

# General Studies

## Current Affair Test (November-2023)

### 1. Answer: C

- Burzahom, Gufkral – Kashmir; Chopani, Mahagarha – UP; Chechar – Bihar; Brahmagiri, Tekkalkota, Sanganakallu, Narsipur, Hallur, Kupgal and Kodekal – Karnataka; Utnur and Piklihal – AP; and Poyampali – Tamil Nadu.
- The Neolithic Age, also called the New Stone Age, is the final stage of cultural evolution or technological development among prehistoric humans.
- The term Neolithic is most frequently used in connection with agriculture, which is the time when cereal cultivation and animal domestication were introduced.
- The Neolithic stage of development was attained during the Holocene Epoch (the last 11,700 years of Earth's history).
- The starting point of the Neolithic is generally thought to have occurred sometime around 10,000 BCE.
- The Neolithic followed the Paleolithic Period, or the age of chipped-stone tools, and preceded the Bronze Age, or the early period of metal tools.
- The Neolithic Revolution started in the Fertile Crescent, a region of the Middle East, where humans first took up farming.

#### Features of the Neolithic Age:

- It was characterized by stone tools shaped by polishing or grinding, dependence on domesticated plants or animals, settlement in permanent villages, and the appearance of such crafts as pottery and weaving.
- The houses were built of mud and reed in rectangular or circular shapes.
- Alcohol was first produced during this period, and architecture, as well as its interior and exterior decoration, first appeared.

### 2. Answer: C

- This declaration is designed to guide 14 nations where river dolphins inhabit, with a focus on responsible freshwater dolphin conservation.
- It aims to halt the decline of all river dolphin species and increase the most vulnerable populations.
- The declaration will escalate collaborative endeavours to safeguard the surviving river dolphin species.
- Countries that adopted the declaration include Bangladesh, Bolivia, Brazil, Cambodia, Colombia, Ecuador, India, Nepal, Pakistan, Peru, and Venezuela.

- The countries involved agreed to improve water quality in the dolphins' habitat, create protected areas, tackle overfishing, and involve Indigenous communities in the affected regions in protecting the animals.
- There is no role of UN here.
- River Dolphins are any of six species of small, usually freshwater aquatic mammals that are related to whales (order Cetacea).
- A seventh river dolphin species, the Chinese river dolphin, or baiji, was declared extinct in 2007.
- Distribution: These dolphins are found in rivers of south-central Asia, China, and South America and in the coastal waters of Brazil, Argentina, and Uruguay.
- Common Features: They have slender beaks lined with lots of teeth, small eyes, flexible necks and bodies, pronounced forehead melons, large flippers, and small dorsal fins.
- The six surviving species of river dolphins are the Amazon, Indus, Ganges, Irrawaddy, Tucuxi, and Yangtze finless porpoise.
- All six species of river dolphins are classified as Endangered or Critically Endangered on the IUCN Red List of Threatened Species.
- The largest is the Amazon River dolphin (*Inia geoffrensis*).

### 3. Answer: B

In marketing, "dark patterns" refer to sale practices where the user interface of online websites is designed to dupe consumers, and the seller/ service provider nudges consumers to buy (additional) products or services they didn't intend to, which is an unfair practice.

### 4. Answer: D

- India is unlikely to sign onto a global pledge to reduce cooling-related emissions at the COP28 climate meeting, citing the need for the world's most populous country to have affordable cooling, as per recent reports.
- The pledge to cut cooling-related carbon dioxide emissions by at least 68% by 2050 compared with 2022 levels was developed by the United Nations Environment Programme's Cool Coalition (UNEP) and COP28 host the United Arab Emirates. The pledge would require major investments by countries to shift to sustainable cooling technologies and also raise the cost of such products.

### 5. Answer: C

- Thallium is an odour-less, tasteless chemical used mostly in science laboratories and chemical industries, and also in small quantities during radiology tests in hospitals.
- It is used in the electronics industry, pharmaceutical industry, glass manufacturing, infrared detectors and as pesticides and insecticides. Thallium is also misused for poisoning humans due to its high toxicity.

### 6. Answer: B

Vienna Convention on Diplomatic Relations (VCDR)

- The Convention was signed in 1961 and currently has 193 parties to it. Hence statement 1 is correct.
- India ratified the convention in 1965. Hence statement 2 is not correct.
- Aim: to ensure the 'development of friendly relations among nations.'
- It puts forth a framework for diplomatic interactions between nations.

Key provisions:

- It specifies the functions of diplomatic missions.
- Lists Special rules on immunities and privileges accorded to diplomats and their missions.
- Guarantees free communication between a mission and its sending State.
- Recently, Canada accused India of not following Vienna Convention, when India asked Canada to bring its 40 diplomats back. Hence statement 3 is not correct.

### 7. Answer: D

Summit of the Three Basins

It is held in Brazzaville (the Capital of Congo). Hence statement 1 is not correct.

Three basins are

- Congo basin: Spans across Cameroon, Central African Republic, Democratic Republic of the Congo, Republic of the Congo, Equatorial Guinea, and Gabon.
- Amazon Basin - It extends over 9 countries in South America.
- Borneo-Mekong-Southeast Asia Basin. Hence statement 2 is not correct.
- These 3 global ecosystems account for 80% of the world's tropical forests and 2/3 of the earth's biodiversity. Hence statement 1 is correct.

### 8. Answer: A

Explanation:

- Statement 1 is not correct: The Nutrient Based Subsidy Scheme (NBS) has been implemented since 2010 by the Department of Fertilizers, Ministry of Chemicals and Fertilizers.
- Statement 2 is not correct: Under the scheme, fertilizers are provided at subsidized rates based on the nutrients contained, namely Nitrogen (N), Phosphate (P), Potash (K) and Sulphur (S).

- It does not include urea-based fertilizers.
- Statement 3 is correct: The government also decides where they can sell the fertilisers apart from subsidising and deciding at what price companies can sell.

### 9. Answer: C

Explanation:

- An IIT Bombay-incubated company (Haystack Analytics) has created a comprehensive drug resistance test for tuberculosis (TB).
- Whole-Genome Sequencing (WGS): WGS is a genetic fingerprinting technique that determines the entire DNA sequence of an organism which can be used for testing drug resistance TB.
- Statement 1 is correct: WGS would allow rapid identification of the origin and drug resistance (DR) profile of TB strains in the patients.
- Statement 2 is correct: Analysing the genomic data of the organism is an important molecular tool for TB surveillance and detecting resistance.

### 10. Answer: C

- Explanation: The Regional Connectivity Scheme (RCS) - UDAN (Ude Desh Ka Aam Nagrik) has recently completed 6 years with a total of 75 airports have being and 499 UDAN routes being operationalized under UDAN. The Regional Connectivity Scheme (RCS) - UDAN aims to improve infrastructure and connectivity in India, especially in remote and underserved regions.
- It is a vital component of India's National Civil Aviation Policy (NCAP) 2016, launched by the Ministry of Civil Aviation (MoCA) with a 10-year vision. The first RCS-UDAN flight was inaugurated by the Hon'ble Prime Minister on 2017, connecting Shimla to Delhi.
- The scheme focuses on improving unserved air routes in underserved regions of the country and fulfilling the aspirations of the common citizens. UDAN 5.1 - designed specifically for helicopter routes by increasing the scope of operations for helicopter operators, enhancing viability gap funding (VGF) and reducing Airfare Caps.
- UDAN 5.2 - is underway to further enhance the connectivity to remote and regional areas of the country, achieve last-mile connectivity. The scheme will provide greater operational flexibility to the small aircraft operators. Hence, all statements are correct.

### 11. Answer: B

- Recently several state governments requested schools to seek parental consent for the creation of the Automated Permanent Academic Account Registry (APAAR), a new student identity card. APAAR is envisioned as a special ID system for all students in India, starting from childhood.

- The main objective of the APAAR is to make education hassle-free and reduce the need for students to carry physical documents. It would also serve as a gateway to Digilocker, a digital system where students can store their important documents and achievements. It also aims to reduce fraud and duplicate educational certificates by providing a single, trusted reference for educational institutions.
- Every individual will have a unique APAAR ID, which will be linked to the Academic Bank Credit (ABC). Academic Bank Credit (ABC) is a digital storehouse that contains information of the credits earned by students throughout their learning journey. With the APAAR ID, students would be able to store all their certificates and credits, whether they come from formal education or informal learning.
- To sign up for APAAR, students will have to provide basic information such as name, age, date of birth, gender, and a photograph. This information will be verified using their Aadhar number. 'One nation, One Student ID' initiative was launched as part of the National Education Policy 2020 by the Education Ministry. Hence, statement 1 is not correct.

#### 12. Answer: C

- Indian peafowl are a species in a group of birds called pheasants. The males are called peacocks, while the females are called peahens. Together, they are peafowl. The Indian peafowl (*Pavo cristatus*) is a brightly-coloured bird that lives mainly on the ground. Peafowl are among the largest of all birds that fly such as ostriches and emus. It is regarded as the national bird and is listed under Schedule-I of the Wildlife Protection Amendment Act, 2022. The IUCN status of the Indian peafowl is Least Concern.
- It can be found in forest, forest edge and agricultural land. Its presence in forest areas often indicates the presence of a predator such as a tiger. Indian peafowl are native to India and Sri Lanka in South Asia. The recent research by the Salim Ali Centre for Ornithology (SACON) in Coimbatore suggest that the population of peafowls has increased exponentially across Tamil Nadu in the last 5 to 10 years.
- One of the reasons for the proliferation of peafowls is due to a drop in the numbers of predators such as jackals. Another could be due to the rising temperatures due to climate change and subsequent increase in dry areas, which are preferred by the bird. Hence, all statements are correct.

