



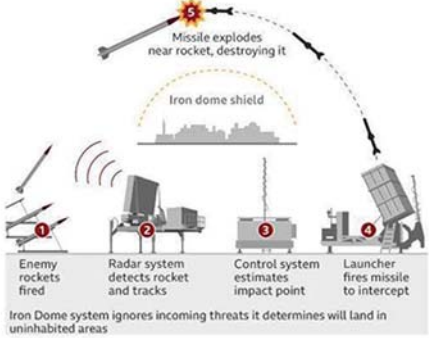
CURRENT AFFAIRS TEST SERIES- CSE PRELIMS 2024



Key with Explanation

<p>1 B</p> <p>Afghanistan earthquake: Race to rescue victims in Herat Province. Herat is an oasis city and the third-largest city in Afghanistan. It serves as the capital of Herat Province, situated south of the Paropamisus Mountains in the fertile valley of the Hari River in the western part of the country. Pair 1 is correctly matched.</p> <p>Map 3: The map shows the flashpoints of the ongoing conflict</p>  <p>Ashdod is a place in Israel recently attacked by Hamas militants. Pair 2 is incorrectly matched.</p> <p>Storm Daniel swept across eastern Libya, affecting most of the region where about 884,000 people live, including about 353,000 children. More than 6,000 people have been confirmed killed by the storm, which caused dams to burst and destroyed buildings in many towns, particularly in Al Bayda, Al Marj and in the coastal city of Derna. Pair 3 is wrong.</p> <p>Qlaileh is a town in the Tyre District in Southern Lebanon. Israel launched air strike in southern Lebanon to neutralize Hezbollah outfits camps. Pair 4 is correctly matched.</p>	<p>2 D</p>  <p>3. A</p> <p>Aditya L1 is the first space-based observatory class Indian solar mission to study the Sun from a substantial distance of 1.5 million Km (1% of Earth-Sun distance). Statement 2 is incorrect.</p> <p>Other countries which have launched a solar mission include US, JAPAN, EUROPE and CHINA. (NOT RUSSIA). Statement 1 is incorrect.</p> <p>The mission aims to provide valuable insights into the solar corona, photosphere, chromosphere, and solar wind. The primary objective of Aditya-L1 is to gain a deeper understanding of the Sun's behaviour, including its radiation, heat, particle flow, and magnetic fields, and how they impact Earth. Statement 4 is correct.</p> <p>The Purpose of Trajectory Correction Maneuvers: Trajectory Correction Maneuvers are essential for deep space missions to ensure that the spacecraft</p>
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	<p>follows the planned trajectory accurately. In the case of Aditya L1, which aims to orbit L1, scientists detected possible trajectory errors soon after the Trans Lagrangian Point 1 Insertion maneuver.</p> <p>These maneuvers help correct deviations in the spacecraft's path, ensuring that it remains on course to reach its destination. Trajectory Correction Maneuvers are typically required for deep space missions. ISRO's Mars Orbiter Mission, for example, underwent three TCMs to ensure it reached its intended distance of 500 km (plus or minus 60 km) from Mars. Statement 3 incorrect.</p>	<p>Earth's shadow interference. It is ideal for astronomy because a spacecraft is close enough to readily communicate with Earth, can keep Sun, Earth and Moon behind the spacecraft for solar power and (with appropriate shielding) provides a clear view of deep space for our telescopes. Statement 3 correct.</p> <p>The James Webb Telescope orbits the Sun near L2.</p> <p>L3: Positioned behind the Sun, opposite Earth, and just beyond Earth's orbit, it offers potential observations of the far side of the Sun.</p> <p>L4 and L5: Objects at L4 and L5 maintain stable positions, forming an equilateral triangle with the two larger bodies.</p> <p>What is Halo Orbit?</p> <p>According to NASA, the spacecraft will be able to "orbit" around an unstable Lagrange point using as little thrust as possible to maintain position. Such an orbit is known as a halo orbit because "it looks like an ellipse hovering over the planet." Statement 2 correct.</p> <p>However, a halo orbit is not a normal orbit because the unstable Lagrange point itself exerts no attractive force.</p> <p>Why is Aditya's spaceship orbiting the L1 point?</p> <ul style="list-style-type: none"> • This is because L1 gets a continuous and unobstructed view of the Sun. • L2 is behind the Earth, thus blocking the view of the Sun, while L3 is behind the Sun, which is not a good position to interact with the Earth. • L4 and L5 are good and stable places, but compared to L1, which is directly between the Sun and the Earth, they are much further from the Earth.
4	<p>C</p> <p>What are Lagrange Points?</p> <p>These are special positions in space where the gravitational forces of two large orbiting bodies, such as the Sun and the Earth, balance each other out.</p> <p>This means that a small object, such as a spacecraft, can stay at these points without using much fuel to maintain its orbit.</p> <p>There are five Lagrange Points, each with distinct characteristics. These points enable a small mass to orbit in a stable pattern amid two larger masses. Of the five Lagrange points, three are unstable and two are stable. The unstable Lagrange points - labelled L1, L2 and L3 - lie along the line connecting the two large masses. The stable Lagrange points - labelled L4 and L5 - form the apex of two equilateral triangles that have the large masses at their vertices. Statement 1 and 4 are incorrect.</p> <p>Lagrange Points in the Sun-Earth System:</p> <p>L1: L1 is considered the most significant of the Lagrange points for solar observations. A satellite placed in the halo orbit around the L1 has the major advantage of continuously viewing the Sun without any occultation/ eclipses.</p> <p>It is currently home to the Solar and Helio spheric Observatory Satellite.</p> <p>L2: Positioned directly 'behind' Earth as viewed from the Sun, L2 is excellent for observing the larger Universe without</p>	<p>5</p> <p>D</p> <p>About Accredited Social Health Activist (ASHA)</p> <ul style="list-style-type: none"> • ASHA is a trained female community health activist.


