General Studies
Current Affair Test (December-2023)

1. Answer: A

Notes:

Statement 1 is correct. India is one of the 14 founding members of the IPEF, along with the United States, Japan, Australia, and several other countries in the Indo-Pacific region. India has been actively engaged in negotiations and has emphasized the importance of the IPEF as a platform for promoting economic growth and integration in the region. Statements 2 and 3 are incorrect. The IPEF is not specifically designed to counter any one country's economic influence, but rather to promote economic cooperation and integration among a diverse group of countries in the Indo-Pacific region. The IPEF is not a free trade agreement, but rather a framework for economic cooperation and integration among its 14 member countries. While the IPEF seeks to promote free, fair, and open trade commitments that build upon the rules-based multilateral trading system, it does not mandate the reduction or elimination of tariffs or trade barriers among its member countries.

2. Answer: B

Explanation – Statement 1 is incorrect. The IRRA Platform is not an insurance platform that provides coverage to investors in case of investment losses. It is a platform developed to reduce risks faced by investors in case of technical glitches at the end of trading members or stock brokers registered with SEBI. It will provide investors an opportunity to close their open positions and cancel pending orders in case of technical glitches or outages which render the trading member's site inaccessible. Statement 2 is correct. IRRA can be invoked by trading members when there's a technical glitch at their end across exchanges from both – the primary site and disaster recovery site. Even stock exchanges can suo moto initiate the service, if needed, irrespective of any such request by the trading members.

3. Answer: D

Explanation – Some of the methods used to produce green hydrogen are: Green Hydrogen Electrolyzer, Solid oxide electrolysis (SOE), Photoelectrochemical (PEC) water splitting, Alkaline electrolysis, Proton exchange membrane (PEM) electrolysis, Thermochemical water splitting, Photobiological water splitting, electrolysis. Methods 1 and 2 (SMR and coal gasification) are not suitable for producing green hydrogen because they rely on fossil fuels and produce significant carbon emissions. Further, Finland and India recently discussed manufacturing green hydrogen electrolyzer in India. A normal Hydrogen Electrolyzer is an electrochemical device that use electricity to split water into hydrogen and oxygen. Whereas, green hydrogen electrolyzer uses electricity generate from renewable sources to power the electrolysis process, by means of which hydrogen is obtained from water. One of the world's largest electrolysers is located in Fukushima, Japan, at the site of the well-known nuclear disaster.

4. Answer: B

Explanation – The Gram Sabha is the general body of the village and is made up of all adult members of the village. It is the primary forum for public engagement and participation in village affairs. The Gram Sabha has the right to participate in the social audit process, and it is responsible for publicizing the dates and venues for the audits.

5. Answer: B

Explanation – Statemen 1 is incorrect. While the Governor does have certain powers that can affect the legislative process, the Governor does not have the authority to disrupt the regular course of lawmaking. The Governor's role in the legislative process is primarily to review and approve bills passed by the State legislature. Statement 2 is correct. Once the State legislature reconsiders the Bill and passes it again, whether with or without amendments, and presents it to the Governor for assent, the Governor is obligated to grant assent without withholding it.

6. Answer: A

Explanation – Statements 1 and 2 are incorrect. Kyasanur Forest Disease (KFD) is a tick-borne viral hemorrhagic fever endemic to the western and central districts of Karnataka State. It is caused by Kyasanur Forest Disease virus (KFDV), a member of the Flaviviridae family of viruses. The disease is characterized by fever, headache, muscle pain, vomiting, and bleeding. In severe cases, it can lead to neurological complications and death. KFD is not found only in India. The disease is also endemic to other parts of Southeast Asia, including Nepal, Myanmar, and Thailand. Statement 3 is correct. Kyasanur Forest

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Disease (KFD) can cause severe illness and death if left untreated. It is a zoonotic disease. It is also referred to as Monkey disease/ monkey fever because of its association with monkey deaths. It is transmitted through the bite of ticks and bonnet. Black-faced langur monkeys are highly susceptible to the infection. They play a significant role in the spread of the virus in the human population. There is no specific treatment for monkey fever. A vaccine (Formalin inactivated KFDV vaccine) does exist for KFD and is used in endemic areas of India.

7. Answer: B

Explanation – Statements 1 and 3 are correct. International Container Transhipment Port (ICTP) Project is being built at Galathea Bay in Great Nicobar Island. It is being developed by the Syama Prasad Mookerjee Port Trust (SMPK). One of the primary objectives of the ICTP project is to reduce India's dependence on foreign ports for transhipment cargo handling. Currently, a significant portion of India's transhipment cargo is handled at ports in Singapore, Colombo, and Klang. The ICTP aims to capture this cargo and keep it within India. The project is Envisaged under Maritime India vision 2030. Statements 2 and 4 are incorrect. While the ICTP is expected to be a major transhipment hub, it is unlikely to handle more containers than all the ports of India combined. The ICTP project is expected to handle around 16 million containers per year in its ultimate phase, which is still less than the total container handling capacity of all Indian ports combined. The ICTP project is being developed under the Landlord-Port Model, which means that the government will develop and maintain the port infrastructure, while private companies will operate the port facilities. Private companies will be allowed to bid for concessions to develop and operate specific terminals within the port.

8. Answer: C

Explanation: The Ministry of Petroleum & Natural Gas recently introduced the phase wise mandatory blending of CBG in CNG (Transport) & PNG (Domestic) segments of City Gas Distribution (CGD) sector. CBG Blending Obligation (CBO) aims to promote production and consumption of Compressed Bio-Gas (CBG) in the country. The key objectives of the CBO include:

1. To stimulate demand for CBG in City Gas Distribution (CGD) sector,
2. Import substitution for Liquefied Natural Gas (LNG) and
3. Saving in Forex, promoting circular economy and to assist in achieving the target of net zero emission.

It will be monitored and implemented by the Central Repository Body (CRB), Ministry of Petroleum and Natural Gas. CBO will be voluntary till FY 2024-2025 and mandatory blending obligation would start from FY 2025-26. CBO shall be kept as 1%, 3% and 4% of total CNG/PNG consumption for FY 2025-26, 2026- 27 and 2027-28 respectively. From 2028-29 onwards CBO will be 5%. Hence, all statements are correct.

9. Answer: B

Explanation: Recently at a stampede in Cochin University of Science and Technology, 4 students were killed including an artist who performs Chavittu Natakam. Chavittu Natakam is a colourful and vigorous theatre form that flourished at Kodungalloor in Kerala with the spread of Christianity. It is considered to be a folk art form noted for its attractive make-up of characters, their elaborate costumes, detailed gesture and well-defined body movements. The Portuguese are supposed to have introduced this art form in Kerala. Chinna Thampi Pilla and Vedanayakan Pilla are considered to be the originators of this art form. The influence of the western visual art opera can be discerned in Chavittu Natakam. Art forms like Kathakali and Kalaripayattu have also influenced Chavittu Natakam. 'Stamping Drama' is the most attractive feature of this art where the artists produce resonating sounds by stamping the floor while dancing. This folk-drama dance takes place on a stage that is referred to as 'thattu'. The 'thattu' is laid with planks of wood. The exquisite costumes of the artistes portray the characters on stage. Generally, the costumes resemble ancient Greek-Roman soldiers and European kings. Instruments like Chenda, Padathamber, Maddalam and Ilathalam, provides background music. These days Tabala, Fiddle, Flute and Bulbul are also played. The Chavittunatakam performance opens with an invocation and the opening sequence is in the form of a Virutham. It is a humming which is followed by a scene of a durbar and the play begins. The actors sing their lines loudly, and with exaggerated gestures stamp the wooden stage with great force. Hence, statement 1 is not correct.

10. Answer: B

Explanation: The recent proposal of hydro-electric modernisation plan in the Manipur's famous Loktak Lake could be detrimental to the endangered species of Sangai deer. Sangai Deer is also called as the Manipur Brow-antlered deer and Dancing Deer. The Sangai is found nowhere in the world but in Manipur. It is a unique and rare species found exclusively in Manipur's Keibul Lamjao National Park (KLNP). Phumdi is the most important and unique part of Sangai's habitat. It is the state animal of Manipur. The IUCN Status of

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Sangai is Critically Endangered. It is included under the Schedule-1 of Wildlife (Protection) Act, 1972. The Sangai population stood at 91 in 2006, 88 in 2007, 92 in 2008, 76 in 2019 and 64 in 2023. Hence, statement 3 is not correct.

11. Answer: C

Explanation: Recently researchers have discovered an extremely high-energy particle that seemingly came from a part of the universe where there is nothing and it was named "Amaterasu" after a Japanese goddess Amaterasu is an extremely high-energy particle that exceeds 240 exa-electron volts (EeV) and seemingly arrived from a void in space where nothing is known to exist. This energy is millions of times more powerful than the particles produced by the Large Hadron Collider, which is the most powerful accelerator ever built. It is second only to the "Oh-My-God" particle, another high-energy cosmic ray detected in 1991. That came in at 320 EeV. Ultra-high energy particles like Amaterasu usually travel through space quite smoothly since they don't bounce off magnetic fields, like low-energy cosmic rays but it is not in case of Amaterasu. The scientists propose 3 explanations for the enigmatic origin of the particle. It could be from a source that we have not yet identified. It might have been magnetically deflected much higher than current models predict. Scientists might need to rewrite their incomplete understanding of high-energy particle physics. Hence, statement C is correct.

12. Answer: A

Explanation: Recognizing that some regions in the country were historically disadvantaged in contrast to the others, the 5th Finance Commission in 1969 introduced the concept of Special Category Status. During the 4th 5-Year plan (1969-1974), the states of Assam, Nagaland, and Jammu & Kashmir were given special status. Five more states included between 1974 and 1979 (Himachal Pradesh, Manipur, Meghalaya, Sikkim, Tripura). Arunachal Pradesh and Mizoram added in 1990. Uttarakhand granted special status in 2001. Telangana, as the newest state, received this status post its separation from Andhra Pradesh. Presently, 11 states have special category status: Assam, Nagaland, Himachal Pradesh, Manipur, Meghalaya, Sikkim, Tripura, Arunachal Pradesh, Mizoram, Uttarakhand, and Telangana.

After the dissolution of the Planning Commission and the subsequent constitution of the NITI-Aayog, the recommendations of the 14th Finance Commission have been implemented, meaning that the Gadgil formula-based grants have been discontinued. But this has been compensated by the increase in devolution from the divisible pool to all states from 32% to 42%. The Centre says that the 14th Finance Commission effectively removed the concept of Special Category Status after its recommendations were accepted in 2015. Hence statement 1 and Statement 3 are incorrect.