#### 13. Answer: B

- Explanation: Bidenomics is a wordplay on Reaganomics, the nickname for the Reagan administration's economic policies, which emphasized four pillars: tax cuts, deregulation, domestic spending cuts and inflation reduction.
- Bidenomics, according to the White House, is a rejection of the trickle-down economic policies that defined Reaganomics.
- It is a vision centered around three key pillars: making smart public investments; empowering and educating workers to grow the middle class; and promoting competition to lower costs and help entrepreneurs and small businesses thrive. Hence, option (b) is correct.

#### 14. Answer: A

- Recently the 1st official star party for experienced amateur astronomers was organised by the Indian Institute of Astrophysics (IIA) in at Hanle Dark Sky Reserve in eastern Ladakh. HDSR aims to control man-made light pollution in the area in order to preserve the pristine dark skies for astronomical research.
- A dark sky is the night sky as nature meant for it to be, without any light pollution. The Reserve is promoted as a tourist destination for enjoying the night sky and also helps in socio-economic development of the local villages. Hence, statement 1 is correct.
- HDSR is India's first dark sky region which is centred at Hanle in Eastern Ladakh, around the Indian Astronomical Observatory. It is India's first Night Sky Sanctuary is located within the Changthang Wildlife Sanctuary. Hence, statement 2 is not correct.
- The Bortle scale is a 9 level numeric scale that measures the night sky's brightness of a particular location. The scale ranges from Class 1, the darkest skies available over the earth, through to Class 9, which denotes the pale, light-marred skies over the insides of cities. HDSR region falls under the Bortle Class 1. Hence, statement 3 is not correct.

#### 15. Answer: C

The recently published "2023 State of the Climate Report: Entering uncharted territory" indicate that AMOC may cross the tipping point and start to collapse between 2025 and 2095. The Atlantic Meridional Overturning Circulation (AMOC) is a system of ocean currents that circulates water within the Atlantic Ocean by bringing warm water north and cold water south. The slower currents that occur from the surface to the seafloor are driven by changes in the saltiness and ocean temperature is a process called thermohaline circulation. These currents are carried in a large "global conveyor belt," which includes the



AMOC. AMOC circulation brings warmth to various parts of the globe and also carries nutrients necessary to sustain ocean life. The circulation process begins as warm water near the equator moves toward the poles (such as the Gulf Stream in the North Atlantic), where it cools and forms sea ice. Hence, both statements are correct.

**16. Answer: B**

Explanation:

East Coast Economic Corridor (ECEC) is India's first coastal economic corridor along the eastern coast. Hence, statement 1 is correct. ECEC also aligns with port-led industrialisation under Sagarmala initiative and Act East Policy by linking domestic companies with vibrant global production networks of East and Southeast Asia. It stretches about 2,500 km from Kolkata (West Bengal) in the north to Kanyakumari (Tamil Nadu) in the south. Hence, statement 2 is correct. It will connect the long eastern coastline and strategically located ports with the multiple international gateways to connect India with global value chains (GVCs) in East and Southeast Asia. The construction of this corridor is funded by the Asian Development Bank (ADB) by approval of a loan. Hence, statement 3 is not correct.

**17. Answer: B**

Each of the two Houses of Parliament has an ethics committee. Besides overseeing the moral and ethical conduct of members, ethics committee also prepares a Code of Conduct for members, which are amended from time to time. The ethics committee in Lok Sabha has 15 members while in Rajya Sabha this number stands at 10.

**18. Answer: B**

India's National Green Hydrogen Mission, piloted by the Ministry of New and Renewable Energy (MNRE) expects to manufacture five million tonnes by 2030. This would require the installation of renewable energy capacity worth 125 GW (1 GW is 1,000 megawatts) and the use of 250,000 gigawatt-hr units of power, equivalent to about 13% of India's present electricity generation.

**19. Answer: A**

India's tax base has widened sharply since 2013-14, with individuals moving up the income ladder and the proportion of super-rich taxpayers' incomes declining, the Central Board of Direct Taxes (CBDT) recently reported. The overall number of income tax (I-T) returns filed by individuals has risen from 3.36 crore to 6.37 crore through assessment years 2013-14 to 2021-22.

**20. Answer: B**

Arctic Council

- The Arctic Council is a high-level intergovernmental body set up in 1996 by the Ottawa declaration to promote cooperation, coordination and

interaction among the Arctic States together with the indigenous communities and other Arctic inhabitants.

- The Council has the eight circumpolar countries as member states and is mandated to protect the Arctic environment and promote the economies and social and cultural well-being of the indigenous people whose organizations are permanent participants in the council. Hence statement 1 is correct.
- Arctic Council Secretariat: The standing Arctic Council Secretariat formally became operational in 2013 in Tromsø, Norway. Hence statement 2 is not correct.
- The Council has members, ad hoc observer countries and "permanent participants"
- Members of the Arctic Council: Ottawa Declaration declares Canada, the Kingdom of Denmark, Finland, Iceland, Norway, the Russian Federation, Sweden and the United States of America as a member of the Arctic Council.
- Denmark represents Greenland and the Faroe Islands.
- Permanent participants: In 1998, the number of Permanent Participants doubled to make up the present six, as the Aleut International Association (AIA), and then, in 2000, the Arctic Athabaskan Council (AAC) and the Gwich'in Council International (GGI) were appointed Permanent Participants.
- Observer status: It is open to non-Arctic states, along with inter-governmental, inter-parliamentary, global, regional and non-governmental organizations that the Council determines can contribute to its work. It is approved by the Council at the Ministerial Meetings that occur once every two years. India was elected as observer member in 2021. Hence statement 3 is correct.

**21. Answer: A**

- Explanation: Few countries involved in a committee tasked with designing a "loss and damage" have recently agreed to meet in November before the COP 28 to address the issues with the fund. Loss and Damage Fund (L&D fund) is a financing mechanism to compensate the most vulnerable countries from climate-linked disasters. Loss and Damage refers to impacts of climate change that cannot be avoided either by mitigation or adaptation. Hence, statement 1 is correct.
- In the 1990s, the Alliance of Small Island States began calling for the establishment of a loss and damage fund. The G-77 (India is part of the group) and China had called for the immediate creation of an L&D fund at COP 27 which was agreed. Hence, statement 2 is not correct.

- The fund will initially draw on contributions from developed countries and other private and public sources with an option for other major economies to join down the line. The fund will aid developing countries that are vulnerable to adverse effects of climate change. The middle-income countries that are severely affected by climate disasters are also eligible. The COP is yet to finalize on the authority to oversee the Loss and Damage Fund. There is still no clear affirmation on which entity should oversee the fund, who should pay and which countries would be eligible to receive funding. Hence, statement 3 is not correct.

**22. Answer: C**

- Dust suppressants are salts of calcium or magnesium that can absorb moisture. Magnesium chloride absorbs moisture. The use of dust suppressant along with water is relatively more effective in control of pollution than conventional methods of dust control that is plain water spraying.
- The use of dust suppressants in water can be more effective than plain water sprinkling as it shows more efficiency to reduce particulate matter emission. About 30% reduction in dust concentration (PM10, PM2.5 and PM1) was observed up to 6 hours for construction sites as well as roads with the use of dust suppressant.
- This is not the first time it has been used in the Capital and parts of NCR to reduce the Delhi pollution. In 2019, the Delhi Pollution Control Committee had also issued directions that all construction agencies to use dust suppressants to control dust emissions and road-owning agencies.
- The effort by the Delhi government aids Graded Response Action Plan (GRAP) and seeks to improve Air Quality Index. Hence, both statements are correct.

**23. Answer: C**

- SIM card is an integrated circuit or a microchip that identifies the subscriber on a given network. In order for a mobile phone to connect to any cellular network that follows the Global System for Mobile Communications (GSM) standard, a SIM card is mandatory. Until 2G networks, the term 'SIM card' denoted both the hardware and the corresponding software. This changed with the advent of the Universal Mobile Telecommunications System with 3G networks.
- In the 3G network the 'SIM' became only the software, the hardware was called the Universal Integrated Circuit Card (UICC). The software was also upgraded to an application called Universal SIM or USIM. USIM could be modified to be compatible with the identification and security

requirements of 3G, 4G, and 5G networks. UICC loaded with both SIM and USIM applications can work with networks of all generations. Over the years, the SIM card has shrunk from the SIM to the mini SIM to the micro SIM to the nano SIM and latest on this path is the eSIM.

- In eSIM the SIM software is loaded to a UICC that is permanently installed in the mobile equipment in the factory itself and it cannot be removed which is called eUICC. It is environmentally friendly and there is no need of more plastic and metal for a new SIM. A malicious person won't be able to separately access the SIM application nor duplicate it.
- eSIMs can be programmed by subscribers themselves. eSIM can in theory allow network operators to track subscribers' data, including inside apps on the device and especially in the absence of data privacy laws. The International Organization for Standardisation and the International Electrotechnical Commission maintain the ISO/IEC 7816 international standard for SIM cards. Hence, all statements are correct.

**24. Answer: C**

- Geosynchronous Satellite Launch Vehicle Mk III (GSLV Mk III), also known as Launch Vehicle MarkIII (LVM-3), will be used as a launch vehicle in Gaganyaan mission. The Central Hub of the Gaganyaan Mission, Orbital Module (OM), which will orbit the Earth, will comprise a Crew Module (CM) and Service Module (SM). The Crew Module will have an Earth-like environment in space for the crew. Hence, both statements are correct.