<ul style="list-style-type: none"> • ASHA workers are a core part of the National Rural Health Mission launched by the Government of India. Statement 4 is incorrect. • Selected from the community itself and accountable to it, the ASHA will be trained to work as an interface between the community and the public health system. • The ASHA scheme is presently in place in all States/UTs (except Goa). Statement 3 is incorrect. • The states are mandated to employ at least one ASHA worker per every 1000 people. Statement 2 is correct. • They are chosen through a rigorous process of selection involving various community groups, self-help groups, Anganwadi Institutions, Block Nodal officer, District Nodal officer, the village Health Committee and the Gram Sabha. • The States have been given the flexibility to relax the population norms as well as the educational qualifications on a case-to-case basis, depending on the local conditions as far as her recruitment is concerned. <p>FUNCTIONS:</p> <ul style="list-style-type: none"> • Act as a care provider at the community level. • Facilitating access to healthcare, medicine, and sanitation services. • Raising the level of awareness of health issues among the marginalised sections within the community. • Advocate for female health and hygiene standards. • Advocate for a health-conscious behaviour and approach to livelihood • They have no such functions of supervising the Anganwadi workers or conducting deliveries. Hence statement 1 is wrong. 	<p>Selection Criteria:</p> <ul style="list-style-type: none"> • In rural areas, ASHA must primarily be a woman resident of the village married/ widowed/ divorced, preferably in the age group of 25 to 45 years and literate preferably qualified up to 10th standard (formal education up to Class 8). Therefore, statement 2 is correct. • In urban areas, ASHA must be a woman resident of the "slum/vulnerable clusters" and belong to that particular vulnerable group which have been identified by City/District Health Society for selection of ASHA, and must have good communication and leadership skills. <p>What Inspired ASHA?</p> <ul style="list-style-type: none"> • The ASHA programme was inspired from the learnings from two past initiatives: In 1975, a WHO monograph titled 'Health by the people' In 1978, an international conference on primary health care in ALMA ATA (in USSR now in Kazakhstan) • However, the biggest inspiration for designing the ASHA programme came from the Mitandin initiative of Chhattisgarh (Mitandin meaning 'a female friend' in Chhattisgarhi) which had started in May 2002. Statement 6 is correct. <p>The Mitandin were the all-female volunteers available for every 50 households and 250 people.</p> <p>India's one million all-women Accredited Social Health Activists (ASHA) workers, were honoured with the World Health Organisation (WHO) Director-General's Global Health Leaders Award 2022.</p> <p>The awardees for the WHO Director-General's Global Health Leaders Awards were selected by the Director-General himself. The ceremony for the award, which was established in 2019, was a part of the live-streamed high-level opening session of the 75th World Health Assembly (WHA75) which is being held in Geneva, Switzerland, on 22-28 May 2022. Statement 5 is correct.</p>
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<p>6</p>	<p>B</p>  <p>IRON DOME</p> <p>Developed by - The state-owned Rafael Advanced Defence Systems with the backing of the United States during 2006 Israeli-Lebanon war. Statement 1 correct.</p> <p>Operational - It became operational in 2011.</p> <p>Features:</p> <ul style="list-style-type: none"> • Short range. Statement 2 is incorrect. • Ground-to-air defence • Laser Controlled Fuse • Tamir interceptor missiles <p>On reaching within 10 metres of target, laser-controlled fuse, activates and blasts the missile with shrapnel.</p> <p>Iron dome is capable of being used in all weather conditions, including during the day and night.</p> <p>Targets: Rockets, artillery & mortars (C-RAM), Aircraft, helicopters and unmanned aerial vehicles. Statement 3 is correct.</p>	<ul style="list-style-type: none"> • It is entrusted with the task of collection, collation, and dissemination of intelligence relating to the evasion of Goods and Services Tax (GST) and the duties of Central Excise and Service Tax on all India basis. Statement 2 is correct. <p>History:</p> <ul style="list-style-type: none"> • It was earlier known as the Directorate General of Anti-Evasion (DGAE). • It was established in 1979 as an independent wing under the control of Directorate of Revenue Intelligence, New Delhi with the Regional Units located at Chennai, Delhi, Kolkata and Mumbai. Statement 3 is correct. • It became a full-fledged Directorate in 1983, headed by Director. • In 1988, the Directorate was upgraded to Directorate General under a Director General. • DGGI has been expanded since, and now it comprises of 04 offices of Director General (East, West, North, and South), 26 Zonal Units, and 40 Regional Units. <p>The main responsibilities of the DGGI are:</p> <ul style="list-style-type: none"> • Intelligence gathering: The DGGI is responsible for gathering intelligence about potential violations of the GST law. This includes collecting information from various sources, such as GST returns, financial statements, and other documents. • Investigation: The DGGI has the power to conduct investigations into suspected cases of GST evasion or non-compliance. This may involve summoning persons, examining records, and carrying out searches and seizures. • Enforcement: The DGGI is responsible for enforcing the provisions of the GST law. This includes, taking legal action against offenders, imposing penalties, and recovering any taxes or duties due.
<p>7</p>	<p>B</p> <p>About Directorate General of GST Intelligence (DGGI)</p> <ul style="list-style-type: none"> • Erstwhile Directorate General of Central Excise Intelligence (DGCEI), now renamed as Directorate General of GST Intelligence (DGGI), is an apex intelligence organization functioning under the Central Board of Indirect Taxes & Customs, Department of Revenue, Ministry of Finance. Statement 1 is incorrect. 	

8	<p>C</p> <p>Yom Kippur War, also called the October War, the Ramadan War, the Arab-Israeli war of October 1973, or the Fourth Arab-Israeli War, fourth of the Arab-Israeli wars, which was initiated by Egypt and Syria on October 6, 1973, on the Jewish holy day of Yom Kippur. It also occurred during Ramadan, the sacred month of fasting in Islam, and it lasted until October 26, 1973. Statement 1 is correct.</p> <p>Camp David Accords, agreements between Israel and Egypt signed on September 17, 1978, that led in the following year to a peace treaty between those two countries, the first such treaty between Israel and any of its Arab neighbours.</p> <p>Brokered by U.S. Pres. Jimmy Carter (this author) between Israeli Prime Minister Menachem Begin and Egyptian Pres. Anwar Sadat and officially titled the "Framework for Peace in the Middle East," the agreements became known as the Camp David Accords because the negotiations took place at the U.S. presidential retreat at Camp David, Maryland.</p> <p>Sadat and Begin were awarded the Nobel Prize for Peace in 1978 for their contributions to the agreements.</p> <p>The Golan Heights is a strategic plateau that Israel captured from Syria in the 1967 war. Israel effectively annexed the territory in 1981. Recently, the USA has officially recognized Jerusalem and Golan Heights a part of Israel. Statement 2 is wrong.</p> <p>In 1979 Egypt became the first Arab country to sign a peace treaty with Israel. Statement 3 correct.</p> <p>Recently, the Palestinian militant group Hamas launched a devastating attack on Israel known as Operation 'Al-Aqsa Storm. Israel retaliated under the code name Operation Iron Sword.</p> <p>About the recent attack</p> <p>The attack involved firing thousands of rockets at occupied territories, including enemy positions, airports, and military positions.</p>	<p>A major factor in this conflict could be the presence of Shiite Lebanese militant group Hezbollah.</p> <p>Israel's declaration of war: Israel has now declared war, raising global concerns for an already volatile region of the world that has been beset by decades of regional, sectarian and communal rivalries, and intervention from foreign powers.</p>
9.	<p>D</p>	
10	<p>B</p>	
11	<p>B</p>	<p>About Satellite Spectrum</p> <ul style="list-style-type: none"> • The Satellite or orbit spectrum is a segment of radio spectrum made available when satellites are placed into orbit. • This spectrum is part of the broader radio frequency spectrum, which encompasses all electromagnetic frequencies used for various wireless communications and broadcasting purposes. Statement 1 is correct. • This spectrum is a limited resource for every country, utilised by firms to

	<p>implement satellite broadcasting, communication satellites, and weather satellite services.</p> <ul style="list-style-type: none"> • This spectrum is divided into many different frequency bands. The choice of bands depends on many factors, including the specific applications. • The frequency is an integral part of the satellite's construction and doesn't change after launch. <p>How does frequency impact the data transfer?</p> <ul style="list-style-type: none"> • In simple terms, the frequency of a signal refers to the number of times the underlying wave oscillates per second. • The higher the frequency, the faster the waves appear to move, and the more data can be transmitted per second. • However, higher frequencies also mean shorter wavelengths (that is, the length between the start and end of each wave), which can lead to a reduction in the strength of the signal over a distance (called signal attenuation) and an increased risk of signal interference. Statement 2 is incorrect. • Satellites generally transmit on a frequency between 1.5 and 51.5 gigahertz (a gigahertz, or GHz, equals one billion hertz). High-speed broadband operates at the higher end of the spectrum. • The International Telecommunication Union, or ITU, is the United Nations institution that coordinates the allocation of frequencies globally. Statement 3 is incorrect. • The ITU has allocated parts of this spectrum range to specific categories of services, and has identified those frequencies best suited for transmissions via satellite. <p>Spectrum Allocation</p> <ul style="list-style-type: none"> • Spectrum allocation is the process of dividing the radio frequency spectrum into different frequency bands and assigning them to different users and 	<p>services. The spectrum is a limited resource, and spectrum allocation is necessary to ensure that users do not interfere with each other.</p> <ul style="list-style-type: none"> • Spectrum allocation in India is governed by the National Frequency Allocation Plan (NFAP), which is prepared and published by the Department of Telecommunications (DoT). The NFAP allocates the spectrum to various services, such as mobile communication, broadcast television, and satellite communication. Statement 4 is correct. • The DoT allocates spectrum to different users through a variety of methods, including auctions, lotteries, and administrative assignments. Auctions are the most common method used to allocate spectrum in India. In an auction, the spectrum is awarded to the bidder who offers the highest price. • Lotteries are another method used to allocate spectrum in India. In a lottery, the spectrum is awarded to the winners of a random draw. Administrative assignment is the least common method used to allocate spectrum in India. In administrative assignments, the DoT awards spectrum to users based on their needs and priorities.
12	C	<p>International Telecommunication Union (ITU):</p> <p>a) It is the United Nations specialized agency for information and communication technologies. Headquarters: Geneva, Switzerland. Statement 1 is incorrect.</p> <p>b) It is an intergovernmental organization that coordinates between governments and private sector bodies with respect to global telecommunication and information communication technology (ICT) services.</p> <ul style="list-style-type: none"> • It was established in 1865 as International Telegraph Union. Statement 2 is correct.