The central government supports states by covering 90% of their program expenditures, with the remaining 10% as a zero-interest loan. States receive preferential treatment in funding applications and enjoy excise tax reductions to attract businesses. They are allocated a substantial 30% share of the federal budget, with access to debt reduction programs. Tax exemptions incentivize investments, and states receive preference in central funds for development projects. Flexibility to carry over unused funds allows for effective financial planning. Hence statement 2 is correct.

13. Answer: C

Explanation: Cosmic rays were discovered by Victor Hess in 1912 in balloon experiments, for which he was awarded the 1936 Nobel Prize in Physics. Hence statement 1 is correct.

Cosmic rays are high-energy particles, primarily composed of protons and atomic nuclei that travel through space at nearly the speed of light. They originate from various sources such as supernovae, active galactic nuclei and other energetic cosmic events Hence statement 2 and 3 are correct.

14. Answer: A

Historical sources have preserved a number of names of Sufi women who are witnesses of the feminine side of Islamic mysticism. Rabi'a Basri is a classic example of how faith and love can set you free. She was the first female Sufi Saint of Islam. She made one of the greatest contributions towards the development of Sufism. She was a teacher of women as well as of men; a woman who called no man her master. Her reputation excels that of many Muslim men within the early days of Sufism. Hence, statement 3 is not correct.

15. Answer: C

Explanation: Recently, a team of researchers from the Indian Institute of Technology (IIT), Ropar has found the presence of tantalum, a rare metal, in the Sutlej River sand in Punjab. Tantalum is a rare metal that was discovered in 1802 by the Swedish chemist Anders Gustaf Ekeberg. It is bright, very hard, silver-grey metal of Group 5 of the periodic table. It is characterized by its high density, extremely high melting point, and excellent resistance to all acids except hydrofluoric at ordinary temperatures. It has 3rd highest melting point next to tungsten and rhenium. As tantalum has a high melting point, it is frequently used as a substitute for platinum, which is

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more expensive. It possesses high corrosion resistance, because when exposed to air, it forms an oxide layer that is extremely difficult to remove, even when it interacts with strong and hot acid environments. When pure, tantalum is ductile, meaning it can be stretched, pulled, or drawn into a thin wire or thread without breaking. It is almost completely immune to chemical attack at temperatures below 150°C and is attacked only by hydrofluoric acid, acidic solutions containing the fluoride ion and free sulphur trioxide. It is mined in many places including Australia, Canada and Brazil. Tantalum is non-toxic and has no known biological role. One of the main uses of tantalum is in the production of electronic components. The capacitors made from tantalum are capable of storing more electricity in smaller sizes without much leakage than any other type of capacitor. Tantalum causes no immune response in mammals, so has found wide use in the making of surgical implants. It is very resistant to corrosion and so is used in equipment for handling corrosive materials. It is also used to make components for chemical plants, nuclear power plants, aeroplanes and missiles. Tantalum alloys can be extremely strong and have been used for turbine blades, rocket nozzles and nose caps for supersonic aircraft. Hence, all statements are correct.

16. Answer: B

Explanation: Recently, a study by an international team of researchers revealed the formation of a new enigmatic layer – E prime layer at the outermost part of Earth's core. Earth comprises 4 primary layers that includes:

- An 'inner core' at the planet's centre
- 'Outer core' that surrounds the inner core
- Mantle
- Crust

A new enigmatic layer or E prime layer is formed at the outermost part of Earth's core. It is formed as a result of "surface water penetrating deep into the planet" altering the composition of the metallic liquid core's outermost region. The material exchange between the core and mantle is small. But the experiments revealed that when water reaches the core-mantle boundary, it reacts with silicon in the core, forming silica. Layer formation process –

- Tectonic plates carrying surface water have transported it deep into the Earth over billions of years.
- Upon reaching the core-mantle boundary about 1,800 miles below the surface, this water initiates significant chemical changes, influencing the core's structure.

Findings by the international team –

- The team observed that sub-ducted water reacts chemically with core materials under high pressure.
- This reaction leads to the formation of a hydrogen-rich, silicon-depleted layer at the outer core, resembling a film-like structure.
- Silica crystals generated by this process ascend and blend into the mantle, impacting the overall composition.
- These modifications in the liquid metallic layer could potentially result in reduced density and altered seismic characteristics. Hence, statement 1 is not correct.

17. Answer: B

Explanation: The recently concluded negotiations of IPEF agreement on "fair economy" dealing with corruption would give a big support to India's efforts to bring back proceeds of crime and corruption parked overseas. The IPEF was launched in Tokyo in May 2022. The 14 members of the IPEF include India, US, Australia, Brunei, Fiji, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand and Vietnam. They account for 40% of the world economic output and 28% of trade. This framework will advance resilience, sustainability, inclusiveness, economic growth, fairness, and competitiveness for our economies. Through this initiative, the IPEF partners aim to contribute to cooperation, stability, prosperity, development, and peace within the region. The 4 pillars of the frame work includes:

- Trade
- Supply Chains
- Clean Energy, Decarbonisation and Infrastructure
- Tax and Anti-Corruption

India has joined 3 pillars expect the trade pillar. The IPEF is designed to be flexible that the IPEF partners are not required to join all four pillars. It seeks to address the vulnerabilities and disruption in supply chains would not in any way take away the country's sovereign rights to impose export restrictions on products or change tariffs. Under the IPEF Fair Economy Agreement members have resolved to cooperate for combating corruption and seizing proceeds of crime. Hence, statement 3 is not correct.

18. Answer: B

Explanation: The Ministry of Education (MoE) recently announced that it would write to all states to urge students to use the newly released exam preparation platform, SATHEE (Self-Assessment Test and Help for Entrance Exams). The Ministry of

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Education has launched a new effort to give students with a free learning and assessment platform. It will assist students in obtaining free training and coaching for competitive examinations. The platform's goal is to bridge the gap for kids in society who cannot afford the expensive entrance exam guidance and coaching. It will provide students with preparation materials in English, Hindi, and other regional Indian languages so that they can prepare for exams such as JEE and NEET. It will be valuable for candidates studying for CAT, GATE, UPSC, and other competitive exams. It will also provide candidates with the opportunity to obtain experience in coaching centres. The website will include videos created by IIT and IISC faculty members to assist students in preparing for competitive tests. The videos would also assist pupils in learning concepts and revising topics in which they are weak. It makes use of a locally produced AI program called Prutor, which was created by IIT-Kanpur. Hence, option B is correct.

19. Answer: B

Explanation – Statements 1 and 2 are incorrect. The International Space Station (ISS) is not in Medium Earth Orbit (MEO). It is in Low Earth Orbit (LEO), at an average altitude of about 250 miles (400 kilometers). The Indian Space Research Organisation (ISRO) is not one of the space agencies involved in the ISS. The ISS is a collaborative project involving five space agencies: the United States' National Aeronautics and Space Administration (NASA), Russia's Roscosmos, Europe's European Space Agency (ESA), Japan's Japan Aerospace Exploration Agency (JAXA), and Canada's Canadian Space Agency (CSA). Statement 3 is correct. The ISS serves as a microgravity and space environment research laboratory. Microgravity is the condition of near weightlessness experienced in space. The ISS provides a unique environment for studying the effects of microgravity on the human body, materials, and biological processes. It also serves as a platform for conducting experiments in astronomy, physics, and other fields.

20. Answer: A

Explanation – Statement 1 is correct. Amyloidosis is a rare disease that occurs when a protein called amyloid builds up in organs. Amyloidosis is a group of diseases in which abnormal proteins called amyloid fibers accumulate in different organs and tissues, causing serious health problems. Organs that may be affected include the heart, kidneys, liver, spleen, nervous system and digestive tract. Chemotherapy, Bone Marrow Transplant and medications are the treatment used in Amyloidosis. Statement 2 is incorrect. Lysozyme is an enzyme that breaks down the walls of bacterial cells, helping to protect the body from infection. It is found in tears, saliva, mucus, and breast milk. Lysozyme does not play a role in regulating blood pressure. Large amounts of lysozyme can be found in egg white. It can be regarded as a model protein in studying diseases like Amyloidosis.

21. Answer: A

Explanation – The Central Council for Research in Ayurveda Sciences (CCRAS) launched the Ayurveda Gyan Naipunya Initiative (AGNI) to promote research and documentation of traditional Ayurveda knowledge and practices. The initiative aims to create a comprehensive database of Ayurveda practices, validate their effectiveness through scientific research, and disseminate this knowledge to Ayurveda practitioners and the general public. Studentship Program for Ayurveda Research Ken (SPARK): It aims to support the research ideas of young undergraduate students enrolled in Ayurveda colleges across India. Scheme for Training in Ayurveda Research for PG Scholars (PG-STAR): It aims to promote good quality research in Ayurveda students pursuing post-graduation courses. However, Advancement Scheme for Technology Integration and Learning (ASTIL) is not an initiative of CCRAS.

22. Answer: B

Explanation: UN Educational Scientific and Cultural Organization (UNESCO) is responsible for promoting peace, social justice, human rights and international security through international cooperation on educational, science and cultural programs.

It is based in Paris, France. It accorded recognition in 2011 to Palestine as its member.

USA and Israel have formally quit the UNESCO.

23. Answer: C

Explanation: International Fund for Agricultural Development is an international financial institution, the UN's food and agriculture hub.

IFAD is dedicated to eradicating poverty and hunger in rural areas of developing countries.

It provides low-interest loans and grants to developing countries to finance innovative agricultural and rural development programmes and projects.

24. Answer: B

Explanation – Statement 1 is incorrect. Fractals are geometrical shapes that are characterized by their self-similarity at all scales. This means that they exhibit the same intricate structure at different levels of magnification. As you zoom in on a fractal, you will see the same patterns repeating themselves over and over again. This property of self-similarity is what gives fractals their infinite complexity. Fractals are

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not limited to a finite number of iterations. In fact, they are often generated by repeating a simple process infinitely many times. This process of iteration is what leads to the emergence of the fractal's intricate patterns. Statement 2 is correct. Fractals have indeed emerged as a powerful tool for understanding quantum systems and for developing new quantum technologies. Their ability to capture complex, self-similar structures make them well-suited for modeling the behavior of quantum particles and systems. In quantum mechanics, fractals are used to: Understand the complex wave functions of quantum particles, Develop new quantum technologies, etc.