**25. Answer: D**

- Statements 1, 3 and 4 are correct. Internationalizing higher education refers to the process of making higher education more globally connected and inclusive.
- The primary goal of internationalization in higher education is to prepare students to engage with and understand global issues, collaborate with individuals from diverse backgrounds, and address the challenges and opportunities presented by an increasingly interconnected world. Internationalization of education is one of the goals of NEP 2020.
- It aims to achieve it by making the Indian education system self-reliant and compliant to global standards & norms.
- It would help India in attracting students from abroad, in large numbers. It also aims to offer opportunities for students to study, work, or engage in research in other countries, promoting cultural exchange and global awareness.

- Statement 2 is incorrect. The core purpose of internationalization is to enhance the overall quality of education by incorporating global perspectives, promoting diversity, and preparing students to thrive in a globalized world.

**26. Answer: B**

Explanation

- Statements 1 and 3 are incorrect. ESG (Environmental, Social, and Governance) investment strategies do not guarantee higher financial returns compared to traditional investment approaches. ESG investments are made with the primary goal of aligning one's portfolio with ethical and sustainable values, and they take into account not only financial factors but also environmental, social, and governance considerations.
- While some ESG investments may perform well financially, their returns are subject to the same market risks and fluctuations as traditional investments. ESG investing is a framework for evaluating how companies manage their environmental, social, and governance risks and opportunities.
- This framework can be applied to any type of investment, regardless of the asset class. Statement 2 is correct. ESG criteria are used by investors, stakeholders, and organizations to evaluate a company's commitment to sustainable and responsible business practices.
- Environmental, social, and governance (ESG) criteria are a set of standards that companies can use to measure and manage their impact on the environment, society, and their own governance practices. ESG criteria are becoming increasingly important to investors, stakeholders, and organizations because they can help to identify companies that are making a positive impact on the world.

**27. Answer: A**

Explanation

Fintech companies, Credit unions, Peer-to-peer lending platforms, Microfinance institutions are capable of digital lending. Digital lending is the process of applying for, receiving, and managing loans through online platforms. It uses technology to automate and streamline the lending process, making it faster, easier, and more convenient for borrowers. Digital lending platforms can be offered by traditional banks or by new fintech companies. They typically use a variety of data sources, including bank statements, credit history, and social media data, to assess a borrower's creditworthiness. This allows them to make faster and more informed lending decisions

**28. Answer: C**

Vajra Mushti Kalaga is a traditional Indian martial art form that originated in Karnataka during the

Vijayanagar Empire. It is a form of wrestling that uses a knuckleduster, called a vajra mushti, to strike the opponent. The vajra mushti is usually made of ivory or buffalo horn and has small spikes at the knuckles. The goal of Vajra Mushti Kalaga is to draw blood from the opponent's head. The wrestlers use a variety of techniques, including grappling, striking, and takedowns, to try to land a blow on the opponent's head. Vajra Mushti Kalaga was once a popular form of wrestling in Karnataka, but it has declined in popularity in recent years. It is still occasionally performed during the Dasara festival in Mysore, Karnataka.

**29. Answer: A**

Mayer-Rokitansky-Küster-Hauser syndrome

MRKH), often referred to as MRKH syndrome, is a congenital disorder that affects the female reproductive system. It is characterized by the underdevelopment or absence of the uterus and the upper part of the vagina in women. Recently, the Supreme Court has allowed a woman with Mayer-Rokitansky-Kuster-Hauser (MRKH) Syndrome to undergo surrogacy using a donor egg.

**30. Answer: C**

- The carrying capacity of an environment is the maximum population size of a biological species that can be sustained by that specific environment, given the food, habitat, water, and other resources available.
- The carrying capacity is defined as the environment's maximal load, which in population ecology corresponds to the population equilibrium, when the number of deaths in a population equals the number of births (as well as immigration and emigration). The effect of carrying capacity on population dynamics is modelled with a logistic function.

**31. Answer: D**

Provisions of the Dam Safety Act (DSA), 2021:

- The Act listed key responsibilities and mandated that national and State Level bodies be established for implementation. It said a National Committee on Dam Safety (NCDS) would oversee dam safety policies and regulations; A National Dam Safety Authority (NDSA) would be charged with implementation and resolving State level disputes
- The Chairman of the Central Water Commission (CWC) would head dam safety protocols at the national level. A State Committee on Dam Safety (SCDS) and State Dam Safety Organisation (SDSO) would be set up.

**32. Answer: D**

- United Nations Refugee Convention 1951 is a United Nations multilateral treaty that defines who is a refugee, and sets out the rights of individuals who are granted asylum and the responsibilities of nations that grant asylum.



- It also set out which people do not qualify as refugees, such as war criminals. It grants certain rights to people fleeing persecution because of race, religion, nationality, affiliation to a particular social group, or political opinion.
- India is not a member of either the 1951 convention or its 1967 protocol.

### 33. Answer: A

Explanation

- Statement 1 is incorrect: Preventive detention means detention of a person without trial and conviction by a court. Its purpose is not to punish a person for a past offence but to prevent him from committing an offence in the near future.
- Statement 2 is incorrect: Article 22 grants protection to persons who are arrested or detained.
- Article 22 has two parts—the first part deals with the cases of ordinary law and the second part deals with the cases of preventive detention law.
- Statement 3 is incorrect: The detention of a person cannot exceed three months unless an advisory board reports sufficient cause for extended detention

### 34. Answer: C

Explanation:

- Pradhan Mantri Anusuchit Jaati Abhuyday Yojana (PM- AJAY) is a merged scheme of 3 Centrally Sponsored Scheme such as:
- Pradhan Mantri Adarsh Gram Yojana (PMAGY) – Aims at integrated development of Scheduled Castes majority villages.
- Special Central Assistance to Scheduled Castes Sub Plan (SCA to SCSP) – Provides 100% grant to the States/UTs as an additive to their Scheduled Castes Sub Plan (SCSP).
- Babu Jagjivan Ram Chhatrawas Yojana(BJRCY) – Construction of hostels for students belonging to Scheduled Castes (SC).
- PM- AJAY aims to reduce poverty of the SC communities by generation of additional employment opportunities through Skill development, income generating schemes and other initiatives. It aids to improve socio-economic developmental indicators by ensuring adequate infrastructure and requisite services in the SC dominated villages. The 3 components of PM- AJAY are:
- Development of SC dominated villages into an “Adarsh Gram”.
- Grants-in-aid to State/Districts.
- Construction/Repair of Hostels.
- The objective of Adarsh Gram is to ensure integrated development of SC majority villages. All requisite infrastructure necessary for socio-economic development needs are to be provided under the Scheme. The scheme functions under aegis of the Ministry of Social Justice and Empowerment. Hence, all statements are correct.

### 35. Answer: C

The practice of ‘visa shopping’ has been gaining popularity in recent times in several Indian states which may have legal implications if traveller did not adhere to the norms and guidelines of the visa process. Visa shopping is the practice of applying for a visa from the country where it is faster or easier to get as compared to main or original destination. Hence, statement 1 is correct. Schengen Visa is a type of visa shopping that facilitates free movement for travellers Schengen region in the Europe. The Schengen system was established in 1985. Under it, member countries form the Schengen area and people can travel freely between them without going through border controls. Once Schengen visa is granted, travellers can traverse the Schengen region and reach their intended destination. Schengen Visa is the most sought-after visa in Visa Shopping. Hence, statement 2 is not correct.

### 36. Answer: C

Explanation:

MDBs are international institutions comprising developed and developing countries. They offer financing and technical assistance for various projects in areas like transportation, energy, urban infrastructure, and waste management. Developed countries contribute to MDB lending while developing nations typically borrow from them for development projects. MDBs have been instrumental in supporting the development of both low-income and middle-income countries (LICs and MICs) by addressing issues such as poverty reduction, infrastructure development, human capital formation, etc. MDBs include the World Bank Group, the Asian Development Bank, the African Development Bank, the Inter-American Development Bank, etc. Hence, both statements are correct.

### 37. Answer: B

Explanation:

- Dhordo village in Gujarat made it to the UN World Tourism Organisation’s (UNWTOs) best villages list for its rich cultural heritage and natural beauty. Dhordo village is nestled in the Great Rann of Kutch in Gujarat which hosts the annual cultural festival Rann Utsav that showcases the region’s traditional art, music, and crafts. It also hosted the 1st Tourism Working Group Meeting of the G-20 held under India’s presidency in 2023. Hence, statement 1 is not correct.
- Global initiative to highlight those villages where tourism preserves cultures and traditions, celebrates diversity, provides opportunities and safeguards biodiversity. The award is given by the United Nations World Tourism Organisation (UNWTO). Hence, statement 2 is correct.

### 38. Answer: C

- Statements 1, 2 and 4 are correct. The Global South is disproportionately affected by climate change, despite contributing less to the problem. This is because:
- First, the Global South is more vulnerable to the effects of climate change due to its geographical location and economic development. For example, many countries in the Global South are located in low-lying coastal areas, which are at risk of flooding due to rising sea levels. Additionally, many countries in the Global South have economies that are heavily reliant on agriculture, which is particularly vulnerable to drought and other extreme weather events.
- Second, the Global South has fewer resources to adapt to the effects of climate change. Third, the Global South has less access to clean energy technologies. This means that countries in the Global South are more reliant on fossil fuels, which are a major contributor to climate change.
- India's G20 presidency in 2023 has provided it with a unique opportunity to champion the Global South. India has used its presidency to focus on issues of particular concern to developing countries, such as food security, energy security, and sustainable development. India has also invited a number of developing countries to participate in the G20, which has helped to give them a greater voice in global discussions.
- The Global South is a region of the world that is often overlooked by the developed countries.
- This is due to: Economic inequality, Lack of political representation, Geographic distance, Cultural differences, Media bias, etc. Statement 3 is incorrect.
- The Global South is not a homogeneous region with similar cultures and traditions. In fact, it is one of the most diverse regions in the world, with a wide range of cultures, languages, and religions.