	<ul style="list-style-type: none"> • In 1947 the ITU became a specialized agency of the United Nations. • Headquarters: Geneva, Switzerland. Statement 3 is incorrect. • Membership: It has a membership of 193 countries and nearly 800 private sector entities and academic institutions. • Functions: <ul style="list-style-type: none"> • allocate global radio spectrum and satellite orbits; • coordination and setting of technical standards related to telecommunication/ICT; • strive to improve access to ICTs in underserved communities worldwide; • India and ITU: India has been an active member of the ITU since 1869 and has been a regular member of the ITU Council since 1952. Statement 4 is correct. • Important publication of the ITU is the Global Cybersecurity Index. Statement 3 is correct. <p>In 2022 ITU signed the Host Country Agreement (HCA) for the establishment of an Area Office & Innovation Centre of ITU in New Delhi.</p> <p>ITU Area office and Innovation Centre:</p> <p>The Area Office, which is fully funded by India, is located on the second floor of the Centre for Development of Telematics (C-DoT) building at Mehrauli in New Delhi.</p> <p>It will serve India, Nepal, Bhutan, Bangladesh, Sri Lanka, Maldives, Afghanistan, and Iran.</p> <p>It will enhance coordination among nations and foster mutually beneficial economic cooperation in the region.</p>	<p>Scheduled and Tribal Areas with Articles 244 - 244 A. Statement 1 is correct.</p> <ol style="list-style-type: none"> 2. President is empowered to declare an area as Scheduled Area. Statement 2 is correct. 3. With the consultation of the Governor of the state, the President can alter, add, diminish the boundary of a Scheduled Area. 4. Both the Centre and the State have their roles to play in the administration of the Scheduled areas. While the governor of the state has to report annually to the President over the management of such area, the Centre gives directions to the state regarding the administration of such areas. 5. A tribal advisory council is a must for the states having scheduled areas It has 20 members (Three-Fourth of which are Scheduled Tribes' representatives in that state legislative assembly.) <p>This council advises the Governor on matters related to the welfare and development of Scheduled Tribes in the state. Statement 4 is incorrect.</p> <ul style="list-style-type: none"> • The power to decide whether any central or state legislation implies over the state having scheduled areas, lies in the hands of the Governor. • Governor can also repeal or amend any regulations w.r.t to the state having scheduled areas but only with the assent of the President of India. • Governor is authorized to make regulations that prohibit or restrict the transfer of land. • Governor can regulate the allotment of the land regarding Scheduled Areas and the money lending business. • Regulations made by the Governor must be implemented after the assent of the President. • Provisions related to the administration of Scheduled areas and tribes can be amended by Parliament with ordinary legislation. This clearly means it does not require a constitutional amendment.
13.	<p>B</p> <p>The areas inhabited by the socially and educationally backward 'Aboriginals' are called Scheduled Areas.</p> <p>Quick Facts about Scheduled Areas</p> <ol style="list-style-type: none"> 1. Part 10 of the Indian Constitution entails the provisions related to 	

	<ul style="list-style-type: none"> • Constitution has a provision for the appointment of a commission to report on the matter of administration and welfare of the Scheduled Area and Scheduled Tribes [Article 339(1)]. • The appointment of such a commission is done by the President. • The first commission to report on the administration and welfare of the Scheduled Areas was established in 1960 and was headed by UN Dhebar. • There are 10 states having 5th scheduled areas: Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan and Telangana <p>Criteria for the declaration of the Scheduled Area:</p> <p>Neither the Constitution nor any law provides any criteria to identify Scheduled Areas. The Supreme court in a judgement held that the identification of Scheduled Areas is an executive function, and it lacks the expertise to scrutinise the empirical basis of the same. Statement 3 is incorrect.</p> <p>But based on the 1961 Dhebar Commission Report, the following are the guiding norms for their declaration:</p> <ul style="list-style-type: none"> • Prominent numbers of tribal population, i.e. when tribal people are in majority in an area • Compactness and reasonable size of the area • A viable administrative entity such as a district, block or taluk, and • Economic backwardness of the area as compared to the neighbouring areas. 	<p>both tributaries of the Yamuna. Statement 1 is incorrect.</p> <ul style="list-style-type: none"> • It is the first project under the National Perspective Plan for interlinking of rivers. • The Ken-Betwa Link Canal will be 221 km long, including a 2-km long tunnel. • Phases- The project has two phases, with four components. • Phase-I - Involves one of the components - Daudhan Dam complex and its subsidiary units such as Low-Level Tunnel, High Level Tunnel, Ken-Betwa Link Canal and power houses. • Phase-II - Involves three components - Lower Orr Dam, Bina Complex Project and Kotha Barrage. • Special Purpose Vehicle - An SPV called Ken-Betwa Link Project Authority (KBLPA) will be set up to implement the project. • NIRA- The Centre has set in motion the process of creation of National Interlinking of Rivers Authority (NIRA) • It will be an independent autonomous body for planning, investigation, financing and implementation of the interlinking of river (ILR) projects in the country. • The NIRA will have powers to set up SPV for individual link projects.
14.	<p>D</p> <p>On March 22, 2021, a memorandum of agreement was signed among the Ministry of Jal Shakti and the governments of Madhya Pradesh and Uttar Pradesh to implement the Ken-Betwa Link Project.</p> <ul style="list-style-type: none"> • The project envisages transferring water from the Ken river to the Betwa river, 	 <p>What is the need for this project?</p> <ul style="list-style-type: none"> • The project lies in Bundelkhand, a drought-prone region, which spreads across 13 districts of Uttar Pradesh and

	<p>Madhya Pradesh. Statement 2 is incorrect.</p> <p>Concerns regarding this project?</p> <ul style="list-style-type: none"> Submergence of Panna Tiger Reserve- According to the National Water Development Agency under the Jal Shakti Ministry, the Daudhan dam, to be built on the Ken river will involve a submergence of 9000 ha area. But the project was cleared by the apex wildlife regulator, the National Board for Wildlife, in 2016. Statement 3 is incorrect. Delay in CLMP- For environment management and safeguards, a Comprehensive Landscape Management Plan (CLMP) has been proposed but it is still under finalisation by the Wildlife Institute of India (WII). Pending cases- The environmental clearance was challenged and is pending at the National Green Tribunal (NGT) <p>What clearances are required for a river linking project?</p> <ul style="list-style-type: none"> Techno-economic clearance - Given by the Central Water Commission Forest clearance and environmental clearance - Given by the Ministry of Environment & Forests Resettlement and rehabilitation plan of tribal population - Given by the Ministry of Tribal Affairs Wildlife clearance - Given by the Central Empowered Committee 	<p>international treaty for "the conservation and sustainable use of wetlands". It is also known as the Convention on Wetlands.</p> <p>It is named after the city of Ramsar in Iran where it was signed on 2nd of February 1971.</p> <p>The 2nd of February each year is World Wetlands Day.</p> <p>The number of parties to the convention (COP) is 171 (as of Jan 2023). At the centre of the Ramsar philosophy is the "wise use" of wetlands.</p> <p>Wise use: maintenance of ecological character within the context of sustainable development.</p> <p>Ramsar Site : When a country accedes to the Convention, it must designate at least one wetland as a Wetland of International Importance.</p> <p>The inclusion of a "Ramsar Site" in the List embodies the government's commitment to take the steps necessary to ensure that its ecological character is maintained.</p> <p>There are over 2,400 Ramsar Sites covering 2.5 million sq km on the territories of 171 Ramsar Contracting Parties across the world.</p> <p>The world's first Site was the Cobourg Peninsula in Australia, designated in 1974.</p> <p>The countries with the most Ramsar Sites are the United Kingdom with 175 and Mexico with 142. Bolivia has the largest area under Ramsar protection.</p>
15	<p>B</p> <p>Khijadia Wildlife Sanctuary in Gujarat and Bakhira Wildlife Sanctuary in Uttar Pradesh were announced as Ramsar sites on the occasion of World Wetland day 2022 (2nd January 2022) held at Sultanpur National Park, a Ramsar site in Haryana. Pair C and D are correctly matched.</p> <p>Bhindawas Wildlife Sanctuary - Haryana. Pair B is incorrectly matched.</p> <p>Asan Barrage is in Uttarakhand. Pair A is incorrectly matched.</p> <p>Ramsar Convention on Wetlands</p> <p>The Ramsar Convention on Wetlands is an</p>	<p>16 D</p> <p>Statement 1 is incorrect. Sagar Parikrama is a transformative journey planned across the coastal belt to show solidarity with the fisherfolk, fish farmers, and related stakeholders, and to promote responsible fisheries and sustainable marine ecosystems.</p> <p>Statement 2 is correct. Sagar Parikrama is aimed at strengthening the fisheries sector in India.</p> <p>Sagar Parikrama is an outreach program intended to reach out to the fishermen community across the entire coastal belt of the country.</p>