25. Answer: D

Explanation – The Pharmacy Council of India (PCI) is a statutory body, established under the Pharmacy Act, 1948. It functions under the Ministry of Health and Family Welfare, Government of India. It is constituted by the central government every five years. It prescribes the minimum standard of education required for qualifying as a pharmacist. It approves institutions that offer pharmacy education in India. It regulates the profession and practice of pharmacy. The National Pharmacy Commission Bill, 2023 aims to repeal the Pharmacy Act of 1948 and replace the Pharmacy Council of India with a national commission.

26. Answer: B

Explanation – Statement 1 is incorrect. The Voice of the Global South Summit is not a G20 initiative, but rather an initiative of India's Ministry of External Affairs (MEA). It was launched in 2022 with the aim of providing a platform for countries in the Global South to share their perspectives and priorities on global issues, particularly those related to sustainable development, climate change, and economic cooperation. India hosted the first Voice of the Global South Summit in January, 2023 under the theme 'Unity of Voice, Unity of Purpose'. The second Voice of the Global South Summit is being hosted under the theme "Together for Everyone's Growth, Together for Everyone's Trust". Statement 2 is correct. The DAKSHIN initiative, which stands for "Development Assistance Knowledge Sharing Hub for International Networks," is a Global Centre of Excellence launched by India under the Voice of the Global South Summit. The DAKSHIN initiative aims to support countries of the Global South in building their capacity to address challenges related to sustainable development, including climate change, through knowledge sharing, capacity building, and technical assistance.

27. Answer: C

Explanation – Statements 1 and 3 are correct. A nuclide is a specific type of atom characterized by its number of protons, neutrons, and nuclear energy state. Nuclides can be stable or unstable. Stable nuclides have a nucleus that is stable and does not undergo radioactive decay. Unstable nuclides have a nucleus that is unstable and will eventually undergo radioactive decay to form a different nuclide. Nuclides are an important concept in nuclear physics, as they allow scientists to distinguish between different types of atoms with the same atomic number. In nuclear physics, drip lines refer to the boundaries beyond which nuclei are unstable and will undergo radioactive decay by emitting protons or neutrons. These boundaries are important in understanding the limits of nuclear stability and the nature of nuclear forces. Statement 2 is incorrect. Isotopes are variants of a chemical element that have the same number of protons but different numbers of neutrons. Isotopes of an element have the same chemical properties, but they can have different physical properties, such as different masses and half-lives.

28. Answer: C

Explanation – The 'Utilization Rate' in the context of FTAs refers to the extent to which countries involved in the agreement actually use or take advantage of the preferential trade conditions outlined in the FTA. It is the percentage of eligible trade that utilizes the benefits offered by the agreement compared to the total trade between the FTA partners. Recently, Indian exporters have benefitted from the India-Australia ECTA. For the first nine months, the utilization rate was 77%.

29. Answer: A

Explanation: Atal Tunnel (also known as Rohtang Tunnel) is a highway tunnel built under the Rohtang Pass in the eastern Pir Panjal range of the Himalayas on the Leh-Manali Highway in Himachal Pradesh, India. Hence, statement 1 is not correct.

Jawahar Tunnel is also called the Banihal Tunnel. The length of the tunnel is 2.85 km. The tunnel facilitates round-the-year road connectivity between Srinagar and Jammu. Hence, statement 2 is not correct.

Recently, an under-construction Silkyara-Barkot tunnel along the Yamunotri National Highway in Uttarkashi district, Uttarakhand, collapsed, trapping a significant number of workers inside. The Silkyara-Barkot tunnel is part of the ambitious Char Dham all-weather road project of the Central Government. Hence, statement 3 is correct.

30. Answer: B

Explanation: The Supreme Court has ruled that the Sessions Court or High Court has the authority to award interim/transit anticipatory bail when the FIR is registered in a separate state rather than within the

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jurisdiction of the same state. Bail is a judicial release from custody of an accused person on the condition that the accused person appear in court at a later date. Anticipatory Bail is the bail granted to a person in anticipation and apprehending arrest. Anticipatory Bail is bail before the arrest, and the police can't arrest an individual if the Court has granted anticipatory Bail. It is meant to be a safeguard for a person who has false accusations or charges made against him/her, most commonly due to professional or personal enmity, as it ensures the release of the falsely accused person even before he/she is arrested. A transit anticipatory bail is sought when a case against a person has been or is likely to be filed in a state different from the one in which the person is likely to be arrested. The purpose of transit bail is to allow the person bail, so they can approach the appropriate court in the state in which the case has been filed for anticipatory bail. In the absence of transit anticipatory bail, the result would be that another state's police could arrest a person from their home state without them having the opportunity to apply for anticipatory bail at all. The procedure to be followed in transit anticipatory bail is exactly the same as of any other anticipatory bail application. The concept of transit anticipatory bail is not codified in Indian law but has found its identity through judicial practice and legal precedents. Hence, statement 1 is correct.

31. Answer: B

Explanation: According to the recent Emissions gap report, 2023, countries' current emissions pledges to limit climate change would still put the world on track to warm by nearly 3 degrees Celsius this century.

Emissions Gap Report is an annual report released by the United Nations Environment Programme (UNEP).

The report assesses countries' promises to tackle climate change compared with what is needed.

The report assessed countries' Nationally Determined Contributions (NDCs), which they are required to update every 5 years. Key findings of the report:

- The world faces between 2.5 C and 2.9 C of warming above preindustrial levels if governments do not boost climate action.
- The planet-warming greenhouse gas emissions must fall by 42% by 2030 to hold warming at 1.5 C.
- The chance of now limiting warming to 1.5 C is just 14%, adding to a growing body of scientific evidence suggesting the goal is dead.
- Global greenhouse gas emissions rose by 1.2% from 2021 to 2022, reaching a record 57.4 gigatonnes of carbon dioxide equivalent.
- The anticipated level of warming is slightly higher than 2022 projections, which then pointed toward a rise of between 2.4 C and 2.6 C by 2100.
- GHG emissions across the G20 also increased by 1.2 % in 2022.
- India accounts for 18% of the world population, but to date only contributed 5% of warming.

Hence, statement 2 is not correct.

32. Answer: C

Explanation: The Technology Development Board (TDB) and the Small Industries Development Bank of India (SIDBI) have formalised a Memorandum of Understanding (MoU) to support the Micro, Small, and Medium Enterprise (MSME) sector in India. The Technology Development Board Act of 1995 established it as a statutory body. Its goal is to encourage the development and commercialization of indigenous technology, as well as the modification of imported technology for broader application. It supports industrial firms with equity capital or loans, as well as financial help to research and development institutions. The Fund has received funds from the Government of India derived from cess collections from industrial enterprises in accordance with the requirements of the Research and Development Cess Act, 1986, as modified in 1995. Hence, both statements are correct.

33. Answer: B

Explanation: The concept of Extended Producer Responsibility (EPR) serves as the foundation for Battery Waste Rules, 2022. Under the Rules, the battery manufacturers, importers and automakers that produce products with batteries have the obligation of Extended Producer Responsibility (EPR). The Rules have mandated that EPR registration system to be managed online on a portal by the Central Pollution Control Boards (CPCB). The collecting, recycling, and refurbishing of used batteries is the responsibility of battery manufacturers, including importers.

The rules include all types of batteries regardless of chemistry, shape, volume, weight, material composition and use. The Rules bring within its ambit all manufacturers, producers, collection centres, importers, re-conditioners, refurbishers, dismantlers, assemblers, dealers, recyclers, auctioneers, vehicle service centres, consumers and bulk consumers. The rules cover the battery manufacturers, importers and automakers that produce products with batteries. The Rules have for the first time defined measurable targets for collection and recycling within a compliance timeframe. The rules have set the target of 90% recovery of the battery

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material. 70 % of battery recovery by 2024-25, then 80 % by 2026, and 90 % after 2026-27 onwards. The "Fit for 55" package – Is a set of legislative proposals by the European Union (EU) to reduce greenhouse gas emissions by 55% by 2030. Hence, statement 3 is not correct.

34. Answer: C

Explanation: India in recent times have attempted to transform Indian rupee (INR) into a hard currency. Hard currencies are widely accepted around the world for international transactions and are considered a reliable and stable store of value. The presence of a currency as a hard currency reflects perceived stability, reliability and economic strength of its issuing country. A hard currency is expected to remain relatively stable through a short period of time, and to be highly liquid in the forex or foreign exchange (FX) market. Transforming a currency into a hard currency is a complex process that hinges on several pivotal factors. The process requires significant systemic changes, which could, potentially, destabilise country's economy. India should work to make local currency settlements more robust which would allow the economy to stabilise and strengthen, making the transition smoother and less risky. The US Dollar is the most dominant hard currency, often considered the world's primary reserve currency. The most tradable currencies in the world are the U.S. dollar (USD), European euro (EUR), Japanese yen (JPY), British pound (GBP), Swiss franc (CHF), Canadian dollar (CAD) and the Australian dollar (AUD). Within the hard currency group, the Canadian and Australian dollars are sensitive to commodity prices. Hence, both statements are correct.

35. Answer: C

Explanation: In animal husbandry, cattle that are born exhibiting characteristics of both sexes are called freemartins. Freemartins are sterile female cattle that result from the twinning of a male and a female within the same uterus. This phenomenon occurs in approximately 90% of such twin pregnancies in cattle. The key reason is the exchange of blood between the male and the female foetuses during gestation. Genetically, freemartinism is attributed to the sharing of cells carrying the Y chromosome from the male twin with the female twin. This chromosome triggers the development of male reproductive organs in the male foetus, while the female foetus, affected by the presence of male hormones, experiences incomplete development of its reproductive system. The end result is that the freemartin has an underdeveloped or non-functional reproductive tract. Hence, statement C is correct.

36. Answer: A

Explanation: Most nitrogen comes as the isotope Nitrogen-14, with 7 protons and 7 neutrons. But Scientists recently discovered hints of the new isotope, called nitrogen-9, by smashing beams of oxygen isotopes into beryllium atoms in the U.S. National Superconducting Cyclotron Laboratory. Nitrogen-9 nucleus is characterised by 7 protons and 2 neutrons – which is an unusually high proton-to-neutron ratio. This disparity has a critical effect on the isotope's stability, influencing its decay processes as well as overall behaviour. For one, the high proton content places nitrogen-9 atoms beyond the conventional stability thresholds. Hence, statement 2 is not correct.