### 39. Answer: A

- Statements 1 and 3 incorrect. The Edakkal Caves are not a series of natural caves that were formed by volcanic activity. They are two natural caves that are believed to have been formed by a large split in a huge rock. The Edakkal Caves are located in the Ambukutty hills, which are part of the Western Ghats Mountain range.
- The Western Ghats are a non-volcanic mountain range, so it is not possible for the Edakkal Caves to have been formed by volcanic activity. Edakkal Caves are not actually caves. They are part of a prehistoric rock shelter formed naturally when one huge boulder got wedged between two bigger

ones. That's why the name Edakkal itself means "a stone in between". The caves feature Neolithic-era pictorial writings dating back to at least 6,000 BCE.

- The caves have engravings of human and animal figures besides symbols and letters.
- The Edakkal Caves are not known for being home to ancient Buddhist temples. Instead, these caves are primarily famous for their prehistoric rock engravings and petroglyphs, which are believed to be of significance for understanding the region's ancient history and culture. They are more closely associated with early human activities rather than religious structures. Statement 2 is correct.
- The Muniyaras, or ancient burial sites, have been discovered in the vicinity of the Edakkal Caves, and they are believed to have been used by the people who lived in the caves.
- The discovery of the Muniyaras suggests that the Edakkal Caves were used as a burial ground by the people who lived in the caves.

### 40. Answer: C

- Statement 1 is incorrect. Corals are sessile organisms, meaning they are fixed in place and cannot move around. They are attached to the bottom of the ocean by a root-like structure called a holdfast. Statements 2 and 3 are correct.
- Corals have stinging tentacles that contain nematocysts used for prey capture. Nematocysts are microscopic stinging capsules that are found in the tentacles of corals, sea anemones, jellyfish, and other cnidarians.
- When coral polyp senses prey nearby, it fires its nematocysts. The nematocysts release a barb that pierces the prey's skin and injects a venom. The venom paralyzes the prey, making it easy for the coral polyp to ingest. Corals use their nematocysts to capture a variety of prey, including zooplankton, small fish, and crustaceans.
- Corals also use their nematocysts to defend themselves from predators. Coral reefs form in warm, shallow waters that are rich in sunlight and nutrients.
- Coral reefs are found in many parts of the world, but they are most common in the tropics. Some of the largest and most famous coral reefs in the world include the Great Barrier Reef in Australia, the Mesoamerican Barrier Reef System in Central America, and the Raja Ampat Islands in Indonesia.
- Coral reefs are important ecosystems that provide habitat for a wide variety of marine life. They also protect coastlines from erosion and storms. However, coral reefs are threatened by climate change, pollution, and overfishing.



#### 41. Answer: C

- Statements 1, 2 and 3 are correct. Kasturi Cotton Bharat is a website launched by the Ministry of Textiles, the Cotton Corporation of India, trade organizations, and the industry. It aims to boost the global competitiveness of Indian cotton by taking charge of branding, traceability, and certification, with a focus on sustainability and benefiting all involved stakeholders.
- Cotton Textiles Export Promotion Council (TEXPROCIL) has been designated as the implementing agency for Traceability, Certification and Branding of "KASTURI Cotton India". According to the Ministry of Textiles, India got 1st place in the world in cotton acreage with 120.69 Lakh Hectares area under cotton cultivation, which is around 36% of the world area of 333 Lakh Hectares.
- Gujarat is the largest producer of cotton in India. 67% of India's cotton is grown on rain-fed areas, and 33% on irrigated areas. India's productivity is ranked 38th, with a yield of 510 kg/ha.
- India is the only country to grow all four species of cultivated cotton: *Gossypium arboreum* (tree cotton), *Gossypium herbaceum* (herb cotton), *Gossypium hirsutum* (upland cotton), and *Gossypium barbadense* (pima cotton). This makes India a major player in the global cotton industry, with a large portion of the world's cotton production and export coming from the country.
- The different cotton species grown in India are adapted to different growing conditions and have unique characteristics that make them desirable for various textiles and fabrics. India's climate and soil conditions are particularly well-suited for cotton cultivation, making it a natural hub for the industry.
- Statement 4 is incorrect. Indian cotton is known for its high quality and is in high demand around the world. India is the world's second-largest producer of cotton, after China. It is also the largest producer and second largest consumer of cotton. Indian cotton is known for its long staple length, fine fiber, and high strength. These qualities make it ideal for spinning high-quality yarn and fabrics.

#### 42. Answer: B

- Chanakya emphasized the importance of a strong intelligence network. He believed that accurate and timely information about the enemy's intentions, strengths, and weaknesses was essential for victory. Spies and informants played a critical role in gathering this intelligence.
- Chanakya recognized the significance of alliances and diplomacy in strengthening a kingdom's position. He advised rulers to form alliances with friendly neighboring states to deter potential

aggressors and ensure support during conflicts. This aligns with modern military practices like international cooperation and soft power projection.

- Chanakya did not advocate for the use of brute force and overwhelming numbers as the primary strategy in warfare. Instead, he emphasized the importance of intelligence, strategy, and adaptability in military operations

#### 43. Answer: A

- The Rafah Border Crossing or Rafah Crossing Point is the sole crossing point between Egypt and the Gaza Strip. It is located on the Gaza-Egypt border, which was recognized by the 1979 Egypt-Israel peace treaty.
- The Rafah border crossing has been a focal point in the Israeli-Palestinian conflict and has seen numerous security incidents and clashes over the years. Its status and operation are closely linked to the broader political and security situation in the region.

#### 44. Answer: C

Explanation:

- Statement 1 is correct: A five-judge Bench of the Supreme Court on 3:2 verdict ruled against legalising same-sex marriage in India leaving it up to the legislature to decide if non-heterosexual unions can be legally recognised. Supreme Court has also stated that, the right to marry is not expressly recognised as a fundamental right under the Indian Constitution. Although the institution of marriage is regulated by various statutes in India, its recognition as a fundamental right or a constitutional right has only developed through various decisions of the Supreme Court.
- Statement 2 is correct: Agreeing unanimously that one's sexual orientation cannot decide the capability or suitability of being adoptive parents, the Supreme held as valid the existing regulations that deny unmarried couples, including queer, the right to adopt a child as a couple.

#### 45. Answer: C

Explanation:

Millets, which are essentially grasses, are grown worldwide, with a focus on tropical regions of Africa and Asia, where they are cultivated as cereal crops. Some common varieties include pearl millet (*Cenchrus americanus*), barnyard millet (*Echinochloa utilis*), finger millet (*Eleusine coracana*), and foxtail millet (*Setaria italica*). The rising popularity of millets in India can be attributed to their low input demands and high nutritional density, qualities that are particularly valuable for a nation anticipating substantial food security challenges in the upcoming decades.

#### 46. Answer: C

Explanation:

1. Light-Emitting Diode (LED):

- An LED is a semiconductor device that emits

visible light when an electric current flows through it.

- ♦ LED operation occurs exclusively in the forward bias condition.
- ♦ In the junction or depletion region, free electrons combine with holes in the positive ions, leading to light emission.

#### 2. Photodiode:

- ♦ A photodiode is a specialized p-n junction diode designed with a transparent window, allowing light to illuminate the diode.
- ♦ It functions under reverse bias.

#### 3. Zener Diode:

- ♦ A Zener diode operates similarly to a PN junction diode in forward bias, but it distinguishes itself by conducting in reverse bias above its threshold or breakdown voltage.
- ♦ Zener diodes operate in the breakdown region.

#### 4. Variable Capacitance Diodes (Varactor Diodes):

- ♦ Variable capacitance diodes, also known as varactor diodes, adjust their capacitance in response to applied voltage bias.
- ♦ They are typically utilized in the reverse bias condition because their capacitance is responsive to the voltage applied across them in this state, commonly found in electronic tuning circuits.

#### 47. Answer: B

- Statements 1 and 3 are correct. Cervical cancer is a type of cancer that develops in the cervix, which is the lower part of the uterus that connects to the vagina. Various strains of the human papillomavirus (HPV), a sexually transmitted infection, play a role in causing most cervical cancer. Cervical cancer is the second most common cancer among women in India, after breast cancer. As per the findings:
- Nearly 52% of patients diagnosed with cervical cancer between 2012 and 2015 survived.
- The highest survival rate was observed in Ahmedabad's at 61.5% followed by Thiruvananthapuram (58.8%) and Kollam (56.1%).
- In contrast, Tripura reported the survival rate at 31.6%.
- The survival rates were lower in India's northeastern region.
- Statement 2 is incorrect. Cervical cancer is not classified as an STD, as it is caused by HPV, which is a virus. While HPV can be transmitted through sexual activity, it is not classified as an STD. STDs are diseases that are specifically transmitted through sexual contact, and HPV can be transmitted through other means, such as skin-to-skin contact.

#### 48. Answer: B

Microalgae are microscopic algae that are invisible to the naked eye. They are single-celled organisms that can be found individually or in colonies. Microalgae

are incredibly diverse and come in a variety of shapes, sizes, and colors. Microalgae are important members of the aquatic ecosystem and play a vital role in the food chain. They are primary producers, which means that they are the base of the food chain and provide food for other organisms, such as zooplankton and fish. Microalgae also play a role in oxygen production and carbon dioxide sequestration. Microalgae can be found in all kinds of environments, including soil, snow, air and water.