	<p>It is being undertaken since March 2022 through a pre-decided sea route from Gujarat to West Bengal covering around 8000 km of India's coastline.</p> <p>Objectives:</p> <ol style="list-style-type: none"> 1. To facilitate interaction with fishermen, coastal communities and stakeholders so as to disseminate information of various fisheries related schemes and programs being implemented by the Government; 2. demonstrating solidarity with all fisher folk, fish farmers and concerned stakeholder as a spirit of Atmanirbhar Bharat; 3. to promote responsible fisheries with focus on sustainable balance between the utilization of marine fisheries resources for food security of nation and livelihoods of coastal fisher communities and 4. protection of marine ecosystems. <p>Significance: The fishermen, fisher communities and stakeholders in the coastal areas are likely to be benefitted with awareness of various beneficiary oriented schemes and programs being implemented by the Government and showcasing them the best practices that may be adopted.</p>	<ul style="list-style-type: none"> • They also help civil administration with providing essential services in areas where state machinery is stretched or there are security threats. <p>History</p> <ul style="list-style-type: none"> • TA was raised by the Britishers in 1920 through Indian Territorial Act of 1920 and it was org into two wings namely - 'The Auxiliary Force' for Europeans & Anglo- Indians and 'The Indian Territorial Force' for Indian Volunteers. Statement 2 is incorrect. • After Independence Territorial Army Act was passed in 1948 and the Territorial Army was formally inaugurated by the first Indian Governor General Shri C Rajagopalachari on 09 Oct 1949. <p>Motto: Savdhani Va Shoorta (Vigilance and Valour). Conditions of Eligibility</p> <p>Nationality: Citizens of India. (Men & Women).</p> <p>Age: 18 to 42 years</p> <p>Educational Qualifications: Graduate from any recognized university</p>
17	<p>C</p> <p>Territorial Army (TA)</p> <ul style="list-style-type: none"> • The Indian Territorial Army (TA) is a second line of defense after the regular Indian Army; it is not a profession, occupation or a source of employment. Statement 1 is correct. • It is only meant for those people who are already in mainstay civilian professions; in fact, gainful employment or self-employment in a civil profession is a prerequisite for joining the TA. <p>Role</p> <ul style="list-style-type: none"> • The duties of the TA include "relieving the Regular Army from static duties", while also providing assistance to civil authorities in times of natural calamities and tragedies. 	<p>18. B</p> <p>About International Big Cat Alliance (IBCA)</p> <ul style="list-style-type: none"> • It was launched by India on April 9, 2023, for the conservation of seven big cats, namely Tiger, Lion, Leopard, Snow Leopard, Cheetah, Jaguar, and Puma harbouring our planet. Statement 1 is incorrect. • Membership: It is open to 97 'range' countries, which contain the natural habitat of these big cats, as well as other interested nations, international organizations, etc. The alliance aims to reach out to 97 range countries covering the natural habitats of Tiger, Lion, Snow Leopard, Puma, Jaguar, and Cheetah. Statement 2 is incorrect. • It will provide a platform for the member nations to share knowledge and expertise and extend support to recovery efforts in potential habitats. <p>Its major activities will include advocacy, partnership, knowledge e-portal, capacity</p>

	<p>building, eco-tourism, partnerships between expert groups, and finance tapping. Statement 4 is correct.</p> <ul style="list-style-type: none"> • IBCA will also assist existing species-specific inter-governmental platforms to boost conservation efforts. • Funding: After the first five years, which will be supported by India's 'total grant assistance' of \$100 million, the IBCA is expected to sustain itself through membership fees and contributions from bilateral and multilateral institutions and the private sector. Statement 3 Correct <p>Governance Structure:</p> <p>A General Assembly consisting of all member countries.</p> <p>A Council of at least seven but not more than 15-member countries elected by the General Assembly for a term of 5 years, and a Secretariat.</p> <p>Upon the recommendation of the Council, the General Assembly will appoint the IBCA Secretary General for a specific term.</p>	<p>As per IEA, there will be 3.5-5x biofuels growth potential by 2050 due to Net Zero targets, creating a huge opportunity for India.</p> <p>Formation and Founding Members:</p> <p>The alliance was launched with nine initiating members: India, the US, Brazil, Argentina, Bangladesh, Italy, Mauritius, South Africa, and the United Arab Emirates.</p> <p>GBA Members constitute major producers and consumers of biofuels. USA (52%), Brazil (30%) and India (3%), contribute about 85% share in production and about 81% in consumption of ethanol.</p> <p>19 countries and 12 international organizations have already agreed to join.</p> <p>G20 Invited Countries supporting GBA:</p> <ul style="list-style-type: none"> • Bangladesh, Singapore, Mauritius, UAE <p>Non-G20 supporting GBA:</p> <ul style="list-style-type: none"> • Iceland, Kenya, Guyana, Paraguay, Seychelles, Sri Lanka, Uganda, and Finland <p>What is the Significance of Global Biofuels Alliance for India:</p> <ul style="list-style-type: none"> • Learning from Best Practices: • E-20 Target <p>Having achieved the E10 target, India aims to achieve E20 by 2025-26.</p> <p>Learning from Brazil's success in achieving E-85 through the Global Biofuels Alliance.</p> <ul style="list-style-type: none"> • Adoption of Flex Fuel Vehicles in India • Climate Action • Promotion of Biofuel Exports <p>What are the Concerns about Viability of Global Biofuels Alliance? Transfer of Technology</p> <p>Reluctance from the developed countries including US to share technology with other countries. Technological secrecy may hinder the objectives of the alliance.</p> <p>Geopolitical Contestation:</p> <p>Opposition from China and Russia to platforms led by western countries.</p> <p>Saudi Arabia and Russia may be concerned that the alliance could promote biofuels as</p>
19	<p>C</p> <p>GBA is an India-led initiative that aims to develop an alliance of governments, international organizations, and industry to promote the adoption of biofuels. Statement 1 is correct.</p> <p>According to National Biofuel Policy 2018 "The Policy emphasizes development of domestic Biofuel Industry and Feedstock. Allowing import will adversely affect domestic biofuels and hence import of biofuels will not be allowed".</p> <p>The import of biofuels is "restricted" under three Harmonized System (HS) codes 22072000, 27102000 and 3826000. Statement 2 is incorrect.</p> <p>The initiative seeks to position biofuels as a key component of the energy transition and contribute to job creation and economic growth.</p> <p>It will help accelerate India's existing biofuels programs such as PM-JIVANYojna, SATAT, and GOBARDhan scheme.</p>	