37. Answer: A

Explanation: Halal is an Arabic word that loosely translates to 'permissible' in English. In the Quran, the term 'halal' is used to designate the categories of lawful (and allowed) while 'haram' means forbidden and is used to designate the categories of unlawful (and forbidden). The two items of food that are most commonly considered haram (non-halal) are pork (pig meat) and intoxicants (alcohol). Even meats that are not pork must satisfy specific requirements relating to their source, the way the animal was killed, and how it was processed, to qualify as halal. Halal is particularly associated with Islamic dietary laws to refer to food that is procured, processed and traded in compliance with Islamic belief. Hence, statement 1 is correct.

It is similarly to the 'kashrut' dietary rules followed by orthodox Jews, who only consume food that is 'kosher', which is permitted in Jewish law. In the Indian context, halal is mostly used to refer to the slaughtering technique used by Muslims. This involves killing the livestock or poultry through a single cut to the jugular vein, carotid artery and the windpipe with a sharp knife at the front of the neck. Animals must be alive and healthy at the time of slaughter, and all blood must be drained from the carcass. During the process, recitation of prayers, known as shahada, is also prescribed. Halal is in contrast to the 'jhatka' method, which is preferred by many Hindus and Sikhs. Jhatka method involves delivering a powerful, single blow to the back of the animal's neck, decapitating it. Jhatka specifically involves stunning animals prior to slaughter, a practice that is not allowed in Islam. Most meat shops owned by Muslims announce their products as 'halal' whereas those owned by Hindus or Sikhs declare themselves as 'jhatka' establishments. The halal or haram go beyond food, depending on any consumable item, whether they are produced in accordance with Islamic law. Hence, statement 2 is not correct.

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Halal certificates simply tell a consumer whether a product meets the requirements for being considered halal or not. They do not indicate the presence of meat, or in and of themselves, have nothing to do with meat. India does not have an official regulator for the certification of halal products. But there are various halal certifying agencies that provide companies, products or food establishments with halal certifications. Their legitimacy lies in their name-recognition among Muslim consumers as well as recognition from regulators in Islamic countries. Hence, statement 3 is not correct.

38. Answer: B

Explanation:

Lunar Sample Return Mission (LSRM) is the proposed mission by the Indian Space Research Organisation (ISRO) to collect soil or rock samples from the Moon and bring them to Earth. Lunar Sample Return Mission (LSRM) aims to bring back rock or soil samples from the Shiv Shakti point in Lunar. The Shiv Shakti point is spot where Vikram had landed on the lunar South Pole. The proposed mission will have 2 separate launch vehicles. The Geosynchronous Satellite Launch Vehicle (GSLV) Mark-II will be used for the injection of the transfer and the re-entry modules. Whereas the Launch Vehicle Mark-III will be used for the direct injection of the Ascender and the Lander module. A robotic arm mechanism will be used for the sample collection at the Shiv Shakti point. The LSRM, like Chandrayaan-3, is planned for one lunar day (14 Earth days) and the expected launch date is in 2028. Hence, statement 1 is not correct.

39. Answer: C

Explanation: Cryosphere is composed of Earth's frozen water in ice sheets, sea ice, permafrost, polar oceans, glaciers, and snow as ground zero for climate change. The State of the Cryosphere Report, 2023 is released by the International Cryosphere Climate Initiative. It is a network of policy experts and researchers working to preserve the Earth's cryosphere.

Key findings of the report:

1. The Himalayas are also expected to lose 50% of today's ice if global average temperatures touch 2°C.
2. Nearly all tropical glaciers, most mid-latitude glaciers and Polar Regions will disappear even if the world manages to limit global temperature rise to 2 degrees Celsius, above the preindustrial era.
3. Sea ice around Antarctica hit an all-time low summer and winter record in 2023.
4. Water temperatures in parts of the Arctic and North Atlantic were 4-6°C higher than normal.
5. When permafrost thaws, it releases CO2 and methane emissions, which will cause a spike in temperatures even if human emissions reach zero.
6. The Earth's ice sheets lost 7,560 billion tonnes of ice between 1992 and 2022. The last decade alone has witnessed the seven worst years of ice loss.
7. Ice sheets in Greenland and parts of Antarctica could contribute between 12-20 metres of sea-level rise at 2°C.
8. This 2°C will result in extensive, potentially rapid, irreversible sea-level rise from Earth's ice sheets and 3°C will further speed up this loss within the next few centuries.

Hence, both statements are correct.

40. Answer: A

Explanation: Ladakh's sea buckthorn fruit recently received a GI designation. Hippophae rhamnoides (sea buckthorn) is a shrub native to Europe and Asia. It is found in India above the tree line in the Himalayan region, mostly in arid places like the frigid deserts of Ladakh and Spiti. It grows naturally on 11,500 hectares in the Ladakh region. It has little orange or yellow berries that are acidic in taste but high in vitamins, particularly vitamin C. Hence, statement 1 is correct. The plant is drought-resistant and can endure temperatures ranging from minus 43 degrees Celsius to 40 degrees Celsius. Because of these two features, the shrub is an excellent plant species for establishing in cold deserts. Sea Buckthorn berries have the unusual property of remaining intact on the shrub throughout the winter months, despite subzero temperatures. It has a long history of use for a number of reasons. Every part of the plant, including the fruit, leaf, twig, root, and thorns, has traditionally been utilized as medicine, a nutritional supplement, fuel, and a fence. Many bird species eat the berries when other food sources are scarce in the area. Cold desert animals like as sheep, goats, donkeys, cattle, and double-humped camels feed on the leaves, which are high in protein. As a result, it is generally known as the 'Wonder Plant,' 'Ladakh Gold,' 'Golden Bush,' or 'Gold Mine' of frigid deserts. Hence, statement 2 is not correct.

41. Answer: B

Explanation: A team of astronomers has discovered a massive galactic structure known as the "Cosmic Vine." It is a gigantic "vine-like structure" that spans over 13 light-years and comprises 20 galaxies. It's also pretty old. It has a redshift of 3.44, indicating that it is in the early cosmos, according to the researchers. A redshift of 3.44 indicates that light from the Cosmic Vine travelled for between 11 and 12 billion years before arriving at JWST. To put things in perspective, current approaches place the universe's age at 13.7

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billion years. It is home to two of the most massive galaxies ever identified at such a high redshift—Galaxy A and Galaxy E, both of which are in a dormant state, indicating a slower rate of star production. The Vine, according to researchers, could be the forerunner to a galaxy cluster, revealing insights into the genesis of such clusters and the rise of big galaxies inside them. Hence, statement B is correct.

42. Answer: C

Explanation – Somalia has the longest coastline on Africa's mainland, with a length of approximately 3,333 km. Cal Madow is a mountain range in northeastern Somalia. Somalia is situated in the Horn of Africa, which is a region of eastern Africa that includes Djibouti, Eritrea, Ethiopia, and Somalia. Somalia is bordered by Ethiopia to the west.

43. Answer: B

Explanation – Statement 1 is correct. A patent is an exclusive set of rights granted for an invention, which may be a product or process that provides a new way of doing something or offers a new technical solution to a problem. Statements 2 and 3 are incorrect. Patents are territorial rights, and the exclusive rights are only applicable in the country or region in which a patent has been filed and granted, in accordance with the law of that country or region. The protection is granted for a limited period, generally 20 years from the filing date of the application. Section 3 outlines what is NOT considered an invention and thus cannot be patented. So, an invention that satisfies the criteria in Section 3 is actually NOT patentable subject matter.

44. Answer: B

Explanation – Statement 1 is incorrect. IGBC is a non-profit organization that promotes green building practices in India. It is not a government agency and does not have the authority to regulate construction. Statement 2 is correct. the Nest Initiative has been launched by the IGBC. It is a rating and certification initiative developed for residential units to build green homes. It aims to – encourage individual house owners and the residential sector to adopt green building measures in a big way, emphasizes on bringing down electricity consumption, water usage and creating a healthy living space.

45. Answer: A

Explanation – Statements 1 and 3 are incorrect. Tax havens are countries or jurisdictions that offer low or no taxation to attract foreign businesses. India is not a tax haven and has strict anti-tax avoidance laws. Companies that use India as a tax haven may face penalties and legal action. A person transferring money between different bank accounts, making international wire transfers, and conducting legitimate business transactions and creating a complex web for authorities to trace the funds. This type of activity is known as money laundering, which is the process of converting illegally obtained money into legitimate money. Money laundering is a serious crime in India and can result in imprisonment. Statement 2 is correct. The Indian government has implemented various policies to promote investment in renewable energy. These policies include tax incentives, such as tax credits and accelerated depreciation, which make renewable energy projects more attractive to investors.

46. Answer: B

Explanation – The Logistics Performance Index (LPI) is a benchmarking tool developed by the World Bank to assess the quality of trade logistics across different countries. India ranked 38 among 139 countries in LPI 2023. Hence, in order to improve its ranking further India needs to improve Logistics services quality, Ease of arranging shipments, lower tariffs and import duties. However, Subsidizing logistics costs and devaluing the currency are not considered relevant parameters for improving India's LPI ranking. While subsidizing logistics costs may provide temporary relief, it does not address the underlying issues affecting logistics efficiency. Similarly, devaluing the currency may make exports more competitive in the short term, but it can lead to economic instability and long-term harm.

47. Answer: A

Explanation – Statement 1 is correct. Miniature paintings are characterized by their use of fine brushwork, intricate details, and vibrant colors. They often depict scenes from mythology, history, and everyday life. In many miniature paintings, human characters are portrayed in profile or with their faces obscured. This is due to a number of factors, including the influence of Islamic art, which traditionally discourages the depiction of the human form, and the desire to create a sense of mystery and intrigue. Statement 2 is incorrect. Brijinder Nath Goswamy was not a miniature painter. He was an art historian who specialized in Indian miniature paintings. Further, Goswamy in his 1968 article, which focused on Pahari painting, illustrated that the style of paintings didn't depend on in which state/region they were being produced. Rather, the style was dependent on the family of painters.

48. Answer: A

Explanation – Statement 1 is correct. The Treaty on Conventional Armed Forces in Europe (CFE) was a major arms control agreement negotiated and concluded during the last years of the Cold War. It established comprehensive limits on key categories of conventional military equipment in Europe

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(from the Atlantic to the Urals) and mandated the destruction of excess weaponry. The treaty was signed by 22 states, including all members of NATO and the Warsaw Pact. It placed limits on the deployment of conventional military forces in Europe and played a significant role in reducing tensions and arms build-up in the region. The CFE Treaty established a legally binding framework for regulating the conventional armaments of the signatory countries in Europe. The CFE Treaty also included a robust verification regime to ensure that all States Parties were complying with the treaty's provisions. Statement 2 is incorrect. While the primary focus of the CFE Treaty was on European countries, its geographical scope extended beyond Europe. The treaty covered a broader area that included parts of the former Soviet Union and North America, demonstrating its attempt to address military balance and stability in a larger context.