#### 49. Answer: A

- Statements 1 and 2 are incorrect. The Act specifically addresses sexual harassment of women in the workplace, and its provisions apply to all organizations that employ women. While the Act does provide for the protection of all individuals in the workplace, regardless of their gender, its main focus is on protecting women from sexual harassment.
- The POSH Act applies to all workplaces in India, including public and private sector organizations, NGOs, and educational institutions. It also applies to workplaces that are located outside of India, but where the employer is an Indian citizen or an Indian company.
- The POSH Act does define sexual harassment. Section 2(n) of the POSH Act defines sexual harassment as: any unwelcome sexual behaviour, whether directly or impliedly, such as: (i) physical contact and advances; or (ii) a demand or request for sexual favours; or (iii) making sexually coloured remarks; or (iv) showing pornography; or (v) any other unwelcome physical, verbal or non-verbal conduct of a sexual nature. The POSH Act also provides safeguards against false or malicious charges.
- Section 14 of the POSH Act states that the Internal Complaints Committee (ICC) shall inquire into the complaint and submit a report to the employer within 60 days. The report shall contain the findings of the inquiry and recommendations for action to be taken by the employer.
- The employer is required to take action on the recommendations of the ICC within 60 days of receiving the report. If the employer finds that the complaint is false or malicious, the employer may take disciplinary action against the complainant. Statement 3 is correct. The POSH Act mandates States to appoint a District Officer in every district.
- Functions of District Officer under POSH Act are: Constitute Local Complaints Committees (LCCs), Appoint Nodal Officers, Submit Annual reports to Government.

#### 50. Answer: C

Statements 1 and 2 are correct. The Little Ice Age (LIA) was a period of regional cooling, particularly pronounced in the North Atlantic region, that occurred from the early 14th century to the mid-19th century.

It was not a true ice age of global extent. The term was introduced into scientific literature by François E. Matthes in 1939. As per the findings of the study: The study reconstructs vegetation-based climate changes and monsoonal variability in the Western Ghats from 1219-1942. LIA in the Western Ghats was characterized by moister conditions, possibly influenced by increased northeast winter monsoon (NEM), contrary to previous assumptions. It also found that the southward shift of the ITCZ and increased northward energy flow across the equator during a cold northern hemisphere contributed to the weakest phase of the Indian Summer Monsoon (ISM) during the LIA.

**51. Answer: C**

- Statements 1, 2 and 4 are correct. Hypertension, also known as high blood pressure, is a condition in which blood pressure is consistently too high. Blood pressure is the force of blood against the walls of the arteries. When blood pressure is too high, it can damage the arteries and lead to heart disease, stroke, kidney disease, and other health problems.
- According to the World Health Organization, an estimated 188.3 million people in India have hypertension, which is the highest number of people with hypertension in any country in the world. The prevalence of hypertension is higher in urban areas (12.5%) than in rural areas (10.6%).
- United Nations Sustainable Development Goal 3 (SDG 3) strives to achieve healthy lives and well-being for all, with one of its key targets being the reduction of hypertension. Hypertension is often underdiagnosed and undertreated in India.
- A study published in The Lancet Global Health in 2020 found that only 20% of people with hypertension in India are aware of their condition, and only 5% are adequately treated.
- Statement 3 is incorrect. Southern States have a higher prevalence of hypertension than the national average. Kerala (32.8% men and 30.9% women) has the highest number followed by Telangana.

**52. Answer: B**

- Statement 1 is incorrect. Exercise MILAN is a naval exercise, not a land army exercise. It is focused on enhancing professional interaction between navies and gaining experience in multilateral large force operations at sea. Exercise MILAN is a biennial multilateral naval exercise hosted by the Indian Navy.
- The exercise was first held in 1995. MILAN is aimed at fostering cooperation and interoperability between the navies of participating countries.
- The exercise includes a variety of activities, such as maritime search and rescue, anti-piracy drills, communication exercises, gunnery exercises, anti-submarine warfare exercises, and fleet maneuvers.

- MILAN also provides an opportunity for participating countries to showcase their naval capabilities and to learn from each other's best practices.
- Statement 2 is correct. The exercise was originally aligned with India's 'Look East Policy'. It later expanded to include more countries as part of India's 'Act East Policy' and the Security and Growth for All in the Region (SAGAR) initiative.
- This expansion involved nations from both the western Indian Ocean Region (IOR) and the countries along the IOR coast. Exercise MILAN 2024 is likely to witness the largest-ever participation with invites being extended to over 50 countries.
- The exercise aligns with India's G20 Presidency and the theme "Vasudhaiva Kutumbakam" emphasizing global unity.

**53. Answer: D**

Explanation

- Statement 1 is correct: The Jagannath temple is believed to be constructed in the 12th century by King Anantavarman Chodaganga Deva of the Eastern Ganga Dynasty.
- Statement 2 is correct: Jagannath Puri temple is called 'Yamanika Tirtha' where, according to the Hindu beliefs, the power of 'Yama', the god of death has been nullified in Puri due to the presence of Lord Jagannath.
- This temple was called the "White Pagoda" and is a part of Char Dham pilgrimages (Badrinath, Dwaraka, Puri, Rameswaram).
- Statement 3 is correct: There are four gates to the temple- Eastern 'Singhdwara' which is the main gate with two crouching lions, Southern 'Ashwadwara', Western 'Vyaghra Dwara' and Northern 'Hastidwara'. There is a carving of each form at each gate.

**54. Answer: C**

- The recent floods in the Teesta river in Sikkim and West Bengal was triggered by a phenomenon called Glacial Lake Outburst Flood or GLOF. It is a sudden release of water from a lake fed by glacier melt that has formed at the side, in front, within, beneath, or on the surface of a glacier.
- These floods can be triggered by a number of factors, including changes in the volume of the glacier, changes in the water level of the lake, and earthquakes. Glacial retreat due to climate change occurring in most parts of the Hindu Kush Himalayas has given rise to the formation of numerous new glacial lakes, which are the major cause of GLOFs.

**55. Answer: B**

- Visva-Bharati is a public central university and an Institute of National Importance (INI) located in Shantiniketan, West Bengal, India. It was founded by Rabindranath Tagore in 1921.



Until independence it was a college. In 1951, the institution was given the status of a central university by an act of the Parliament.

- INI is a status that may be conferred on a premier public higher education institution in India by an act of Parliament of India, an institution which “serves as a pivotal player in developing highly skilled personnel within the specified region of the country/state”.

#### 56. Answer: A

Explanation:

- India's first indigenous mass rapid system, RRTS covering Delhi-Ghaziabad-Meerut section was inaugurated recently. Regional Rapid Transit System (RRTS) is a new rail-based, semi-high-speed, high-frequency commuter transit system dedicated to regional connectivity. RRTS, now called as NaMo Bharat, was designed with a speed of 180 kmph. It is modelled on systems such as the RER in Paris, Germany, Austria and USA. It is a multimodal semi-high-speed regional rapid transit system that ensures balanced and sustainable urban development. Hence, statement 1 is correct.
- 8 RRTS corridors have been identified for development in the NCR. Phase - I: Out of 8, 3 corridors have been prioritised to be implemented in Phase-I. Delhi-Ghaziabad-Meerut Corridor, Delhi-Gurugram-SNB-Alwar Corridor, Delhi-Panipat Corridor Construction & Implementation – National Capital Region Transport Corporation (NCRTC), a joint venture of Union government and the governments of Delhi, Haryana, Rajasthan and Uttar Pradesh. NCRTC comes under the Ministry of Housing and Urban Affairs. Hence, statement 2 and 3 are not correct.

#### 57. Answer: B

Explanation:

- Recently Settlement Guarantee Fund (SGF) have regulated norms for the Settlement Guarantee Fund in commodity derivatives segment. The primary objective of SGF is to have a fund for each segment to guarantee the settlement of trades executed in respective segment of the stock exchange. A Settlement Guarantee Fund (SGF) is a corpus used for settlement of trades during defaults. Hence, statement 1 is correct.
- All intermediaries such as stock exchanges, clearing corporations and brokers contribute towards SGF. Hence, statement 2 is correct.
- SGF is received in the form of cash and securities. Members are required to maintain a minimum of 10% of their Securities Segment margin requirements in the form of cash contributions to SGF. Members have the option to maintain their

entire SGF contribution in the form of Cash. The SEBI has recently notified that excess contribution may be returned to the contributing stakeholders on a pro-rata basis, after taking due approval from SEBI. Hence, statement 3 is not correct.

#### 58. Answer: B

Explanation

- I2U2 was initially formed in October, 2021 following the Abraham Accords between Israel and the UAE, to deal with issues concerning maritime security, infrastructure and transport in the region.
- At that time, it was called the ‘International Forum for Economic Cooperation’.
- That was referred as the ‘West Asian Quad’.
- I2U2 initiative is a new grouping of India, Israel, USA and UAE.
- In the grouping's name, ‘I2’ stands for India and Israel, whereas ‘U2’ stands for USA and the UAE.

#### 59. Answer: A

Explanation:

- Recently the union government announced Minimum Support Price (MSP) for 6 Rabi crops for the 2024-25 marketing season with the old formula for MSP.
- Minimum Support Price (MSP) is a form of market intervention by the Government of India to insure agricultural producers against any sharp fall in farm prices.
- MSP are announced by the Government of India at the beginning of the sowing season for certain crops on the basis of the recommendations of the Commission for Agricultural Costs and Prices (CACP).
- Hence, statement 1 is correct. The Swaminathan Commission recommended that the MSP should at least be 50 % more than the weighted average CoP, which it refers to as the C2 cost.
- Hence, statement 2 is not correct. The minimum support prices (MSPs) is mandated for 14 crops of the kharif season, 6 rabi crops and 2 other commercial crops (Cotton and Jute) excluding sugar cane. Hence, statement 3 is not correct.