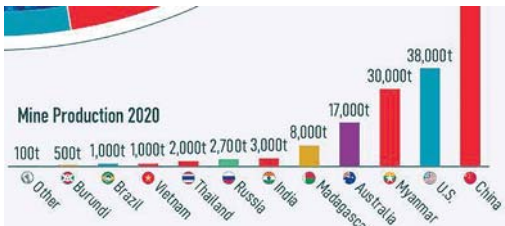
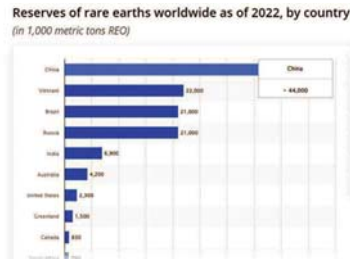
<p>a competitor to oil.</p> <p>India and China are major producers of coal as well as major consumers. They are unlikely to give up on using this resource any time soon despite its harmful impact on the environment.</p> <p>Funding Limitations:</p> <p>Structuring sustainable financing mechanisms for projects is crucial.</p> <p>Global institutions like WB and IMF do not have sufficient resources to invest in financing such groups.</p> <p>Import Restrictions on Biofuels:</p> <p>India's policies restrict import of biofuels, impacting global biofuels market development. Environmental Implications:</p> <p>Growing demand for biofuels can have environmental implications</p> <p>Water and land requirements may deter water-scarce countries from joining the alliance.</p> <p>Categories of biofuels</p> <ul style="list-style-type: none"> • First generation biofuels- First-generation biofuels are made from sugar, starch, vegetable oil, or animal fats using conventional technology. Common first- generation biofuels include Bio-alcohols, Biodiesel, Vegetable oil, Bio-ethers, Biogas. • Second generation biofuels -These are produced from non-food crops, such as cellulosic biofuels and waste biomass (stalks of wheat and corn, and wood). Examples include advanced biofuels like biohydrogen, bio-methanol. • Third generation biofuels- These are produced from micro-organisms like algae. • Fourth generation biofuels- These are produced from genetically modified (GM) algae to enhance biofuel production. 	<p>valley, Kargil district, Ladakh.</p> <ul style="list-style-type: none"> • The Nun Kun massif consists of twin peaks, Nun (7135 meters) and Kun, separated by a 4-kilometer snow plateau. • These peaks are among the highest in the Zaskar Range on the Indian side of the Line of Control. <p>Lachen is in Sikkim and is one of the towns that got affected due to recent Flash Floods. Asaphila and Dichu both in Arunachal Pradesh.</p> 
<p>20 B</p> <ul style="list-style-type: none"> • Mount Kun is the second-highest peak of the Nun Kun massif, standing at an elevation of 7077 meters. • It is located near Sankoo in the Suru 	<p>21 A</p> <p>Indian Pharmacopoeia Commission:</p> <p>It is an autonomous Institution of the Ministry of Health and Family Welfare, Govt. of India. Statement 1 is incorrect.</p> <p>It is created to set standards of drugs in the country.</p> <p>Functions:</p> <p>Its function is to update regularly the standards of drugs commonly required for treatment of diseases prevailing in this region. Statement 2 is correct.</p> <p>It publishes official documents for improving Quality of Medicines by way of adding new and updating existing monographs in the form of Indian Pharmacopoeia (IP).</p> <p>It further promotes rational use of generic medicines by publishing National Formulary of India.</p> <p>It prescribes standards for identity, purity and strength of drugs essentially required from the health care perspective of human beings and animals.</p> <p>It also provides IP Reference Substances</p>

	<p>(IPRS) which act as a finger print for identification of an article under test and its purity as prescribed in IP.</p> <p>What is Indian Pharmacopoeia (IP)?</p> <ul style="list-style-type: none"> • These standards are authoritative in nature. They are enforced by the Regulatory authorities for quality control of medicines in India. • During Quality Assurance and at the time of dispute in the court of law the IP standards are legally acceptable. • It is an official document meant for overall Quality Control and Assurance of Pharmaceutical products marketed in India by way of contributing to their safety, efficacy and affordability. • It contains a collection of authoritative procedures of analysis and specifications for Drugs. • The IP, or any part of it, has got legal status under the Second Schedule of the Drugs & Cosmetics Act, 1940 and Rules 1945 there under. Statement 3 is correct. <p>Key facts about the Pharmacopoeial Discussion Group</p> <ul style="list-style-type: none"> • It was formed in 1989 with representatives from the European Directorate for the Quality of Medicines in the Council of Europe (the European Pharmacopoeia), the Ministry of Health and Welfare-now the Ministry of Health, Labor, and Welfare (MHLW) the Japanese Pharmacopoeia, and the United States Pharmacopoeial Convention, Inc., (the U.S. Pharmacopoeia). • In May 2001, PDG welcomed the World Health Organization as an observer. • It generally meets twice a year and holds monthly status and technical teleconferences to advance harmonization work. 	<p>dimensions (Economic Participation and Opportunity, Educational Attainment, Health and Survival, and Political Empowerment).</p> <p>It is published annually by the World Economic Forum (WEF).</p> <p>India has made significant progress, rising from 135th (in 2022) to 127th out of 146 countries in the report's 2023 edition, indicating an improvement in its ranking. India's neighbours Pakistan ranked at 142, Bangladesh at 59, China at 107, Nepal at 116, Sri Lanka at 115 and Bhutan at 103. Statement 1 is incorrect.</p> <p>Iceland has maintained its position as the most gender-equal country for the 14th consecutive year, with a gender gap score of 91.2%.</p> <p>It is the only country to have closed over 90% of its gender gap.</p> <p>Three other Nordic countries-Norway (87.9%), Finland (86.3%), and Sweden (81.5%)-join Iceland in the top five rankings, highlighting their strong commitment to gender equality. No country has yet achieved full gender parity. Statement 2 is incorrect.</p> <p>The Periodic Labour Force Survey (PLFS) data indicates that for women in the working age group (15-59 years), LFPR is only 35.6 per cent in India with the participation rate being 39.3 per cent and 26.5 per cent, respectively, in rural and urban areas in 2021-22. Notably, from 2017 to 2021, women's LFPR increased relative to men, particularly in rural areas because of the larger engagement of rural women in agriculture and allied activities. Statement 3 is correct.</p> <p>Rural women working as regular and casual wage workers faced a higher gender wage gap compared to urban women and self-employed women received less than half of men's earnings, indicating a higher gender earning gap as compared to other categories of workers in rural areas. Statement 4 is correct.</p>
22	<p>B</p> <p>Global Gender Gap Report</p> <p>The Global Gender Gap Index annually benchmarks the current state and evolution of gender parity across four key</p>	