49. Answer: C

Explanation – Statements 1 and 3 are correct. The Naga Hills are a mountain range that is located in both India and Myanmar. The hills are home to a number of different ethnic groups, including the Nagas. The Naga Hills are a mountainous and forested region that is known for its beautiful scenery and its rich cultural heritage. The Chin Hills-Arakan Yoma montane forests are a mountain range that extends across the border between India and Myanmar. Statement 2 is incorrect. The Irrawaddy River flows entirely within Myanmar. It is the longest river in Myanmar and it flows from the mountains of the north through the central plains of the country and into the Andaman Sea. The Irrawaddy River is an important waterway for transportation and irrigation.

50. Answer: D

Explanation – Statement 1 is incorrect. NOTTO is not primarily focused on importing organs and tissues from other countries to meet domestic demand. In fact, NOTTO has a number of initiatives in place to promote organ donation and transplantation within India. For example, NOTTO has a national registry of potential organ donors, and it provides training and support to transplant centers across the country. It is a national level organization set up under Directorate General of Health Services, Ministry of Health. It functions as the apex centre for all Indian activities for procurement, distribution and registry of organs and tissue donation and transplantation in the country. Statement 2 is correct. NOTTO plays a vital role in ensuring the fair and equitable distribution of organs and tissues for transplantation in India. NOTTO maintains a national registry of organ donors and recipients, and it also develops and implements policies and procedures for organ allocation.

51. Answer: C

Explanation – Statements 1, 2 and 3 are correct. The Global Innovation & Technology Alliance (GITA) is a non-profit Public Private Partnership (PPP) company promoted jointly by the Technology Development Board (TDB), Department of Science & Technology (DST), Government of India (GoI) and the Confederation of Indian Industry (CII). GITA's mission is to facilitate the implementation of various innovative and revolutionary scientific and technological industrial research and development projects worldwide. It aims to promote collaboration between Indian and global industries and academia to develop new technologies and products that can address global challenges. Some of its objectives include: To encourage and promote joint research and development ventures between Indian industries and foreign partners, to provide funding support for joint research and development projects, to promote the transfer of technology from developed countries to India.

52. Answer: C

Explanation – Statements 1 and 2 are incorrect. The WGI evaluates countries based on criteria related to good governance, however, those criteria are not universal. The WGI's criteria are based on a particular set of values and ideals, but they are not universally accepted as the only criteria for good governance. The WGI is not one of the criteria used to select countries for membership in the United Nations. The UN has its own criteria for membership, which are based on things like a country's political stability, its ability to contribute to the work of the UN, and its commitment to the UN Charter. Statement 3 is correct. The World Governance Indicators (WGI) play a significant role in determining a country's sovereign credit rating. Credit rating agencies, such as Moody's, Standard & Poor's, and Fitch, consider the WGI data when assessing a country's creditworthiness. The WGI provide insights into a country's political stability, economic governance, and rule of law, all of which are crucial factors in determining its ability to repay its debts.

53. Answer: B

Explanation – Statements 1 and 2 are correct. The MSCI Emerging Markets Index (MSCI EM) is a market capitalization-weighted stock market index that tracks the performance of large and mid-cap stocks in emerging markets in 25 nations. It is one of the most widely used benchmarks for emerging market investing. The MSCI EM is a well-diversified and widely used benchmark for emerging market investing. India was included in the index in 1994.

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Recently, after inclusion of nine Indian stocks, India's current representation in MSCI EM index will be reached to 131 stocks. India, has the second-highest weightage in the index after China. Statement 3 is incorrect. The MSCI EM is calculated using a free float-adjusted market capitalization methodology. This means that the index is weighted by the market capitalization of each constituent company, adjusted for the percentage of shares that are freely available for trading. This helps to ensure that the index is not overly influenced by companies that have a large number of restricted shares.

54. Answer: A

Explanation – Statements 1 and 2 are correct. India has signed a memorandum of understanding (MoU) with the US on "Enhancing Innovation Ecosystems through an Innovation Handshake". The concept of Innovation Handshake has been developed under the US-India Commercial Dialogue. It aims to bring the two governments together with venture capitalists, entrepreneurs and industry players. They will have open discussions to explore opportunities and tackle challenges in key sectors highlighted in the US-India Critical and Emerging Technology initiative. Objectives under the Innovation Handshake include: 1) To connect the two sides' dynamic startup ecosystems, 2) To address specific regulatory hurdles to cooperation, 3) To share information and best practices for startup fundraising, 4) To promote innovation and job growth, particularly in critical and emerging technologies (CET). Statement 3 is incorrect. There is no such objective.

55. Answer: C

Explanation – When the Reserve Bank of India (RBI) increases the Risk Weighted Assets (RWA) of banks, the bank's profitability will decrease, as it affects their capital adequacy ratios and may require them to hold more capital against their assets, potentially reducing their profitability. An increase in RWA can lead to banks becoming more selective in their lending practices and reducing their lending activity as they may need to allocate more capital to support their lending operations. An increase in RWA is not expected to lead to lower borrowing costs for the public. In fact, it may lead to higher borrowing costs as banks adjust their lending activities in response to the increased capital requirements. An increase in RWA can lead to banks becoming more selective in their lending practices as they may need to allocate more capital to support their lending operations. Stronger capital requirements can promote greater financial stability by reducing the likelihood of bank failures. This can protect depositors' funds and maintain confidence in the financial system.

56. Answer: B

Explanation – The tropical rainforests are located near the equator. Average temperatures are high, and there is a consistent amount of rainfall. They are among the most biodiverse ecosystems on the planet, hosting a vast array of plant and animal species. The high temperatures and abundant rainfall create optimal conditions for diverse life forms. The dominant vegetation consists of tall, evergreen trees that form a dense canopy. These forests often host a variety of epiphytic plants, which grow on the surfaces of other plants rather than in soil. Examples include mosses, ferns, and orchids. The warm and humid conditions facilitate rapid decomposition of organic matter. Nutrients are quickly recycled back into the ecosystem, supporting the continuous growth of vegetation.

57. Answer: B

Explanation – Statement 1 is incorrect. Chikungunya is not more common in temperate regions; it is generally more prevalent in tropical and subtropical regions. Dengue fever also primarily occurs in tropical and subtropical regions and is not typically associated with temperate climates. These are also known as Neglected Tropical Diseases (NTDs). Statement 2 is correct. The U.S. Food and Drug Administration (FDA) approved Ixchiq, the first vaccine to prevent chikungunya virus (CHIKV) disease. Ixchiq is a live-attenuated vaccine, meaning it contains a weakened form of the CHIKV that triggers an immune response without causing disease. The vaccine is administered as a single dose by injection into the muscle.

58. Answer: B

Explanation: Pahari denotes 'hilly or mountainous' in origin. Pahari painting is a style of miniature painting that developed in the independent states of the Himalayan foothills in India. The roots of the miniature painting tradition go back to the Buddhist Pala dynasty, which ruled Bengal and Bihar from the 8th century until the end of the 11th century. Pahari paintings demonstrate challenges in their territorial classification. Pahari paintings featured both religious and secular subjects. Detailed paintings based on religious epics such as Mahabharat and Ramayana, Puranas, and Gita were frequently painted in the style. Basohli painting is a school of Pahari miniature painting that flourished in the Indian hill states during the late 17th and the 18th centuries, known for its bold vitality of colour and line. Miniature painting also flourished in the Deccan region between the 16th and 19th centuries. Hence, statement 3 is not correct.

59. Answer: A

Explanation: PM Janjati Adivasi Nyaya MahaAbhiyan aims to ensure holistic development of tribal groups. It

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is meant to ensure last-mile welfare scheme delivery and protection for Particularly Vulnerable Tribal Groups (PVTGs). The scheme aims to benefit and saturate the families and habitations with basic facilities. It is a 24,000-crore project for vulnerable tribal groups. It was launched by the Prime Minister Shri Narendra Modi on the occasion of Janjatiya Gaurav Diwas (Tribal Pride Day). Modi also launched the Visksit Bharat Sankalp Yatra, a nationwide programme to reach out to all villages and include those eligible for various central schemes. Hence, statement 2 is not correct.

60. Answer: A

Explanation: Public Safety Act (PSA), 1978 is also called as The Jammu And Kashmir Public Safety Act, 1978. The act extents only to the state of Jammu and Kashmir. It is a preventive detention law where a person can be held under preventive detention up to two years. It is very similar to the National Security Act that is used by other state governments for preventive detention. A person can be detained for the following reasons:

- Threat to the maintenance of the public order to the state.
- Smuggling or abetting the smuggling of liquor.
- Engaging in transporting or concealing or keeping smuggled liquor.

When a person is detained under the PSA, the District Magistrate or Divisional Commissioners communicates the reason for the detention in writing, within 5 days. In exceptional circumstances, the DM can take 10 days to communicate these grounds. Article 22A of the Constitution states that no person who is arrested shall be detained in custody without being informed. Hence, statement 2 is not correct.

61. Answer: B

Explanation: TB remained the world's second leading cause of death from a single infectious agent in 2022. Hence, statement 1 is not correct.

This reduced India's contribution towards global mortality from 36 per cent in the previous years to 26 percent in 2022. Hence, statement 2 is not correct.

There was an increase in reporting of TB cases, crossing even the pre-pandemic high with 24.2 lakh cases in 2022. Hence, statement 3 is correct. India accounts for 27 percent of the total TB cases globally, according to the recently released Global TB Report 2023 by the World Health Organisation. Hence, statement 4 is correct.

India, Indonesia, and the Philippines, which accounted for a large share (60%) of global reductions in the number of people newly diagnosed with tuberculosis in 2020 and 2021, all recovered to levels higher than in 2019.

62. Answer: B

Explanation: Recently the World Energy Outlook 2023 was released by the International Energy Agency (IEA) which has projected that the global emissions would raise global temperatures by approximately 2.4°C. The World Energy Outlook 2023 provides in-depth analysis and strategic insights into every aspect of the global energy system. The World Energy Outlook 2023 is released annually by the International Energy Agency (IEA) since 1998. This Outlook assesses the evolving nature of energy security for around 50 years.