#### 60. Answer: C

Explanation:

The Golden Peacock Awards, instituted by the Institute of Directors, India in 1991, are now regarded as a benchmark of Corporate Excellence worldwide. Golden Peacock Awards for Corporate Leadership and Institutional Excellence, over the time, have become a hallmark of excellence, both locally and globally. Award winners are eligible to use the Golden Peacock Awards Logo with year on all printed and promotional materials, which evidences the highest accolade received by the organisation. The Awards

are bestowed annually and are designed to encourage total improvement in each sector of our business. REC Limited honoured with Golden Peacock Award in Risk Management in 2023. REC is a 'Maharatna' company under the administrative control of the Ministry of Power. Hence, both statements are correct.

**61. Answer: C**

Explanation:

The Broadcasting Content Complaints Council (BCCC) operates as an independent self-regulatory body. It is affiliated with the Indian Broadcasting Foundation (IBF), which is an industry association of television broadcasters in India. The BCCC comprises thirteen members, including a Chairperson who is typically a retired Judge from the Supreme Court or High Court. The BCCC's self-regulatory approach empowers the broadcasting industry to have a say in content regulation. This approach strikes a balance between providing creative freedom for content creators and the responsibility to ensure that content aligns with established norms and community standards, thus upholding public expectations while fostering creative expression. Hence, all statements are correct.

**62. Answer: C**

- Statements 1 and 4 are incorrect. The deeper the earthquake, the less intense the shaking will be at the surface. This is because:
- Shallow earthquakes, those that occur within about 30 km of the surface, release most of their energy close to the surface. This can cause more intense shaking and more damage to buildings and infrastructure.
- Deep earthquakes, those that occur at depths greater than 30 km, release most of their energy at deeper levels. The energy is dissipated by the time it reaches the surface, resulting in weaker shaking and less damage.

Soft soil can amplify the shaking of earthquakes.

- When the ground shakes during an earthquake, the vibrations travel through the soil. In soft soils, the vibrations can be amplified due to the soil's low density and low stiffness. This amplification can cause more intense shaking and potentially greater damage to buildings and infrastructure in areas with soft soil. Hence, peat soil, sandy, loamy, clay soils are types of soft soils that can amplify the earthquakes. Statements 2 and 3 are correct.
- The magnitude of an earthquake is a measure of the amount of energy released by the earthquake. Larger magnitude earthquakes will produce more intense shaking. The closer you are to the epicenter of an earthquake, the more intense the shaking will be.
- This is because the energy from the earthquake spreads out in all directions from the epicenter, and the closer you are, the more energy you will be exposed to.

**63. Answer: B**

- Statements 1 and 3 are correct. Nutrition security can only be achieved sustainably if the producers producing the food make reasonable economic returns that are resilient over time.
- This is because: First, farmers need to be able to make a profit in order to stay in business and continue producing food. Second, farmers need to be able to invest in their farms in order to improve productivity and sustainability. Third, farmers need to be able to cope with shocks, such as droughts and floods, which can disrupt food production. India faces a double burden of malnutrition: 1) At one end, a sizable proportion of Indians exhibit nutrient deficiencies.
- As in the National Family Health Survey, 2019-21, 35% of children are stunted, and 57% of women and 25% of men are anaemic. 2) At the other end, due to imbalanced diets and sedentary lifestyles, 24% of adult women and 23% of adult men are now obese. Statement 2 is incorrect. As in the 2023 soil health survey, almost half the cultivable land in India has become deficient in organic carbon. In States such as Punjab, more than 75% blocks are over-exploited.

**64. Answer: C**

Statements 1 and 2 are correct. India is the world's third-largest emitter of greenhouse gases, but its per capita emissions are much lower than those of developed countries. In 2020, India's per capita emissions were 2.4 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e), while the global average was 6.3 tCO<sub>2</sub>e. The per capita emissions of developed countries are even higher, with the United States at 16.5 tCO<sub>2</sub>e and the European Union at 7.2 tCO<sub>2</sub>e. The main source of greenhouse gas emissions in India is the energy sector, which accounts for about 70% of total emissions. The rest of the emissions come from agriculture, industry, and waste management. India's Nationally Determined Contributions (NDC) aim to ensure that 40% of the total installed power generation capacity is clean energy. India's NDC also includes a number of other ambitious targets, such as reducing emissions intensity by 33-35% by 2030 compared to 2005 levels and creating an additional carbon sink of 2.5-3 GtCO<sub>2</sub>e through afforestation and reforestation.

**65. Answer: A**

Statements 1 and 2 are correct. NPD is a group of rare and inherited metabolic disorders that affect the body's ability to process lipids or fats properly. NPD is caused by mutations in genes that code for enzymes that break down cholesterol and other fatty substances. These enzymes are called sphingomyelinase (NPC1 and NPC2). When these enzymes are not working properly, cholesterol and other fatty substances build

up in the cells, which can lead to a variety of health problems. The severity of NPD varies depending on the type of mutation and the age at which the disease begins. Statement 3 is incorrect. People with NPD Type B cannot be cured with a simple gene therapy. There is no cure for NPD, and gene therapy is still in its early stages of development for this disease.

**66. Answer: C**

Estivation is also known as aestivation. It is a biological phenomenon during which some animals enter a prolonged state of dormancy or inactivity during hot and dry conditions. It serves as a survival strategy to conserve energy and water. Animals during estivation seek shelter in cool places like underground burrows, crevices, or cocoons. During this time, animals will also reduce their metabolic activity which in turn reduces their energy consumption. This helps them avoid extreme dryness and safe from predators.

**67. Answer: C**

Statements 1 and 2 are correct. The Leniency Plus Programme is a new initiative introduced by the Competition Commission of India (CCI) in 2023. The program is designed to encourage companies to disclose information about cartels and other anti-competitive practices in exchange for reduced penalties. Under the Leniency Plus Programme, a company that has already applied for leniency in an ongoing cartel investigation can submit a separate application for leniency in another cartel investigation. If the CCI finds that the information provided in the second application is valuable and helps to detect and prosecute the second cartel, the company may be eligible for an additional reduction in its penalty in the first case. The Leniency Plus Programme is a significant development in Indian antitrust law. It is expected to make it more difficult for companies to engage in cartels and other anti-competitive practices, and to make it easier for the CCI to detect and prosecute these practices.

**68. Answer: D**

- In a grand finale to the Meri Maati Mera Desh (My Country My Soil) campaign, a giant pitcher containing soil collected from across the country will be placed at Kartavya Path in the national capital on October 31.
- Approximately 8,000 urns carrying soil from all villages of the country are expected to arrive in the capital as part of the campaign, which was launched on August 9 as a tribute to the valiant individuals who sacrificed their lives for the nation. This campaign aims to honour the brave freedom fighters and bravehearts. Shilaphalakams (memorial plaques) commemorating them will be installed in gram panchayats, close to Amrit Sarovars.

**69. Answer: C**

Explanation:

At the Global Maritime India Summit 2023 the Prime Minister Narendra Modi unveiled 'Amrit Kaal Vision 2047', a blueprint for the Indian Maritime blue economy. Amrit Kaal Vision 2047 is the long-term blueprint for the Indian maritime blue economy for enhancing port, promoting sustainable practices and facilitating global collaboration. The blueprint outlines strategic initiatives aimed at enhancing port facilities, promoting sustainable practices and facilitating international collaboration. It includes strategies to make major ports carbon-neutral and push for domestic hydrogen production and distribution. It aims to quadruple port capacity to 10,000 million tonnes per annum (mtpa) by 2047, aiming to get 100 % public private partnership (PPP) for 12 major ports. Global Maritime India Summit 2023 is the 3rd edition of the summit that was held at Mumbai. Hence, all statements are correct.

**70. Answer: A**

Explanation:

- Recently the researchers have observed that the Microalgae are adapting to warming climate, declining nutrient levels in seas with help of the Rhodopsin protein. The warmer the surface water gets, the lower are the nutrients in these surface water layers. There is less mixing between the surface waters and nutrient-rich deeper waters as the oceans warm. So nutrients become scarce at the surface, impacting the primary producers such as microalgae that are present in the top layer. Microalgae form the base of the food chain in the ocean and capture carbon dioxide from the atmosphere. For algae to produce food and to remove carbon dioxide from the atmosphere, they need sunlight. Microbial rhodopsins may absorb as much light as chlorophyll-based photosynthesis in the sea, which also captures light to generate energy and food. Rhodopsin is a light-responsive protein that helps the microalgae flourish with the help of sunlight in place of traditional chlorophyll. Hence, statement 1 is correct.
- Microbial rhodopsins may have the potential to reduce the negative effects of changing environmental conditions, such as ocean warming and even the reduction in the productivity of crops. The same mechanism could be deployed to enhance the activity of microbes that cannot use light, such as yeast. Rhodopsins were found to be more concentrated in low latitudes, where there is less mixing of ocean waters and lower concentrations of nutrients, including dissolved iron. Hence, statement 2 is not correct.



**71. Answer: B**

Explanation:

- It is a type of provident fund account that is available only for government employees in India. The primary objective of this fund is to provide a dependable source of retirement income for government employees. It allows government employees to accumulate savings over their employment tenure. Hence, statement 1 is not correct.
- It is a mandatory scheme for government employees, requiring them to contribute a certain percentage of their salary towards the fund. The contributions are deducted from the employee's monthly salary, and the amount earns interest at a predetermined rate. Employees can also increase the GPF deductions as per their choice. Hence, statement 2 is correct.

**72. Answer: B**

Explanation:

Recently the Cybersecurity experts have found hackers using Quick response (QR) codes for phishing activities. A quick response (QR) code is a type of barcode that can be read easily by a digital device and which stores information as a series of pixels in a square-shaped grid. QR codes are frequently used to track information about products in a supply chain and often used in marketing and advertising campaigns. It was invented by Masahiro Hara, a Japanese engineer in 1994. An enhancement on traditional barcodes, QR codes can store vastly more information and are used in a variety of applications from supply chain management to cryptocurrency wallet addresses. QR codes have become more widespread in facilitating digital payments and in cryptocurrency. The Trellix Advanced Research Centre recently noticed an attack campaign with an acute spike of phishing emails that uses QR codes. Phishing is an attempt by cybercriminals posing as legitimate institutions, usually via email, to obtain sensitive information from targeted individuals. Hence, statement 3 is not correct.