<p>Claudia's Work:</p> <ul style="list-style-type: none"> • Goldin had provided "the first comprehensive account of women's earnings and labour market participation through the centuries. • Her research reveals the causes of change, as well as the main sources of the remaining gender gap. • Goldin's path breaking work has shed light on the participation of women in the labour market over the past 200 years, and why the pay gap between men and women refuses to close even as many women are likely to be better educated than men in high-income countries. • While her research focused on the US, her findings are applicable to many other countries. <p>Findings of Claudia's Research Related to Women's Participation in Workforce:</p> <p>Historical Perspective: Before Industrialization, women were more likely to be involved in economic activities related to agriculture and cottage industries.</p> <p>However, with the rise of industrialization and factory-based work, women faced difficulties leaving their homes to work.</p> <p>Role of the Services Sector: In the early 20th century, the growth of the services sector played a pivotal role in women's access to higher education and employment opportunities.</p> <p>This sector offered more opportunities for women to enter the workforce.</p> <p>Marriage Barriers: By the beginning of the 20th century, while around 20 % of women were gainfully employed, the share of married women was only 5 %.</p> <p>Goldin noted that legislation known as "marriage bars" often prevented married women from continuing their employment as teachers or office workers.</p> <p>Despite an increasing demand for labour, married women were excluded from parts of the labour market.</p>	<p>Role of Expectations and Career Choices: Women's expectations about their future careers played a significant role in the Gender Pay Gap.</p> <p>Women's career decisions were influenced by the experiences of their mothers, leading to choices that did not necessarily prioritize long, uninterrupted, and fruitful careers.</p> <p>Role of Contraceptive Pills: The availability of easy-to-use contraceptive pills by the end of the 1960s allowed women to exercise greater control over childbirth and plan their careers and motherhood.</p> <p>This led to more women studying subjects like law, economics, and medicine and entering various fields of employment.</p> <p>Role of Parenthood in Pay Gap: Despite improvements in education and employment opportunities for women, a significant gender-based pay gap persisted.</p> <p>Initial earnings differences between men and women were small. However, once the first child arrived, women's earnings fell, and they did not increase at the same rate as men's earnings, even if they had similar education and professions.</p> <p>Parenthood played a role in the widening pay gap.</p> <hr/> <p>23 A</p> <p>What are Quantum Dots?</p> <p>Each element's properties are defined by its atomic structure, primarily the number and arrangement of electrons around the nucleus.</p> <p>All pure elements display consistent properties, regardless of their size. For example, every piece of gold, whether a large 100 gm or a small 10 mg, has the same properties (fundamental facts).</p> <p>However, at the nanoscale, when the matter is really small, the electrons are squeezed together, so its properties depend on size.</p> <p>Quantum dots are semiconductor nanoparticles that exhibit size and composition- dependent optical and</p>
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<p>electronic properties. Nanoscale materials exhibit size-dependent properties due to quantum forces, while gravity and classical physics govern at the macroscopic scale.</p> <p>Nanoparticles: Particles whose sizes range between 1 to 100 billionth of a metre.</p> <p>Semiconductor: A material with an electrical conductivity value falling between a conductor (such as copper) and an insulator (such as glass).</p> <p>Quantum dots constitute a new class of materials that is neither molecular nor bulk material.</p> <p>They have the same structure and atomic composition as bulk materials, but their properties can be tuned using a single parameter, i.e., the particle's size.</p> <p>What did Ekimov, Brus, and Bawendi do?</p> <p>Dr. Ekimov's Research</p> <ul style="list-style-type: none"> • Dr. Ekimov used copper chloride to colour glass under various heating and cooling conditions. • He discovered that the glass's light absorption depended on the particle size of copper chloride. • Larger particles behaved as expected, but smaller particles absorbed bluer light. • Ekimov recognised this as a size-dependent quantum effect. <p>Dr. Brus's Research</p> <ul style="list-style-type: none"> • Dr. Brus prepared similar size-dependent particles (crystals) of cadmium sulphide in a liquid solution rather than in a glass. This allowed the researchers to manipulate better and study the crystals. <p>Dr. Bawendi Research</p> <ul style="list-style-type: none"> • Dr. Bawendi developed a technique to make these peculiar crystals, i.e. quantum dots, of well-defined sizes and with high optical quality. <p>Applications of Quantum Dots</p> <p>Optoelectronics and Displays: Quantum dots are used in displays and lighting to enhance colour accuracy, brightness, and energy efficiency. QLED (Quantum-dot Light</p>	<p>Emitting Diode) technology has led to the developing of high-quality, vivid displays in televisions and monitors.</p> <p>Biological Imaging: Quantum dots are valuable in biological and medical imaging. They offer bright, stable fluorescence for precise cell and biomolecule tracking in living organisms.</p> <p>Solar Cells: Quantum dots are studied for use in solar cells to boost efficiency and broaden the light absorption spectrum.</p> <p>Quantum Dot Lasers: They are used to develop lasers with low threshold current and tunable emission, which find applications in telecommunications and optical signal processing.</p> <p>Quantum Dot Computing: Quantum dots may serve as qubits (quantum bits) in quantum computing, advancing the development of robust, efficient quantum computers.</p> <p>Sensors and Detection: Quantum dots can be used in sensors for substance detection and environmental monitoring due to their sensitivity and tunable traits.</p> <p>Telecommunications: Quantum dots can amplify and transmit optical signals efficiently.</p> <p>Material Science: Quantum dots provide insights into nanoscale quantum effects and material behaviour, driving innovation for novel materials and technologies.</p> <p>Energy Storage: Quantum dots are explored for use in energy storage devices (like batteries and supercapacitors), where their unique properties can enhance energy storage and efficiency.</p> <p>Drug Delivery: Quantum dots serve as drug delivery carriers in medicine, enabling precise and controlled pharmaceutical release. E.g., cancer treatments.</p> <p>Environmental Remediation: Quantum dots have applications in environmental remediation, such as removing pollutants from water and soil through photocatalysis.</p> <p>Security and Authentication: Tunable optical properties of quantum dots enhance their value in anti-counterfeiting measures used in document and product security features.</p>
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24	<p>B</p> <p>A quantum well represents confinement of a charge carrier on only one dimension. A quantum wire represents confinement in two dimensions,</p> <p>A quantum dot is confined in three dimensions.</p> <p>Nanoscale semiconductor materials tightly confine either electrons or electron holes. The confinement is similar to a three-dimensional particle in a box model. The quantum dot absorption and emission features correspond to transitions between discrete quantum mechanically allowed energy levels in the box that are reminiscent of atomic spectra.</p> <p>For these reasons, quantum dots are sometimes referred to as artificial atoms, emphasizing their bound and discrete electronic states, like naturally occurring atoms or molecules. Statement 1 is correct.</p> <p>When the quantum dots are illuminated by UV light, an electron in the quantum dot can be excited to a state of higher energy. In the case of a semiconducting quantum dot, this process corresponds to the transition of an electron from the valence band to the conductance band. The excited electron can drop back into the valence band releasing its energy as light.</p> <p>Differently sized quantum dots emit different colors of light due to quantum confinement.</p> <p>Larger QDs of 5-6 nm diameter emit longer wavelengths, with colors such as orange, or red. Smaller QDs (2-3 nm) emit shorter wavelengths, yielding colors like blue and green. However, the specific colors vary depending on the exact composition of the QD. Statement 4 is incorrect.</p> <p>Difference between Nanoparticles and Quantum dots:</p> <p>The main difference between the two comes from their strange behavior at their respective length scales. Nano particles behave differently when compared to their bulk counterparts, due to their strong surface effects.</p>	<p>In contrast, quantum dots exhibit confinement of charge carriers. Please note that the effect of quantum confinement is different from the surface effects. Statement 2 is incorrect.</p> <p>Confinement comes when the material dimensions are comparable to some characteristic length scale such as electron mean free path or exciton Bohr radius. Surface effects comes when the ratio of surface area to volume of a material is greater than one.</p> <p>Surface effects don't confine charge carriers.</p> <p>Nano particles usually are bigger in size than quantum dots. Statement 3 is correct.</p>																												
	<p>25</p> <table><tr><th>B</th><th></th></tr><tr><th>Rare Earth Element</th><th>Present Applications</th></tr><tr><td>Yttrium</td><td>Used as a Phosphors Liquid Crystal Displays, ceramics</td></tr><tr><td>Lanthanum</td><td>Batteries, catalysts for petroleum refining</td></tr><tr><td>Cerium</td><td>Auto catalysts, Chemical Catalyst, glass polishing</td></tr><tr><td>Praseodymium</td><td>High-power magnets, yellow ceramic pigment</td></tr><tr><td>Promethium</td><td>Neodymium High power magnets</td></tr><tr><td>Samarium</td><td>Beta radiation source</td></tr><tr><td>Europium</td><td>High-temperature magnets,</td></tr><tr><td>Gadolinium</td><td>fluorescent lighting</td></tr><tr><td>Terbium</td><td>Magnetic resonance imaging, nuclear reactor rods</td></tr><tr><td>Dysprosium</td><td>Phosphors for lighting, high power magnets</td></tr><tr><td>Holmium</td><td>High power high-temperature magnets, lasers</td></tr><tr><td>Erbium</td><td>Highest power magnets in existence</td></tr><tr><td></td><td>Lasers, glass colorant</td></tr></table>	B		Rare Earth Element	Present Applications	Yttrium	Used as a Phosphors Liquid Crystal Displays, ceramics	Lanthanum	Batteries, catalysts for petroleum refining	Cerium	Auto catalysts, Chemical Catalyst, glass polishing	Praseodymium	High-power magnets, yellow ceramic pigment	Promethium	Neodymium High power magnets	Samarium	Beta radiation source	Europium	High-temperature magnets,	Gadolinium	fluorescent lighting	Terbium	Magnetic resonance imaging, nuclear reactor rods	Dysprosium	Phosphors for lighting, high power magnets	Holmium	High power high-temperature magnets, lasers	Erbium	Highest power magnets in existence	
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	<p>Thulium Ceramic magnetic materials</p> <p>Ytterbium Fibre optic technology, solar panels</p> <p>Lutetium PET scanners</p>		
26	<p>C</p>  <p>Mine Production 2020</p> <p>100t 500t 1,000t 2,000t 2,700t 3,000t 8,000t 17,000t 30,000t 38,000t</p> <p>Other Burkundi Brazil Vietnam Thailand Russia India Madagascar Australia Myanmar U.S. China</p> <p>Bastnasite, Monazite and Xenotime account for the total REE production. From an economic point of view, pegmatites, carbonatites and granites are the most important sources.</p> <p>As on September, 2022, Atomic Minerals Directorate for Exploration and Research (AMD) has established</p> <ul style="list-style-type: none"> 13.07 million tonnes in-situ monazite (containing ~55-60% total Rare Earth Elements oxide) resource occurring in the coastal beach placer sands in parts of Kerala, Tamil Nadu, Odisha, Andhra Pradesh, Maharashtra and Gujarat and in the inland placers in parts of Jharkhand, West Bengal and Tamil Nadu. <p>Statement 1 is correct.</p> <ul style="list-style-type: none"> 7,37,283 tonne Rare Earth Elements Oxide (REO) in Ambadungar area, Chhota Udepur district, Gujarat 36,945 tonnes REO in Bhatikhera area, Barmer district, Rajasthan 2,000 tonne of heavy mineral concentrate containing ~2% xenotime (a phosphate mineral of yttrium and rare earth elements) in the riverine placer deposits of Chhattisgarh and Jharkhand. <p>Statement 2 is correct.</p> <p>CHINA has highest production of rare elements. Statement 4 is correct.</p>	 <p>Reserves of rare earths worldwide as of 2022, by country (in 1,000 metric tons REO)</p> <p>China 44,000</p> <p>Vietnam 13,000</p> <p>Brazil 11,000</p> <p>Others</p>	<p>Vietnam has 2nd highest reserves after China. Statement 3 is incorrect.</p>
27	<p>D</p> <p>RARE EARTH ELEMENTS</p> <p>They are a set of seventeen metallic elements. These include the fifteen lanthanides on the periodic table in addition to scandium and yttrium that show similar physical and chemical properties to the lanthanides.</p> <p>The 17 Rare Earths are cerium (Ce), dysprosium (Dy), erbium (Er), europium (Eu), gadolinium (Gd), holmium (Ho), lanthanum (La), lutetium (Lu), neodymium (Nd), praseodymium (Pr), promethium (Pm), samarium (Sm), scandium (Sc), terbium (Tb), thulium (Tm), yttrium (Yb), and yttrium (Y).</p> <p>These minerals have unique magnetic, luminescent, and electrochemical properties and thus are used in many modern technologies, including consumer electronics, computers and networks, communications, health care, national defense, clean energy technologies etc. Statement 2 is correct.</p> <p>Even futuristic technologies need these REEs.</p> <p>For example, high-temperature superconductivity, safe storage and transport of hydrogen for a post-hydrocarbon economy etc.</p> <p>The first 5 elements in the lanthanide series (La to Pm) are called Light Rare Earths (LREE), while the remaining elements are grouped as Heavy Rare Earths (HREE).</p> <p>The terming of the lanthanides, along with Y and Sc, as "rare earths" is a misnomer.</p>		

