borrowings.

Statement 3 is not correct:

- Devaluation of domestic currency does not affect the External Commercial Borrowings as it is denominated in the foreign currency and not in the domestic currency.

84. Answer: (B)

Explanation

- Jal Jeevan Mission, is envisioned to provide safe and adequate drinking water through individual household tap connections by 2024 to all households in rural India. The programme will also implement source sustainability measures as mandatory elements, such as recharge and reuse through grey water management, water conservation, rain water harvesting. Hence, statement 1 is not correct.
- The Jal Jeevan Mission will be based on a community approach to water and will include extensive Information, Education and communication as a key component of the mission. JJM looks to create a Jan Andolan for water, thereby making it everyone's priority. Hence, statement 2 is correct.

Hence, option (b) is correct.

85. Answer: (B)

Explanation :

- Kuruvai cultivation refers to the seasonal cultivation of paddy (rice) during the Kuruvai season in the Indian state of Tamil Nadu.
- The Kuruvai season, also known as the "short-term" or "lesser" monsoon season, typically occurs between June and September.
- It is characterized by the onset of the southwest monsoon, which brings rainfall to the region.
- Hence, statements 1 and 2 are correct while statement 3 is not correct.

Hence, option (b) is correct.

86. Answer: (D)

- The Ancient Monuments and Archaeological Sites and Remains (AMASR) Act is an important piece of legislation in India that aims to preserve and protect the country's rich heritage and cultural assets. The act was passed in 1958. It applies to all monuments that are over 100 years old, whether they are in public or private ownership. The act prohibits any construction activity or alteration to the protected area around ancient monuments without the approval of the National Monuments Authority (NMA).
- This protected area is defined as a 100-metre radius around the monument, and a regulated area extends up to 200 metres beyond that. The NMA is the regulatory authority responsible for implementing the AMASR Act.

87. Answer: (D)

Alternative Dispute Resolution (ADR) is a technique to resolve disputes and disagreements between the parties by arriving at an amenable settlement through negotiations and discussions. In India, ADR is established on the basis of Article 14 (Equality before law) and Article 21 (Right to life and personal liberty) under the Constitution of India.

88. Answer: (D)

- Recently, Madhya Pradesh Chief Minister Shivraj Singh Chauhan unveiled the 108-foot-tall 'Statue of Oneness' of Adi Shankaracharya at Omkareshwar, Madhya Pradesh.
- Adi Shankara, who is believed to have lived between 788 and 820 A.D. was born in Kerala's Kaladi, situated on the bank of the Periyar River.
- He studied under his guru Govinda Bhagavatpada and soon became a proponent of Advaita Vedanta, challenging prevailing philosophical traditions – including Buddhism and Jainism.

89. Answer: (B)

Explanation :

Various types of Dark Patterns include:

- False Urgency: Misleading users with a false sense of urgency to make immediate purchases or take actions.
- Basket Sneaking: Adding extra items at checkout without user consent, increasing the total payable amount.
- Confirm Shaming: Using fear, shame, ridicule, or guilt to push users into buying products or continuing subscriptions.
- Forced Action: Compelling users to take unrelated actions or buy additional goods or services to access their intended product/service.
- Subscription Trap: Making it difficult or complex to cancel paid subscriptions.
- Interface Interference: Manipulating UI elements to misdirect users by highlighting certain information while obscuring relevant details.
- Bait and Switch: Deceptively advertising one outcome but delivering another based on user actions.
- Drip Pricing: Hiding or revealing price elements discreetly during the user experience.
- Disguised Advertisement: Presenting ads as user-generated content, news articles, or false information.
- Nagging: Overloading users with unrelated requests, information, or interruptions during transactions.

90. Answer: (A)

Explanation :

- In 1968, the Hindu Marriage (Tamil Nadu Amendment) Act, 1967, was enacted, introducing Section 7-A into the Hindu Marriage Act of 1955. Section 7-A legalized self-respect and secular marriages among Hindus who meet the

minimum marriage age requirements, mandating their registration. These marriages typically occur without priests or traditional wedding rituals like the holy fire or mangalsutra and are often witnessed by family and friends. Hence statement 1 is correct and 2 is incorrect.