**73. Answer: A**

Explanation:

- Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) recently conducted a meeting in Nairobi to gauge progress on Kunming-Montreal Global Biodiversity Framework. It is an open-ended intergovernmental scientific advisory body established by the article 25 of the Convention on Biological Diversity. It provides the Conference of the Parties (COP) and its other subsidiary bodies, with timely advice relating to the implementation of the Convention. It is a subsidiary body of the COP that report regularly to the COP on all aspects of its work. SBSTTA comprises government representatives competent in the relevant field of expertise. Its functions includes:

- Providing assessments of the status of biological diversity,
- Providing assessments of the types of measures taken in accordance with the provisions of the Convention and
- Responding to questions that the COP may put to the body.
- The 25th meeting of SBSTTA was held at Nairobi, Kenya. Hence, statement 3 is not correct.

**74. Answer: B**

Explanation:

Signalling a road map for India's future space ambitions, Prime Minister Narendra Modi has directed the Indian Space Agency (ISRO) to set up an Indian crafted, indigenous space station by 2035 and land an Indian on the moon by 2040. This follows preparations for the Gaganyaan mission — India's first manned mission to space, scheduled for 2025. The International Space Station or ISS, orbiting in low earth orbit (LEO), developed and maintained by the U.S., Russia, Canada, Japan, and European agencies, is the largest space station but is expected to be decommissioned by 2030. Hence, both statements are correct.

**75. Answer: B**

Statements 1 and 3 are correct. *Bufoides bhupathyi* is a newly discovered species of toad that is endemic to the Dampa Tiger Reserve in Mizoram, India. It differs from other similar species in terms of colouration, skin and the presence of depressed parotid glands. The two species, *Bufoides meghalayanus* and *Bufoides kempi* were found in Meghalaya. Statement 2 is incorrect. *Bufoides bhupathyi* is currently known to exist only in the Dampa tiger reserve in Mizoram.

**76. Answer: C**

- Statement 1 is correct. White phosphorus is a waxy, yellowish-to-clear chemical with a pungent, garlic-like odour. It is a highly combustible chemical that burns quickly and brightly when exposed to air. It can be deployed through artillery shells, bombs, rockets or grenades. It is used primarily to create a smokescreen at night or during the day to hide the visual movement of troops.
- Statement 3 is correct. White phosphorus is not found naturally, but is produced from a mineral called apatite, which is a phosphate mineral found in phosphate rocks. The process of producing white phosphorus involves heating apatite to extremely high temperatures in the absence of oxygen, and the phosphorus is then collected as a white, waxy substance. Statement 2 is incorrect. White phosphorus is not considered a chemical weapon because it operates primarily by heat and flame rather than toxicity.

**77. Answer: A**

- Statement 1 is correct. In a democracy, the majority rules. This means that decisions are made based on the will of the majority. However, the rights of the minority are also protected. Moreover, decisions should also be made under democratic conditions treating all members with equal respect and concern.
- Statement 2 is incorrect. A culturally or ethnically homogeneous population where the majority of individuals share the same or a very similar ethnic or racial background is not an essential feature of a democracy. In fact, democracies are often characterized by their diversity, with people from different ethnic, religious, and cultural backgrounds living together.

**78. Answer: B**

E-rupee is a digital currency issued by the Reserve Bank of India (RBI) as a central bank digital currency (CBDC). It is a CBDC, which means that it is issued and regulated by the central bank. Cryptocurrencies, on the other hand, are decentralized and not backed by any government or central bank. Statement 2 is correct. The e-rupee is different from other digital payment methods, such as UPI and Paytm, in that it is a direct liability of the RBI. This means that it is backed by the full faith and credit of the government of India. The e-rupee is also different from cryptocurrencies in that it is not decentralized and is not subject to the volatility of the cryptocurrency market.

**79. Answer: C**

Statements 1, 2 and 3 are correct. OALP is a part of the Hydrocarbon Exploration and Licensing Policy (HELP). It was introduced by the government in 2016 and became operational from 2017. OALP gives an option to a company to select the exploration blocks on its own without waiting for the formal bid round from the Government. Under OALP, a bidder intending to explore hydrocarbons may apply to the Government seeking exploration of any new block which was not already covered by exploration

**80. Answer: C**

- Union Health Secretary has delivered the keynote address at the National Conclave on “Augmented Zoonotic Diseases Surveillance at Human – Wildlife Interface” and National Conclave for Endorsement of “National Action Plan for Prevention and Control of Snakebite Envenoming”. As per his speech,
- Zoonotic disease is one of the areas of concern which is affecting humans as well as animals’ health. 75% of new infectious diseases that have emerged in the last 30 years are zoonotic.
- Snake bite is a neglected public health issue in many tropical and subtropical countries. Most of these occur in Africa, Asia and Latin America. In Asia up to 2 million people are envenomed by

snakes each year. In India, snake bites continue to be a huge problem causing nearly 60,000 deaths annually.

**81. Answer: B**

Explanation:

- Ahead of the COP 28, set to held in Dubai in November-December 2023, the Union government has notified two initiatives namely Eco Mark Scheme and Green Credit Programme. The Ministry of Environment, Forest and Climate Change has introduced 2 pioneering initiatives to promote country’s pro-active approach to climate change. These initiatives seek to encourage environmentally friendly practices rooted in tradition and conservation; reflecting the ideas of LiFE concept. Green Credit Program (GCP) is an innovative market-based mechanism designed to incentivize voluntary environmental actions.
- The environmental actions include across diverse sectors such as various stakeholders like individuals, communities, private sector industries and companies. GCP will focus on water conservation and afforestation. The Indian Council of Forestry Research and Education (ICFRE) serves as the GCP Administrator, responsible for program implementation, management, monitoring, and operation. Ecomark Scheme promotes Eco-Friendly Products. It provides accreditation and labelling for household and consumer products that meet specific environmental criteria while maintaining quality standards as per Indian norms. The Central Pollution Control Board administers the Eco mark Scheme in partnership with Bureau of Indian Standards (BIS). Hence, statement 3 is incorrect.

**82. Answer: A**

Explanation:

Recently the Manipur’s Imphal witnessed the outbreak of the African swine fever. African swine fever is a highly contagious and deadly viral disease affecting both domestic and feral swine of all ages. ASF is not a threat to human health and cannot be transmitted from pigs to humans. It is found in countries around the world. ASF is a different disease to swine flu. The clinical signs of ASF may occur in chronic, sub-acute or acute form. The incubation period for ASF is variable but is usually between 5 and 15 days. Traditionally this serious disease has occurred mainly in Africa with the only endemic area in the European Union (EU) being the Italian island of Sardinia. However, since 2017 the disease has also been reported in Central and Eastern Europe. Hence, statement 2 is not correct.

**83. Answer: A**

Explanation:

Recently, World health summit, 2023 takes place in Berlin, Germany and online from 15–17 October under the theme “A Defining Year for Global Health

Action". During the summit India highlighted the efforts at reducing non-communicable diseases, "India has launched the 75/25 initiative, aimed at screening and providing standard of care for 75 million individuals with hypertension and diabetes by 2025. It marks the most extensive expansion of NCDs in primary healthcare globally". Hence, option (a) is correct.

**84. Answer: B**

Explanation:

Aerosols are tiny solid or liquid particles suspended in the atmosphere. Natural Aerosols are formed by natural processes such as dust storms, sea spray, volcanic eruptions, and wildfires. Anthropogenic Aerosols are generated from human activities, including industrial processes, vehicle emissions, and the burning of fossil fuels. Aerosols can vary widely in size, ranging from a few nanometers to several tens of micrometers. They can consist of sulfates, nitrates, organic compounds, black carbon, mineral dust, and sea salt, among other components. Hence, statement 2 is not correct.

**85. Answer: C**

- The women's reservation bill or Nari Shakti Vandan Adhiniyam reserves one-third (33%) of the seats in Lok Sabha, State legislative assemblies and the Delhi assembly for women. This will also apply to the seats reserved for SCs (Scheduled Castes) and STs (Scheduled Tribes) in Lok Sabha and State Legislatures.
- However, the reservation will not be effective immediately, but only after the next census. Based on the census, delimitation will be undertaken to reserve seats for women. The reservation will be provided for a period of 15 years. However, it shall continue till such date as determined by Parliamentary enactment.

**86. Answer: D**

Statement 1 is correct:

Core of the Core Schemes of government of India

1. National Social Assistance Program
2. Mahatma Gandhi National Rural Employment Guarantee Program
3. Umbrella Scheme for Development of Scheduled Castes
4. Umbrella Programme for Development of Scheduled Tribes
5. Umbrella Programme for Development of Minorities
6. Umbrella Programme for Development of Other Vulnerable Groups

Statement 2 is correct:

- Mahatma Gandhi National Rural Employment Guarantee Scheme (Mahatma Gandhi NREGS) is a demand driven wage employment scheme

which provides for the enhancement of livelihood security of the households in rural areas of the country by providing at least one hundred days of guaranteed wage employment in every financial year to every household whose adult members volunteer to do unskilled manual work.