<p>In fact, the concentration of the rare earths in the earth's crust is as high as some other elements including that of copper. The only difference is that rare earths do not occur as separate minerals amenable for easy exploration and mining and are widely distributed across the earth's surface. Statement 1 is incorrect.</p> <p>The coining of the word "rare earths" to these set of elements may be due to their lack of mining in most countries combined with geo-political concerns which inhibited their mining.</p> <p>Analysis of supply demand of REE</p> <ul style="list-style-type: none"> Currently, China has control over 94% in producing and mining REMs and further china has very high natural reserves for these. As per some recent reports, China is even buying these reserve in others countries and regions to have a monopoly over production for a very long time. And due to these very reasons, it has become very critical metal for India since India is not having enough resources and it further suffers technological constraints in mining its own reserves of REEs. A study, conducted by the think-tank Council on Energy Environment and Water, identifies 12 minerals out of 49 that were evaluated as 'most critical' for India's manufacturing sector by 2030. These are beryllium, chromium, germanium, limestone, niobium, graphite, rare earth, rhenium, strontium, tantalum and zirconium. Other minerals like limestone and graphite, while currently abundantly available in India, are deemed 'critical' because extractable resources could be scarce in the future. For others, the report says, India is 100 percent import-dependent for seven out of 12 identified critical minerals and does not have any declared resources for them, except light rare earth (found along with monazite sands) and beryllium. <p>What is the future use of Rare Earth Metals?</p>	<ul style="list-style-type: none"> The global demand for automobiles, consumer electronics, energy-efficient lighting, and catalysts is expected to rise rapidly over the next decade. REMs are critical raw material for future of these technologies/industries. Rare earth magnet demand is expected to increase due to the rise in demand for rechargeable batteries. New developments in medical technology are expected to increase the use of surgical lasers, magnetic resonance imaging, and positron emission tomography scintillation detectors. Future military and navy arsenals may utilize REMs for better efficiency and handling. <p>28 B</p> <p>What is India's Current Policy on Rare Earths?</p> <ul style="list-style-type: none"> Exploration in India has been conducted by the Bureau of Mines and the Department of Atomic Energy. Mining and processing has been performed by some minor private players in the past, but is today concentrated in the hands of IREL (India) Limited (formerly Indian Rare Earths Limited), a Public Sector Undertaking under the Department of Atomic Energy. Statement 1 is correct. India has granted government corporations such as IREL a monopoly over the primary mineral that contains REEs: monazite beach sand, found in many coastal states. IREL produces rare earth oxides (low-cost, low-reward "upstream processes"), selling these to foreign firms that extract the metals and manufacture end products (high-cost, high-reward "downstream processes") elsewhere. IREL's focus is to provide thorium - extracted from monazite - to the Department of Atomic Energy. <p>Globally:</p> <p>The Multilateral Minerals Security Partnership (MSP) was announced in June</p>
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2022, with the goal of bringing together countries to build robust critical minerals supply chains needed for climate objectives. Involved in this partnership are the United States (US), Canada, Australia, Republic of Korea, Japan, and various European countries.

India is not included in the partnership.

Recently, the Mines and Minerals (Development and Regulation) Amendment act, 2023 was passed by the Parliament, which has come into force from 17th August, 2023. The Amendment, among other things, delisted six minerals, including Lithium and Niobium, from the list of atomic minerals, thereby allowing grant of concessions for these minerals to private sector through auction. Statement 2 is incorrect.

1. Antimony	15. Nickel	ix. Neodymium	20. Rhodium
2. Beryllium	16. PGE	x. Promethium	21. Selenium
3. Bismuth	i. Platinum	xi. Samarium	22. Silicon
4. Cadmium	ii. Palladium	xii. Europium	23. Strontium
5. Cobalt	iii. Rhodium	xiii. Gadolinium	24. Tantalum
6. Copper	iv. Ruthenium	xiv. Terbium	25. Tellurium
7. Gallium	v. Iridium	xv. Dysprosium	26. Tin
8. Germanium	vi. Osmium	xvi. Holmium	27. Titanium
9. Graphite	17. Phosphorus	xvii. Erbium	28. Tungsten
10. Hafnium	18. Potash	xviii. Thulium	29. Vanadium
11. Indium	19. REE	xix. Ytterbium	30. Zirconium
12. Lithium	i. Lanthanum	xx. Lutetium	
13. Molybdenum	ii. Cerium	xxi. Scandium	
14. Niobium	iii. Praseodymium	xxii. Yttrium	

List of 30 critical minerals identified by a committee set up by ministry of mines. Statement 3 is correct.

group 1, which lies in the s-block of the periodic table.

Rare Metals (RM) include Niobium (Nb), Tantalum (Ta), Lithium (Li), Beryllium (Be), Cesium (Cs) etc. and Rare Earths (RE) include Lanthanum (La) to Lutetium (Lu) besides Scandium (Sc) and Yttrium (Y).

These metals are strategic in nature with wide application in the nuclear and other high tech industries such as electronics, telecommunication, information technology, space, defense etc.

Uses:

- Lithium metal is used to make useful alloys.

For example, with lead to make 'white metal' bearings for motor engines, with aluminium to make aircraft parts, and with magnesium to make armour plates. Statement 2 is correct but is not the correct explanation

- It is also used as a convertor to tritium used as a raw material for thermonuclear reactions i.e. fusion. Thermonuclear application makes Lithium as "Prescribed substance" under the Atomic Energy Act, 1962.

To make electrochemical cells. Lithium is an important component in Electric Vehicles, Laptops etc.

Countries with Largest Reserves:

Chile> Australia> Argentina Lithium in India:

- The discovery of 5.9 million 'Inferred' lithium resource has been made in the Jammu and Kashmir region of India.
- This is the first major lithium reserve that has been found in India.
- Previously, a survey led by the Atomic Minerals Directorate for Exploration and Research showed the presence of lithium resources in the Marlagalla area of Karnataka's Mandya district.

Researchers at the Atomic Minerals Directorate (under India's Atomic Energy Commission) have estimated lithium reserves of 14,100 tonnes in a small patch of land surveyed in Southern Karnataka's Mandya district recently.

29

B

Lithium:

- It is a chemical element with the symbol Li.
- It is a soft, silvery-white metal.
- Under standard conditions, it is the lightest metal and the lightest solid element. Statement 1 is correct.
- It is highly reactive and flammable, and must be stored in mineral oil.
- It is an alkali metal and a rare metal.

The alkali metals consist of the chemical elements lithium, sodium, potassium, rubidium, caesium, and francium. Together with hydrogen they constitute

Also to be India's first ever Lithium deposit site found.

Other Potential Sites in India:

The major mica belts in Rajasthan, Bihar, and Andhra Pradesh.

Pegmatite (igneous rocks) belts in Odisha and Chhattisgarh.

Brines of Sambhar and Pachpadra in Rajasthan, and Rann of Kachchh in Gujarat.