The Outlook examines the implications of today's energy trends in key areas including investment, trade flows, electrification and energy access. The Outlook 2023 also examines what needs to happen at the COP28 climate conference in Dubai to keep the door open for the 1.5 °C goal. The anticipated peak in fossil fuel demand by the end of this decade (2030). There is an urgent need for increased investment, diversified energy sources and geopolitical considerations in the global energy transition for positive shifts towards Net-Zero commitments. For the first time, the report projected that fossil fuel demand will peak by the end of this decade under the Stated Policies Scenario (STEPS) scenario. Hence, statement 1 is not correct.

63. Answer: (D)

Explanation: The recent study has found that the water in West Antarctica will continue to get warmer three times faster than the 20th century, leading to an increased melting of the region's ice sheet. An ice sheet is essentially a mass of glacial ice that covers more than 50,000 square kilometres of land. Ice sheets contain about 99% of the fresh water on Earth and are sometimes called continental glaciers. As ice sheets extend to the coast and over the ocean, they become ice shelves. Greenland ice sheet and Antarctica ice sheet are only two major ice sheet that contain about two-thirds of all the freshwater on Earth. When ice sheets gain mass, they contribute to a fall in global mean sea level and when they lose mass, they contribute to a rise in global mean sea level. The earth have reached the point where some impacts of climate change can no longer be avoided and substantial ice loss in West Antarctica is probably one of them. Hence, all statements are not correct.

64. Answer: A

Explanation: Recently the Union Finance Ministry launched the 4th phase of 'Operation Sesha' to curb the illegal trade of Timber, including Red Sanders. Operation Sesha was launched in 2015 to bust organised syndicates of smugglers of precious woods.

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The name Sesha has been derived from Seshachalam forest in Andhra Pradesh, bordering Karnataka. Under this initiative, the directorate of revenue intelligence of Indian Customs works in collaboration with probe agencies of several other countries to curb illegal trade of timber. Phase IV of 'Operation Sesha' aims to curb the illegal trade of Timber, including Red Sanders. Hence, option A is correct.

65. Answer: C

Explanation: For the first time, Bru refugees will not vote in Mizoram elections because they have been relocated to Tripura on a Central Government-sponsored rehabilitation program. Bru, also known as Reang, is a Northeastern indigenous people primarily found in Tripura, Mizoram, and Assam. They speak a language called "Kaubru," which has a tonal effect on the Kuki language but is essentially the Kok-Borok dialect. They are designated as a Particularly Vulnerable Tribal Group in Tripura. They are of Indo-Mongoloid ancestry. Their languages are related to Austro-Asian tribes in the Tibeto-Burman family. They are ethnically divided into two major clans, Meska and Molsoi. Hence, both statements are correct.

66. Answer: A

Explanation – Iceland is currently facing a notable surge in seismic activity due its geological location as Iceland's position on top of a volcanic hotspot and on the Mid-Atlantic Ridge plays a role in the increased seismic activity. The movement of magma beneath the surface also contributes to earthquakes and volcanic activity. While weather conditions can affect the severity of earthquakes, they are not directly responsible for the increased seismic activity. There's also no scientific evidence to suggest that cosmic events, such as solar flares or asteroid impacts, are responsible for the increased seismic activity in Iceland.

67. Answer: A

Explanation – The statement "life imprisonment is the rule and death penalty the exception" means that in Indian criminal law, life imprisonment is typically considered the standard or default punishment, while the death penalty is reserved for specific and exceptional circumstances. Hence, the statement "The death penalty cannot be imposed in India in cases where life imprisonment is adequate" reflects the legal principle that life imprisonment is the primary form of punishment, and the death penalty is reserved for exceptional cases where life imprisonment is deemed inadequate. This aligns with the legal framework and the emphasis on the rule of law in determining the appropriateness of the death penalty in India. Further, the Indian Supreme Court has held that the death penalty should only be imposed in cases where life imprisonment is not enough to satisfy the "interests of justice." This means that if the court determines that life imprisonment will adequately address the gravity of the crime and protect the public, then the death penalty should not be imposed.

68. Answer: B

Explanation – Statement 1 is incorrect. As of 2022, China is the largest producer of gold, followed by Australia and Russia. The United States ranks fourth in gold production. Statements 2 and 3 are correct. Bihar is home to the largest gold deposits in India, primarily located in the Kolar Gold Fields (KGF) region. These deposits are estimated to hold over 600 million tonnes of gold ore. Bihar (44%) is followed by Rajasthan (25%), Karnataka (21%), West Bengal (3%), Andhra Pradesh (3%) and Jharkhand (2%). India is a net importer of gold, with domestic production only meeting a small portion of the country's demand. The countries from which India imports most of its gold are Switzerland and UAE. India's share in the global gold production is less than 0.05%.

69. Answer: B

Explanation – Statements 1, 2 and 4 are correct. Force-carriers are the particles that "carry" forces between other particles. Examples include photons (which carry the electromagnetic force), gluons (which carry the strong nuclear force), and W and Z bosons (which carry the weak nuclear force). Force causes objects to accelerate, which means their velocity (speed and direction) changes. Weak force is responsible for certain types of radioactive decay, like beta decay and neutrino emission. Weak force is one of the four fundamental forces in nature, along with the strong force, the electromagnetic force, and gravity. Statement 3 is incorrect. While a stronger force can cause an object to accelerate more rapidly, the actual speed depends on both the force and the object's mass. Newton's second law of motion provides the relationship: force equals mass times acceleration.

70. Answer: B

Explanation – Statement 1 is incorrect. Gondwana coal comprises about 98 percent of the total reserves and 99 percent of the production of coal in India. Gondwana coal is said to be about 250 million years old. Statements 2 and 3 are correct. India's largest lignite deposits are indeed at Neyveli in Tamil Nadu. Neyveli. Lignite Corporation India Limited (NLCIL) operates the lignite mines in Neyveli, which are crucial for the country's energy production. India is the world's second-largest coal importer, after China. In the financial year 2022-23, India imported 254 million tonnes of coal, worth around $23 billion. This was a 22% increase from the previous year. The 5 major

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coal importers to India are Indonesia, Australia, South Africa, USA & Russia. Further, India is the world's second-largest coal producer and 5th largest country in terms of coal deposits. During 2022-2023, the four major coal producing states were Odisha (24.52%), Chhattisgarh (20.70%), Jharkhand (17.52%) and Madhya Pradesh (16.35%). These four states together contributed about 79.08% of the total coal production in the country.

71. Answer: B

Explanation: The Ministry of Roads, Transport and Highways recently released the Road Accidents in India Report, 2022 which indicate that the number of accidents in 2022 have increased by 11.9% compared to 2021. Road Accidents in India Report is released annually by the Ministry of Roads, Transport and Highways (MoRTH). This report is based on the data/information received from police departments of States/UTs on calendar year basis. The most number of accidents were recorded on the Other Roads, 32.9 % was recorded in National Highways (NH) including Expressways and 43.9 % on state highways. Over speeding is a major killer, accounting for 71.2 % of the persons killed followed by driving on the wrong side which amounts to 5.4 %. Tamil Nadu recorded the highest number of road accidents on National Highways in 2022, whereas, the number of persons killed in road accident was the highest in Uttar Pradesh. In 2022, about 68% of road accidents death took place in rural area where as urban area accounted for 32% of total accidents death in the country. Among vehicle categories involved in road accidents, two-wheelers for the second consecutive year, accounted for the highest share in total accidents and fatalities during 2022. The Electronic Detailed Accident Report (e-DAR) is a portal developed by the Ministry of Roads, Transport and Highways (MoRTH). The project will enable capture of road accidents and geo-tagging of the same through app on mobile/ tablet by first responder, which is the police. e-DAR project is aided by World Bank Assistance to provide an integrated and systemic solution to problem of accidents in line with international practice. Hence, statement 3 is not correct.

72. Answer: B

Explanation: Recently Brazzaville Summit of the Three Basins ended with a declaration that did not result in an Alliance of the three basins. The three global ecosystems account for 80% of the world's tropical forests and 2/3rd of the earth's biodiversity. The central vision of the Summit is the preservation and restoration of the planet's three ecological lungs. The objectives of the summit include: - To promote scientific and technical cooperation, strengthen capacities and increase influence in multilateral forums for environmental advocacy. - To establish effective global governance to manage environmental and climate challenges on a planetary scale. - To develop a common strategy to stimulate investment projects aimed at combating climate change and preserving biodiversity. The three basins include Amazon, Congo and Borneo-Mekong-Southeast Asia. Three Basins Summit, 2023 was held at Brazzaville, capital of the Republic of Congo. Hence, statement 1 is not correct.

73. Answer: A

Explanation: After receiving three missed calls from unknown numbers and losing money from her bank account, a Delhi-based counsel recently became the latest victim of the SIM-Swap Scam. All banking applications are linked to phone numbers, which aid in the generation of OTPs (for transaction authentication) and the receipt of critical bank-related notifications. In the SIM switch scam, scammers first get personal information such as phone numbers, bank account information, and addresses by phishing or vishing. Hence, statement 1 is correct. Following the theft of the victim's SIM card and/or mobile phone, fraudsters contact the mobile operator's retail shop, acting as the victim with a forged ID proof, and report a fake theft of the victim's SIM card and/or mobile phone. They obtain a replica SIM card as a result of this. Notably, scammers can obtain a replica SIM card even if the original is functioning well, as they reported a theft of the original SIM card. Unlike other scams that require scammers to deceive victims into providing OTPs and confidential information over the phone, the SIM switch fraud does not involve direct communication with the victims. However, scammers do leave missed calls for their victims, causing them to abandon their phones and ignore the loss of network connectivity. The accused acquires control of the entire SIM when the SIM is switched. All calls and messages are routed solely through their SIM card. Once they get control of the SIM card, they can obtain passwords and OTPs to gain access to their targets' bank accounts. Hence, statement 2 is not correct.

74. Answer: C

Explanation: 'Improvised Explosive Devices (IEDs)' consist of a variety of components that include an initiator, switch, main charge, power source, and a container. Many commonly available materials, such as fertilizer, gunpowder, and hydrogen peroxide, can be used as explosive materials in IEDs. Explosives must contain a fuel and an oxidizer, which provides the oxygen needed to sustain the reaction. Hence, all statements are correct.