- As per the scheme, Within 15 days of submitting the application or from the day work is demanded, wage employment will be provided to the applicant.
- Statement 3 is correct: As per the Para 15 of Schedule-II of the Mahatma Gandhi National Rural Employment Guarantee Act, "Priority shall be given to women in such a way that at least one-third of the beneficiaries shall be women who have registered and requested for work. Efforts to increase participation of single women and the disabled shall be made"

**87. Answer: D**

- Belt and Road Initiative (BRI) is a large-scale infrastructure development programme launched by China in 2013. BRI comprises two main components: Silk Road Economic Belt (SREB) and the 21st century Maritime Silk Road (MSR).
- The initiative aims to connect Asia with Europe and Africa, through a network of railways, highways, ports, airports, and other infrastructure projects with the intent to promote trade, investment, and economic growth in participating countries.
- Partnership for Global Infrastructure Investment (PGII) is a west-led infrastructure plan to counter the China-led BRI. PGII was first announced in 2021 G7 (or Group of Seven) summit in the UK.

**88. Answer: C**

Explanation:

- The Global Hunger Index, 2023 was recently released by the Concern Worldwide and Welthungerhilfe, Non-Government Organisations from Ireland and Germany respectively. The Global Hunger Index (GHI) is a tool for comprehensively measuring and tracking hunger at global, regional and national levels. GHI scores are based on the values of 4 component indicators that includes:
- Undernourishment – The share of the population with insufficient caloric intake.
- Child stunting – The share of children under age five who have low height for their age, reflecting chronic undernutrition.
- Child wasting – The share of children under age five who have low weight for their height, reflecting acute undernutrition.
- Child mortality – The share of children who die before their fifth birthday, partly reflecting the fatal mix of inadequate nutrition and unhealthy environments.



- In the 2023 Global Hunger Index, India ranks 111th out of the 125 countries. India has a score of 28.7 in the 2023 Global Hunger Index and has a level of hunger that is serious. India has the highest child wasting rate in the world at 18.7%. Afghanistan, Haiti and 12 sub-Saharan countries perform worse than India on the index. Hence, all statements are correct.

**89. Answer: C**

Explanation:

Recently the ministry of road transport and highways approved 7 bridge projects in Arunachal Pradesh under the Setu Bandhan Scheme. The Setu Bandhan scheme has been introduced to improve inter-state connectivity, especially on the rural areas at the borders where state roads do not get the required attention. The scheme is an initiative of the Ministry of Road Transport and Highways (Morth). The scheme is different from "Setu Bharatam" scheme. Setu Bharatam is an ambitious programme with an investment of Rs. 50,000 crore to build bridges for safe and seamless travel on National Highways. The programme aims at making all national highways Railway Level Crossing free by 2019. Hence, both statements are correct.

**90. Answer: B**

Explanation:

It defines ART procedures as all techniques that attempt to obtain a pregnancy by handling the sperm or the oocyte (the immature female egg) outside the human body and transferring into the reproductive system of a woman. This is open to married couples, live-in partners, single women, and also foreigners. ART procedures include gamete donation, intrauterine insemination, and in-vitro fertilisation or IVF. The Surrogacy (Regulation) Act, 2021 (SRA) says the surrogate mother should be married and have a child of her own. Hence, statement 2 is incorrect.

**91. Answer: A**

Explanation:

They are fixed-income instruments designed to finance projects that have been specifically earmarked as climate or environment-related. The Reserve Bank of India (RBI) issues the sovereign green bonds in line with global standards in India. The proceeds will be deployed in public sector projects which help in reducing the carbon intensity of the economy. The issuance of green bonds is part of the Union Budget 2022-23 announcement. India is among 25 other countries to have issued bonds to exclusively fund climate sustainability and green infrastructure projects and initiatives. Hence, statement 1 is correct.

**92. Answer: C**

Explanation:

The temple is located in Ujjain in the state of Madhya

Pradesh. There are 12 jyotirlinga sites in India, considered a manifestation of Shiva. 12 temples: Mahakal, Somnath and Nageshwar in Gujarat, Mallikarjuna in Andhra Pradesh, Omkareshwar in Madhya Pradesh, Kedarnath in Uttarakhand, Bhimashankar, Triyambakeshwar and Grishneshwar in Maharashtra, Viswanath at Varanasi, Baidyanath in Jharkhand, and Rameshwar in Tamil Nadu. Mahakal is the only jyotirlinga facing the south, while all the other jyotirlingas face east. The Mahakal temple finds a mention in several ancient Indian poetic texts. In the early part of the Meghadutam (Purva Megha) composed in the 4th century, Kalidasa gives a description of the Mahakal temple. It is described as one with a stone foundation, with the ceiling on wooden pillars. There would be no shikharas or spires on the temples prior to the Gupta period. The present five-storeyed structure was built by the Maratha general Ranoji Shinde in 1734, in the Bhumija, Chalukya and Maratha styles of architecture. A century later, its marble walkways were restored by the Scindias. Ujjain is geographically situated at a spot where the zero meridian of longitude and the Tropic of Cancer intersect. Hence, all statements are correct.

**93. Answer: C**

Explanation:

International Big Cat Alliance (IBCA) is a mega global alliance launched by India in April 2023 during the 50th anniversary of Project Tiger. The Intergovernmental body has 97 countries with many Asian and African countries becoming a part of the alliance. The alliance aims at the conservation of the world's seven principal big cats, which include the tiger, lion, snow leopard, leopard, jaguar, puma, and cheetah. Through the alliance, the member nations exchange experiences, provide faster assistance to their neighbours and place a strong emphasis on capacity building. Hence, both statements are correct.

**94. Answer: B**

Statements 1 and 3 are correct. Section 54EC Bonds are fixed-income instruments that provide capital gains tax exemption under Section 54EC of the Income Tax Act to investors. These bonds offer attractive interest rates, which are usually higher than those offered by other fixed-income investment options. Statement 2 is incorrect. Section 54EC Bonds are not transferable, and they cannot be used to claim a deduction on short-term capital gains. These bonds are specifically meant for investors earning long-term capital gains and would like tax exemption on these gains.

**95. Answer: B**

Statement 1 is incorrect. FAME Scheme provides incentives to manufacturers and buyers of electric and hybrid vehicles and aims to increase demand for these

vehicles by providing financial support. Statement 2 is correct. The scheme is being implemented by the Ministry of Heavy Industries.

**96. Answer: A**

Explanation:

TRAFFIC is an organization that was established in 1976 by WWF and IUCN. It is a wildlife trade monitoring network to undertake data collection, analysis, and provision of recommendations to inform decision making on wildlife trade. TRAFFIC became an independent non-profit organization in 2017, with WWF and IUCN sitting on its Board of Directors along with independent Board members. Chennai is the highest-ranked node in the tortoise and hard-shell turtle trafficking network fuelling the global pet trade. The most frequent trafficking links in the soft-shell turtle trafficking network were from Jaunpur in Uttar Pradesh to unspecified districts in West Bengal and from North 24 Parganas to unspecified districts in Bangladesh. Asian turtle crisis is a term often used to describe the current state of tortoises and freshwater turtles (TFTs) in the largest continent on earth. Hence, statement 2 is incorrect.

**97. Answer: C**

Explanation:

- The Moscow format is one of the several dialogue platforms on Afghanistan, which began before the Taliban takeover of Kabul. It consists of Russia, China, Pakistan, Iran, Kazakhstan, Tajikistan, Kyrgyzstan, Uzbekistan, Turkmenistan and India. As part of its initiatives to encourage a peaceful conclusion to the violence and instability in Afghanistan, the Russian government initially started it in 2017.
- The key objective of the Moscow format of consultations is to facilitate the national reconciliation process in Afghanistan to establish peace. The Kazan Declaration is a document that resulted from the fifth regional consultation on Afghanistan, known as the Moscow Format, which took place in Kazan, Russia. The Kazan Declaration underscores the call for the Afghan authorities to create conditions that improve the well-being of the Afghan people, deter further migration, and facilitate the return of refugees. Hence, all statements are correct.

**98. Answer: C**

Explanation:

Gresham's Law, named after Thomas Gresham, states that "bad money drives out good" when the government fixes the exchange rate between two currencies at a level different from the market rate. This leads to the undervalued currency going out of circulation, while the overvalued currency remains but

lacks buyers. The law can result in a currency shortage when demand exceeds supply due to the fixed price. Gresham's law applies not only to paper currencies but also to commodities. It can cause goods to disappear from the formal market when their prices are forcibly undervalued by governments. Thiers' law, on the other hand, states that "good money drives out bad" when people have the freedom to choose between currencies, and they prefer higher-quality currencies. Hence, option (c) is correct.

**99. Answer: B**

Explanation:

Recently 3 scientists received Nobel Prize award, 2023 in the field of Physics for their "experimental methods that generate attosecond pulses for the study of electrons dynamics in matter." The laureates were awarded the Prize for experiments that have allowed scientists to produce ultra-short pulses of light, with which they can finally 'see' directly into the super-fast world of electrons. Attosecond physics gives us the opportunity to understand mechanisms that are governed by electrons. The movement of an atom in a molecule can be studied with the very shortest pulses produced by a laser. These movements and changes in the atoms occur on the order of a femtosecond that is a millionth of a billionth of a second. However, electrons are lighter and interact faster, in the attosecond realm. An attosecond is one-billionth of a nanosecond. By fine-tuning the setup used to produce the overtones, scientists realised that it should be possible to create intense pulses of light each a few attoseconds long. Attosecond pulses allow scientists to capture 'images' of activities that happen in incredibly short time spans. Hence, statement 3 is incorrect.

**100. Answer: D**

Explanation:

It is a hand-spun product known for extreme softness, fineness and light-weight, has insulating properties and extended life. It is obtained from a breed of mountain goats (*Capra hircus*) found on the Changthang Plateau in Tibet and parts of Ladakh. Recently, Basohli Pashmina, a more than 100-year-old traditional craft from Jammu and Kashmir's Kathua district, has got the Geographical Indication (GI) tag. Hence, all statements are correct.