- The Supreme Court ruled that self-respect marriages do not require public solemnization or declaration. It overruled the Madras High Court's ruling in S. Balakrishnan Pandiyam and cited its 2001 judgment in S. Nagalingam v. Sivagami, which upheld Section 7-A of the Hindu Marriage Act (Tamil Nadu State Amendment). The Court highlighted that couples may avoid public declarations due to parental pressure, and imposing such a requirement could jeopardize their safety and bodily integrity. The High Court's observations were deemed to violate Article 21 (the right to life) of the Constitution, as they hindered the free will of adult individuals. Hence statement 3 is incorrect.

91. Answer: (B)

Explanation :

- Some countries, like Canada, have their own heat index measurements. Canada uses the Humidex system. In 2024, India plans to launch its own heat index to assess heat's impact on its population and issue impact-based heatwave alerts for specific areas. Hence statement 1 is incorrect.
- Hot air can hold more moisture than cold air, increasing the apparent temperature or heat index as temperatures rise. High humidity during heat waves results in a higher heat index because humid air feels hotter to humans. High humidity can lead to heat stress, with symptoms including increased heart rate and heat-related issues, potentially fatal if not addressed. When humidity is high, it's harder for the body to lose heat through sweating and evaporation, making the heat indexes a more useful measure than just the air temperature. Hence statement 2 is correct.
- The Heat Index categorizes the apparent temperature into different levels using color codes:
- Green: Experimental heat Index less than 35°C.
- Yellow: Experimental heat Index in the range of 36-45°C.
- Orange: Experimental heat Index in the range 46-55°C.
- Red: Experimental heat Index greater than 55°C. Hence statement 3 is correct.

92. Answer: (A)

Explanation :

- Disguised unemployment, also known as hidden unemployment, refers to a situation in which more people are engaged in a particular activity or sector of the economy than is actually necessary for its efficient operation. In other words, it is a form of unemployment where individuals are employed in

jobs that do not fully utilize their skills and labor potential.

- In the context of India, agriculture is a sector where disguised unemployment is prevalent. This is because a significant portion of the country's workforce is employed in agriculture, and often, there are more people working in agriculture than are required for efficient agricultural production. This leads to a situation where many individuals in the agricultural sector are not contributing significantly to the overall output, and their labor is, in essence, "disguised" or hidden, as it does not add much value to the sector.
- In contrast, the other sectors mentioned (trade, transport, and manufacturing) may have their own issues with unemployment or underemployment, but disguised unemployment is most commonly associated with the agricultural sector in India due to its labor-intensive nature and the persistence of traditional farming practices.

Hence, option (a) is correct.

93. Answer: (B)

- Sand is categorized as a "minor mineral" under the Mines and Minerals (Development and Regulations) Act, 1957, and its control lies with the State Governments. The primary sources of sand are rivers and coastal areas, and its demand has surged due to India's construction and infrastructure development activities. The Ministry of Environment, Forests, and Climate Change has issued "Sustainable Sand Mining Management Guidelines 2016" to promote environmentally friendly sand mining practices.
- Marine Sand Watch is a global data platform developed by GRID-Geneva, part of the UN Environment Programme. It monitors and tracks sediment extraction activities in the world's marine environments, including sand, clay, silt, gravel, and rock dredging.

94. Answer: (B)

Explanation

According to recent study India's core pearl millet or bajra production zone has shifted to 18 districts spread across eastern Rajasthan and Haryana between 1998 and 2017. Pearl millet is also called, as bajra in India, is suited to soils of low fertility and limited moisture. It is a popular food crop in India and Africa. It is a rainfed Kharif crop of dry and warm north-western and western parts of the country. It is a hardy crop which resists frequent dry spells and drought. Pearl millet is the major millet occupying first position among all the millets in India followed by Sorghum and Ragi. It is termed as "nutricereal" as it is a good source of energy, carbohydrate, protein, fat, ash, dietary fiber, iron and zinc. India classifies pearl millet cultivation zones based on rainfall patterns and soil types. Hence, statement 2 is incorrect.