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75. Answer: B

Explanation: NASA celebrated Halloween by sharing the "ghost hand" in space that was caused by a pulsar. Most neutron stars are observed as pulsars. Pulsars are rotating neutron stars observed to have pulses of radiation at very regular intervals that typically range from milliseconds to seconds. Pulsars have very strong magnetic fields which funnel jets of particles out along the two magnetic poles. These accelerated particles produce very powerful beams of light. Often, the magnetic field is not aligned with the spin axis, so those beams of particles and light are swept around as the star rotates. Young pulsars sometimes create jets of matter and antimatter that move away from their poles, along with an intense "wind," creating what is known as a "pulsar wind nebula". NASA's Chandra X-ray Observatory first observed this pulsar with a wind nebula shaped like a human hand labelled PSR B1509-58 in 2001. The pulsar wind nebula is called MSH 15-52 and is located about 16,000 light-years away from our planet. Hence, statement 3 is not correct.

76. Answer: B

Explanation: The Lucy space craft is set to cross the 'Dinkinesh', an asteroid situated in the main asteroid belt between the orbits of Mars and Jupiter. National Aeronautics and Space Administration (NASA) has launched the Lucy mission on October 2021 and its main aim was to observe the Jupiter Trojan asteroids. It is possible for Lucy to observe so many because it won't stop or orbit the asteroids. Jupiter Trojan asteroids refers to a huge group of small bodies that orbit the Sun in two "swarms." Lucy will first fly by Dinkinesh and another asteroid in the main belt called Donaldjohnson. The mission has been visually tracking Dinkinesh since September and it will be the first asteroid that Lucy will visit on its 12-year-long journey. Dinkinesh is about a kilometre wide and orbits the Sun in the main belt of asteroids between the orbits of Mars and Jupiter. Hence, statement 2 is not correct.

77. Answer: A

Explanation: Recently, Kozhikode in Kerala and Gwalior in Madhya Pradesh were named to UNESCO's renowned list of innovative cities for their contributions to literature and music, respectively. In 2004, UNESCO established the Creative Cities Network (UCCN). This network presently includes around 300 cities from around the world. Its objective is putting creativity and cultural industries at the heart of their local development strategies and actively cooperating at the international level. UNESCO recognises creative cities in seven categories: craft, folk art, media arts, film design, gastronomy, literature, and music. Hence, statement 1 is correct.

Every year, UNESCO seeks applications from towns all around the world to join its UCCN project. In India, applications go through the Ministry of Culture. Kozhikode is home to the annual Kerala Literature Festival and various other book festivals. Gwalior has a rich musical tradition that includes classical Hindustani music, folk music, and devotional music. In addition, the city features some prominent music institutes and holds popular festivals.

Other Indian towns added to this network:

Srinagar and Jaipur are known for their crafts and folk arts.

Mumbai: Film category

Chennai and Varanasi are in the music category.

Hyderabad is in the Gastronomy category.

Hence, statement 2 is not correct.

78. Answer: B

Explanation – Statements 1 and 3 are correct. The Asia-Pacific Economic Cooperation (APEC) is a regional economic forum established in 1989 to promote free trade throughout the Asia-Pacific region. APEC's member economies aim to create greater prosperity for the people of the region by promoting balanced, inclusive, sustainable, innovative and secure growth and by accelerating regional economic integration. It promotes trade liberalization and economic cooperation among its member economies in the Asia-Pacific region. APEC economies make up roughly 60% of global GDP. Statements 2 and 4 are incorrect. APEC is solely focused on economic matters, not security. India is not currently a member of APEC.

79. Answer: C

Explanation – Statements 1 and 3 are correct. Algae are photosynthetic, i.e., they use sunlight to convert carbon dioxide and water into energy and oxygen. Algae lack the specialized tissues and organs that characterize land plants, such as roots, stems, and leaves. This is why they are not considered to be true plants. They are found both in freshwater and saltwater environments. Algae have a wider variety of photosynthetic pigments than land plants. This allows them to absorb sunlight in a wider range of wavelengths, which helps them to survive in different environments. Algae have a wide variety of life cycles. Some algae are simple and reproduce asexually, while others are more complex and reproduce sexually. Recently, P. salinarum (one of the smallest green algae) has been found in hypersaline soda lake Sambhar, Rajasthan. It can survive extreme

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environments. Statement 2 is incorrect. Algae are eukaryotic organisms, meaning that their cells have a nucleus and other membrane-bound organelles. This distinguishes them from prokaryotic organisms, such as bacteria, which have a simpler cellular structure.

80. Answer: C

Explanation – Statement 1 is correct. Tribal Pride Day (Janjatiya Gaurav Diwas) is celebrated on the birth anniversary of Birsa Munda (15th November). It is an annual celebration in India that commemorates the contributions of tribal communities to the nation's history, culture, and development. Statement 2 is incorrect. The state of Odisha was not founded on the birth anniversary of Birsa Munda. Birsa Munda was born on November 15, 1875, while Odisha was established as a separate state on April 1, 1936. However, the state of Jharkhand was founded on the birth anniversary of Birsa Munda.

81. Answer: D

Statements 1, 2 and 3 are incorrect. Purchasing Sovereign Green Bonds does not typically exempt investors from paying taxes on their other investments. Tax treatment of investments can vary by country and region, but buying Sovereign Green Bonds does not automatically lead to tax exemptions on unrelated investments. Investing in Sovereign Green Bonds does not guarantee a financial return equal to the value of carbon emissions reduced by the issuing government. The return on Sovereign Green Bonds is typically based on fixed interest rates or other predetermined criteria, not directly tied to emissions reduction. Investing in Sovereign Green Bonds does not directly contribute to reducing a country's national debt. These bonds are issued to raise funds for environmentally sustainable projects and are a form of government borrowing, which may add to the national debt rather than reduce it. Sovereign Green bonds are fixed interest-bearing financial instruments issued by any sovereign entity/inter-governmental organization/ corporation. The proceeds of these bonds are used only for environmentally conscious, climate-resilient projects. Further, if a government wants to go global to raise funds, it needs to improve its credit rating as all bonds issued globally are closely linked to the credit rating of the issuing country.

82. Answer: B

Explanation – Statements 1 and 3 are correct. AAINA Dashboard for Cities' portal aims to create a robust database of the key performance metrics of Urban Local Bodies. Its objective is to help cities to see how they are faring vis-à-vis other cities, inspire them by pointing to possibilities and areas of improvement and provide opportunity to learn and engage with frontrunners. The dashboard will provide information on status and progress of the ULBs on five pillars: 1) Political & Administrative Structure, 2) Finance, 3) Planning, 4) Citizen Centric Governance and 5) Delivery of Basic Services. This dashboard will inspire the ULBs by pointing to possibilities and areas of improvement and providing them the opportunity to learn and engage with frontrunners. Statement 2 is incorrect. AAINA dashboard will not rank ULBs. It would serve as a tool for comparing similarly placed cities and promoting peer learning among cities.

83. Answer: B

Statement 1 is incorrect. The FAME India Scheme provides incentives for both electric vehicles manufactured in India and those imported into the country. Statement 2 is correct. FAME Scheme provides financial support for the electrification of public and shared transportation, including electric and hybrid buses, electric three-wheelers, electric four-wheeler passenger cars, and electric two-wheelers. The scheme aims to reduce India's dependence on fossil fuels and promote the use of clean and sustainable transportation. It provides financial incentives to both manufacturers and consumers of EVs.

84. Answer: (D)

Explanation: In the recently held standing committee meeting of the National Board for Wildlife, Raman Sukumar, an Indian ecologist and IISc professor said that multiple inconsistencies in the elephant corridor report, 2023. A corridor is a small patch of land that provides connectivity for elephant movement across habitats, largely within a landscape of the elephant reserve. According to the report there is increase of 62 'elephant corridors' in the country since 2010, bringing the total to 150, an increase of 40 %. West Bengal has the most elephant corridors (26) that amounts to 17% of the total elephant corridors. Elephants have seen increased presence in Madhya Pradesh found in Sanjay Tiger reserves and Bandhavgarh. The decrease in corridor use is attributed to the habitat fragmentation, shrinkage and destruction. The elephant corridor in forest areas shall be notified under the rules mentioned under the Wild Life (Protection) Act, 1972. The elephant corridor areas with revenue lands and private lands must be notified under the Environment (Protection) Act, 1986. Hence, all statements are not correct.

85. Answer: A

Explanation: Recently Karnataka has stepped up surveillance after a mosquito pool in Chickballapur was found to be positive for Zika virus. Zika virus is a mosquito-borne virus first identified in Uganda in 1947 in a Rhesus macaque monkey. Zika virus is a vector-borne flavivirus transmitted by the bite of infected Aedes mosquitoes, mainly Aedes aegypti and Aedes albopictus. Most people with Zika virus infection do not develop symptoms; those

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who do typically have symptoms including rash, fever, conjunctivitis, muscle and joint pain, malaise and headache that last for 2–7 days. The virus during pregnancy can cause infants to be born with microcephaly and other congenital malformations as well as preterm birth and miscarriage. The infection is associated with Guillain-Barre syndrome, neuropathy and myelitis in adults and children. In February 2016, World Health Organisation (WHO) declared Zika-related microcephaly a Public Health Emergency of International Concern (PHEIC). WHO declared the end of the PHEIC of Zika virus in November of 2016. Although cases of Zika virus disease declined from 2017 onwards globally, transmission persists at low levels in several countries in the Americas and other endemic regions. Hence, option A is correct.

86. Answer: A

Explanation: The Reserve Bank of India (RBI) has designated as Payment Aggregator-Cross Border (PA-CB) those organizations that facilitate cross-border payments for the import and export of goods and services. PAs-CB enables cross-border online payments for permitted products and services import and export. A payment processor (also known as a merchant aggregator) is a third-party service provider that enables merchants to take client payments by integrating them into their websites or apps. It enables various payment transactions, such as cash/cheque, internet payments via several payment sources, and offline touchpoints. It enables merchants to accept bank transfers without requiring the establishment of a bank-based merchant account. It means that a merchant does not need to open a merchant account with a bank. The Companies Act of 2013 governs the incorporation of a PA in India. A PA might be a bank or a non-banking organization. Because a PA deals with money, the RBI requires a license. Only non-bank payment aggregators require special permission from the RBI because 'handling funds' is regarded as a routine aspect of bank PAs' banking connections. Amazon (Pay) India, Google India, Razorpay, Pine Labs, and others are examples. Hence, only statement 1 is correct.

87. Answer: C

Explanation: It is a forex tool used by the RBI uses to sells USD in exchange for INR and promises to buy dollar from banks after some years. Only the Authorised Dealers (ADs) Category 1 banks will be the eligible entities to participate in the auction of USD/INR Sell Buy Swaps. Swaps under the auction, once undertaken with the Reserve Bank, cannot be cancelled and no request for any modification or revision to the same will be entertained.