95. Answer: (A)**Explanation :**

Recently Global Biofuels Alliance (GBA) was announced at G20 event to develop an alliance of Governments, International organizations and Industry. GBA is an India-led Initiative to develop an alliance of Governments, International organizations and Industry to facilitate adoption of biofuels. Hence, statement 1 is correct.

India, Brazil and the US are the founding members of the alliance. The initiative aims to position biofuels as a key to energy transition and contribute to jobs and economic growth. Hence, statement 2 is incorrect.

It will facilitate development, adoption and implementation of internationally recognized standards, codes, sustainability principles and regulations to incentivize biofuels adoption. It will help accelerate India's existing biofuels programs such as PM-JIVANYojna, SATAT and GOBARdhan scheme which will result in:

- Contributing to increased farmers' income,
- Creating jobs and
- Overall development of the Indian ecosystem.

19 countries and 12 international organisations have already agreed to join. GBA Members constitute major producers and consumers of biofuels. Hence, statement 3 is incorrect.

96. Answer: (C)**Explanation**

It is a mountainous country of western North Africa that lies directly across the Strait of Gibraltar. It retains much of its ancient architecture and even more of its traditional customs. Morocco's largest city and major Atlantic Ocean port is Casablanca, an industrial and commercial centre. It is the only African country with coastal exposure to both the Atlantic Ocean and the Mediterranean Sea. Hence, both statements are correct.

97. Answer: (C)**Explanation**

Recently the renovated library of the Indian Council of World Affairs (ICWA) was inaugurated by Vice-President of India. The Indian Council of World Affairs was established in 1943 by a group of Indian intellectuals as a think tank. It was registered as a non-official, non-political and non-profit organisation under the Registration of Societies Act 1860. By the Indian Council of World Affairs Act, 2001, it has been declared an institution of national importance. The council is devoted exclusively for the study of international relations and foreign affairs. The Vice President of India is the ex-officio President of ICWA. Minister of External Affairs is the Vice-President of the Council. It is located at the Sapru House, New Delhi. It is named after the eminent Indian Jurist and intellectual, Sir Tej Bahadur Sapru, the founder President of the Council. Hence, all statements are correct.

98. Answer: (C)**Explanation**

The Ministry of Education is encouraging states to establish Vidya Samiksha Kendras (VSKs) under the National Digital Education Architecture (NDEAR). Vidya Samiksha Kendra (VSKs) is a data repository that will house data from all Ministry of Education (MoE) initiatives. The goal of creating VSKs is to map the school location layer with the population layer to calculate the Gross Access Ratio. It can assist in the planning of new schools or industry clusters to understand the skilling requirements of the area, as well as in the planning of higher educational institutions based on demand and future scenarios. Hence, both statements are correct.

99. Answer: (B)**Explanation :**

- A hefty supply of the anorthosite soil from Sittampoondi and Kunnamalai villages ensured the Chandrayaan-3 mission's success. Anorthosite, type of intrusive igneous rock composed predominantly of calcium-rich plagioclase feldspar. It contains Aluminium, Silicon and Calcium, minerals that are high in demand. Hence, statement 1 is incorrect.
- Plagioclase – It is a member of the feldspar group (like orthoclase) and is a framework silicate. Plagioclase consists of a solid solution between the albite and anorthite end-members, and together with quartz is the most common of the rock forming minerals. All anorthosites found on Earth consist of coarse crystals, but some samples of the rock taken from the Moon are finely crystalline. Most anorthosites formed during Precambrian times. In India, this soil is available in abundance in places like Sithampoondi and Kunnamalai villages surrounding Namakkal, and also in some areas in Andhra Pradesh and northern parts of the country. Hence, statement 2 and 3 are correct.

100. Answer: (C)**Explanation**

The cosmological constant is presumably an enigmatic form of matter or energy that acts in opposition to gravity. It is considered by many physicists to be equivalent to dark energy. Albert Einstein, came up with the cosmological constant, which he called the universal constant, in 1915. The cosmological constant was intended to balance certain calculations in his theory of general relativity. At the time, physicists believed the universe was static, neither expanding nor contracting. However, Einstein's work suggested that gravity would cause it to do one or the other. Hence, all statements are correct.