RBI has the following rights for the Dollar/Rupee Swap:

1. Decide on the quantum of US Dollar amount to be sold in the swap auction.
2. Accept bids for less than the aggregate notified US Dollar amount.
3. Accept marginally higher than the notified US Dollar amount due to rounding-off effects.
4. Accept or reject any or all the bids either wholly or partially without assigning any reason.

Forex swaps help in liquidity management and in a limited way, helps in keeping the currency rates in check. A dollar–rupee buy/sell swap injects INR into the banking system while sucking out the dollars and the reverse happens in a sell/buy swap. Hence, all statements are correct.

88. Answer: B

Explanation: NexCar19 is a type of Chimeric Antigen Receptor T cell (CAR-T cell) and gene therapy developed indigenously in India by ImmunoACT, which is a company incubated at IIT Bombay. It is designed to target cancer cells that carry the CD19 protein. Hence, statement 1 is correct.

NexCAR19 therapy is intended for people with B-cell lymphomas who have not responded to standard treatments like chemotherapy and have experienced relapse or recurrence of cancer. Hence, statement 2 is correct.

Initially, the therapy is approved for patients aged 15 years and older and also proves beneficial for adolescents. Hence, statement 3 is not correct.

89. Answer: B

Explanation: Recently the Supreme Court recently stopped an Advocate-on-Record (AoR) for filing a frivolous case and dismissed the public interest litigation. Advocate-on-Record (AoRs) are a pool of elite Delhi-based lawyers whose legal practice is mostly before the Supreme Court. They can appear before other courts too. Only an AoR can file cases before the Supreme Court. An AoR might engage other lawyers including senior counsels to argue before the Court but the AoR is essentially the link between the litigant and the highest court of the country. The Supreme Court Rules, 2013 prescribe eligibility criteria for an AoR. An advocate has to clear an examination set by the Court itself, the advocate has to meet specific criteria to be eligible to appear for the exam. According to Section 30 of the Advocates Act, any lawyer enrolled with the Bar Council is entitled to practice law before any Court or tribunal in the country. Article 145 of the Constitution states that the Supreme Court is empowered to make rules and regulate its own procedure for hearing cases. The AoR system is broadly based on the British practice of barristers and solicitors. Hence, statement 3 is not correct.

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90. Answer: C

Explanation: Electoral bonds are interest-free bearer bonds or money instruments that firms and individuals in India can purchase from authorized State Bank of India (SBI) branches. A person or company may purchase an unlimited number of electoral bonds. Political parties that received at least 1% of the votes cast in the most recent Lok Sabha or State Assembly elections and are registered under the RPA are eligible for a verified account from the Election Commission of India (ECI). Because the donor's name and other details are not recorded on the instrument, electoral bonds are referred to as anonymous. Hence, all statements are correct.

91. Answer: B

Explanation: The second edition of 'World Food India 2023' was inaugurated by the Prime Minister in New Delhi. The primary objective of the event is to present India as the 'food basket of the world' and celebrate 2023 as the International Year of Millets. The event aims to promote India as a global hub for the food processing industry and showcase the country's diverse food culture and heritage. It also underscores the importance of technology and sustainability in the food sector. Hence, statement 1 is not correct.

92. Answer: B

Explanation – The UK government's proposed addition of India to the Safe States List is expected to have several implications for Indian citizens seeking asylum in the UK. The Safe States List is a designation given to countries that are deemed to be safe and stable, and where there is no widespread human rights abuse. Following will be the implication of the decision:

It will be more difficult for Indian citizens to claim asylum in the UK on the basis of persecution in their home country.

Those found to be in the UK illegally will be removed more quickly, as they will no longer have the right to claim asylum.

Indian citizens who enter the UK illegally will have a significantly reduced chance of being granted asylum. This is because the Safe States List designation means that the UK government will not consider India to be a country from which people are fleeing persecution.

Indian citizens who are in the UK illegally will have less access to support services, such as housing and healthcare. This is because the Safe States List designation means that they will not be considered to be refugees and will not be entitled to the same level of support.

Indian citizens who are found to be in the UK illegally are likely to be deported more quickly. The Safe States List designation means that the UK government will prioritize the deportation of Indian nationals.

However, it is important to note that Indian citizens who are in the UK legally will not be affected by this decision. They will still be able to access support services and live and work in the UK as before.

93. Answer: D

Statements 1 and 2 are incorrect. Geoglyph refers to a design that is drawn on the earth. Geoglyphs are not typically used as pathways, but rather as large designs or patterns created on the ground. They can be made from various materials, including stones, but also earth, vegetation, and other natural materials. Geoglyphs are primarily artistic or symbolic creations on the landscape and are not intended for burial purposes. Burial sites from the Iron Age are generally marked by features such as barrows, cairns, or megalithic structures, but they are not the same as geoglyphs. Examples of Geoglyph: Nazca Lines in Peru, Uffington White Horse in England.

94. Answer: C

Explanation – Statements 1 and 3 are correct. Ogasawara Islands chain is a volcanic archipelago of over 30 subtropical and tropical islands located around 1,000 kilometers south-southeast of Tokyo, Japan. The Ogasawara Islands are a UNESCO World Heritage Site due to their unique biodiversity and undisturbed ecosystems. The Ogasawara Islands are part of the Izu-Bonin-Mariana Arc, a chain of volcanic islands formed by the subduction of the Pacific Plate beneath the Izu-Bonin Plate. The islands are primarily composed of basalt and andesite, and they are still volcanically active. The Ogasawara Islands have a subtropical climate with warm, humid summers and mild, wet winters. Statement 2 is incorrect. The Ogasawara Islands are part of the Nanpo Islands, which are a chain of small islands that extend from Japan to Guam. The Ryukyu Islands are a separate chain of islands that are located to the southwest of the Ogasawara Islands, closer to Taiwan and the Philippines.

95. Answer: B

Explanation – Statement 1 is incorrect. The FIDE Grand Swiss Tournament is a Swiss-system chess tournament, forming part of the qualification for the World Chess Championship. It is held every two years, and the top two players in the tournament qualify for the Candidates Tournament, which is the next step in the qualification process for the World Chess Championship. Statement 2 is correct. India made a historic sweep at the FIDE Grand Swiss Tournament 2023, held on the Isle of Man from October 25 to November 5, 2023. Grandmaster Vidit Gujrathi emerged victorious in the men's category, while International Master R. Vaishali claimed the top spot in the women's section.

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96. Answer: C

Explanation: In the 1990s, the Indian military and Assam police launched successive crackdowns against militant groups in Assam, putting them under pressure. At the same time, Bangladesh ceased to be a place of refuge as well, with the pro-India Awami League government under Sheikh Hasina coming to power in 1996 and taking action against them. As a consequence, these groups set up camps in southeast Bhutan, particularly in the Samdrup Jongkhar district that borders Assam. According to the Bhutan government, at the time of its crackdown, there were many militant camps in its territory. While Bhutan ignored and did not engage with the Indian insurgents in its territories in the initial years, pressure began to mount on it as it began to strain diplomatic relationships with India. Bhutan had entered into dialogue with these groups in 1998 but still been reluctant to take coercive action to drive them out, a major factor in which was the small size and inexperience of its military. The talks did not yield any outcome for the government despite five rounds of talks with the ULFA and three rounds with the NDFB. In the Bhutan Royal Assembly session of June-August 2003, a resolution was taken that the government would make one last attempt to persuade the militants to leave the country. Operation All Clear was a military operation conducted by Royal Bhutan Army forces against Assam separatist insurgent groups in the southern regions of Bhutan. It was the first military operation by the Bhutan in 140 years against militants under 'Operation All Clear' in 2003. On 15 December 2003, the 6000-member Royal Bhutan Army launched simultaneous attacks on the camps of all three outfits with logistical and medical assistance from the Indian Army. In January 2004, India's Chief of Army Staff General claimed that at least 650 insurgents from the three groups had been either killed or captured. Hence, both statements are not correct.

97. Answer: B

Explanation: Deepfakes are synthetic media that use AI to manipulate or generate visual and audio content, usually with the intention of deceiving or misleading someone. Deepfakes are created using a technique called generative adversarial networks (GANs), which involve two competing neural networks: a generator and a discriminator. The generator tries to create fake images or videos that look realistic, while the discriminator tries to distinguish between the real and the fake ones.

The generator learns from the feedback of the discriminator and improves its output until it can fool the discriminator. Hence, statement 1 is correct. Positive Applications of Deep Learning: Deep learning technology has enabled positive advancements, such as restoring lost voices and recreating historical figures. Deep learning techniques have been applied in comedy, cinema, music, and gaming to enhance artistic expression. It enhances medical training and simulation by generating diverse and realistic medical images. It also creates virtual patients and scenarios for simulating medical conditions and procedures, improving training efficiency. Hence, statement 2 is correct.

India does not have specific laws or regulations that ban or regulate the use of deepfake technology. India has called for a global framework for the expansion of "ethical" AI tools. Existing laws such as Sections 67 and 67A of the Information Technology (IT) Act (2000) have provisions that may be applied to certain aspects of deep fakes, such as defamation and publishing explicit material. The Information Technology Rules, 2021, mandate the removal of content impersonating others and artificially morphed images within 36 hours. None of the provisions or section of the IT Act 2000 deal with each and every aspect of the Deepfakes. Hence, statement 3 is not correct.

98. Answer: C

Explanation: Productivity of activity is usually measured as the quantum of output value per unit of labour (time) cost at a micro level. At a macro level, it is measured in terms of the labor-output ratio or change in Net Domestic Product (NDP) per worker in each sector (where working hours are assumed to be 8 hours per day). The only conceptual difference between Worker Productivity and Labor Productivity is that the 'work' in worker productivity describes mental activities. In contrast, the 'work' in labor productivity is mostly associated with manual activities. Hence, both statements are correct.

99. Answer: C

Explanation: The Centre for Advanced Financial Research and Learning (CAFRAL) is an independent body set up by the Reserve Bank of India. The first edition of the India Finance Report was published by CAFRAL. The report took stock of India's non-bank financial companies sector, also known as the shadow banking sector. CAFRAL raised concern over the rise in bank financing for non-banking finance companies.

100. Answer: A

Explanation: Cyclone Vardah, a tropical cyclone, originated in the southeast Bay of Bengal. It was created as a depression (low pressure) over the Andaman Sea and later slightly intensified further as a cyclonic storm. The reason for the intensification can be attributed to the warm sea surface temperatures of the Bay of Bengal and longer sea travel. Hence, statement 1 is not correct.

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