Related Government Initiative:

India, through a newly state-owned company Khanij Bidesh India Ltd, had signed an agreement with an Argentinian firm to jointly prospect lithium in Argentina.

Khanij Bidesh India Ltd has a specific mandate to acquire strategic mineral assets such as lithium and cobalt abroad.



LITHIUM TRIANGLE

30

A

OSIRIS-REx is NASA's first mission to visit a near-Earth asteroid, survey its surface and collect a sample from it.

The NASA's Origins, Spectral Interpretation, Resource Identification, and Security-Regolith Explorer (OSIRIS-REx) spacecraft, launched on 8th September 2016, has successfully delivered the first asteroid samples from the near-Earth asteroid Bennu (formerly 1999 RQ36) to Earth after a seven-year journey, bringing valuable 4.5 billion-year-old samples.

The Osiris-Rex sample capsule was released during an Earth flyby, landing safely in the Utah desert, United States preserving the asteroid samples. Spacecraft never landed on earth, it just released the capsule. Statement 1 is incorrect.

Scientists estimate the capsule has at least a cupful of debris from the carbon-rich asteroid Bennu. The samples are expected to provide insights into the formation of Earth and life 4.5 billion years ago. Osiris-Rex will continue its mission by studying another asteroid, Apophis, which it will reach in 2029.

Key Points

About OSIRIS-REx Mission:

It is the United States' first asteroid sample return mission, aiming to collect and carry a pristine, unaltered sample from an asteroid back to earth for scientific study.

The OSIRIS-REx (Origins, Spectral Interpretation, Resource Identification, Security, Regolith Explorer) spacecraft was launched in 2016 for the journey to Bennu.

The mission is essentially a seven-year-long voyage and will conclude when at least 60 grams of samples are delivered back to the Earth (in 2023).

As per the National Aeronautics and Space Administration (NASA), the mission promises to bring the largest amount of extraterrestrial material back to the Earth since the Apollo era.

Apollo was the NASA program that resulted in American astronauts' making a total of

<p>11 space flights and walking on the moon (1968-72).</p> <p>The spacecraft contains five instruments meant to explore Bennu including cameras, a spectrometer and a laser altimeter.</p> <p>Recently, the spacecraft's robotic arm called the Touch-And-Go Sample Acquisition Mechanism (TAGSAM), made an attempt to "TAG" the asteroid at a sample site and collected a sample.</p> <p>Significance:</p> <p>Scientists will use the asteroid samples to study the formation of the solar system and of habitable planets such as Earth.</p> <p>NASA will also distribute a part of the samples to laboratories worldwide and will reserve about 75% of the samples for future generations who can study it with technologies not yet created.</p> <p>Asteroid Bennu:</p> <p>Bennu is an ancient asteroid, currently more than 200 million miles from Earth.</p> <p>It is about as tall as the Empire State Building (US) and is named after an Egyptian deity.</p> <p>The asteroid was discovered by a team from the NASA- funded Lincoln Near-Earth Asteroid Research team in 1999.</p> <p>It is known that this asteroid is a B-type asteroid, implying that it contains significant amounts of carbon and various other minerals.</p> <p>Because of its high carbon content, it reflects about 4% of the light that hits it, which is very low when compared with a planet like Venus, which reflects about 65% of the light that hits it. Earth reflects about 30%.</p> <p>Around 20-40% of Bennu's interior is empty space and scientists believe that it was formed in the first 10 million years of the solar system's formation, implying that it is roughly 4.5 billion years old.</p> <p>There is a slight possibility that Bennu, which is classified as a Near Earth Object (NEO), might strike the Earth in the next century, between the years 2175 and 2199.</p>	<p>NEOs are comets and asteroids nudged by the gravitational attraction of nearby planets into orbits which allows them to enter the Earth's neighbourhood.</p> <p>Bennu is believed to have been born in the Main Asteroid belt between Mars and Jupiter and because of gravitational tugs from other celestial objects and the slight push asteroids get when they release absorbed sunlight, the asteroid is coming closer to Earth. Statement 2 is correct.</p> <p>Bennu offers scientists a window into the early solar system as it was first taking shape billions of years ago and tossing ingredients that could have helped seed life on Earth.</p> <p>Significantly, Bennu hasn't undergone drastic changes since its formation over billions of years ago and therefore it contains chemicals and rocks dating back to the birth of the solar system. It is also relatively close to the Earth.</p> <p>Asteroids</p> <p>These are rocky objects that orbit the Sun, much smaller than planets. They are also called minor planets.</p> <p>According to NASA, 9,94,383 is the count of known asteroids, the remnants from the formation of the solar system over 4.6 billion years ago.</p> <p>Asteroids are divided into three classes:</p> <ul style="list-style-type: none"> • First, those found in the main asteroid belt between Mars and Jupiter, which is estimated to contain somewhere between 1.1-1.9 million asteroids. • The second group is that of trojans, which are asteroids that share an orbit with a larger planet. • The third classification is Near-Earth Asteroids (NEA), which have orbits that pass close by the Earth. Those that cross the Earth's orbit are called Earth-crossers. <p>More than 10,000 such asteroids are known, out of which over 1,400 are classified as Potentially Hazardous Asteroids (PHAs).</p>
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	<p>PHAs are currently defined based on parameters that measure the asteroid's potential to make threatening close approaches to the Earth.</p> <p>Specifically, all asteroids with an Earth Minimum Orbit Intersection Distance (MOID) of 0.05 au or less and an absolute magnitude (H) of 22.0 or less are considered PHAs.</p> <p>Bennu is a potentially hazardous asteroid that has a 1-in-2,700 chance of striking Earth in the year 2182 - the highest odds of any known space object. But the scientists are more interested in what's trapped inside the space rock: the possible extraterrestrial precursors of life on Earth. Statement 4 is correct.</p> <p>Because scientists will look for organic molecules related to life in grains of Bennu, it is critical that the sample doesn't get exposed to Earth's environment, including its life. Such contamination would make it hard for scientists to distinguish which molecules came from space and which came from Earth.</p> <p>Once the capsule landed, it was retrieved, and delivered to a temporary clean room at the Utah Test and Training Range. The OSIRIS-REx team hooked it up to a tank that released nitrogen, a gas that doesn't interact with most other chemicals. A continuous nitrogen flow into the capsule pushed out any invading air. Statement 3 is correct.</p>	<p>Indian citizens from conflict-torn Sudan.</p> <p>Operation Ganga - Is an operation executed by the Indian government to rescue Indians in the war hit Ukraine.</p> <ul style="list-style-type: none"> Operation Devi Shakti - Evacuation of Indians and Afghans and shipment of humanitarian assistance for the people of Afghanistan.
31	<p>D</p> <p>Operation Ajay</p> <p>Recently the ministry of external affairs announced an initiative Operation 'Ajay' to evacuate Indian nationals from Israel.</p> <ul style="list-style-type: none"> Operation Ajay is a major operation to evacuate its citizens who wish to return from conflict-hit Israel. There are at least 900 Indian students who are enrolled in various Israeli universities and institutions. This will be the second evacuation operation in 2023, after Operation Kaveri that brought back several thousand 	<p>32</p> <p>A</p> <p>It was announced by the Prime Minister in his Independence Day speech on August 15, 2023.</p> <p>Objective:</p> <p>To encourage women to start micro-enterprises within their villages.</p> <p>Under the Lakhpati Didi Initiative, the government aims to train two crore women. The programme is aimed at training women in self-help groups (SHGs) so that they can earn a sustainable income of at least Rs 1 lakh per annum per household. Statement 1 is correct.</p> <p>The initiative has been initiated by DAY-NRLM, wherein each SHG household is encouraged to take up multiple livelihood activities coupled with value chain interventions, resulting in a sustainable income of Rs 1 lakh or more per year.</p> <p>The ministry of rural development is adopting a whole-of-government approach for maximum impact through convergence to transform the rural economy with the enabling of 'Lakhpati Didis'.</p> <p>Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM) is a flagship poverty alleviation program implemented by the Ministry of Rural Development, Government of India. Statement 2 is incorrect.</p> <p>Under this scheme, women will be trained in various skills, such as plumbing, LED bulb making, drone operation and repair, and tailoring and weaving.</p> <p>After completing the training, women will be provided with opportunities to earn income using their skills.</p> <p>There is no monetary assistance provided. Statement 3 is incorrect.</p>

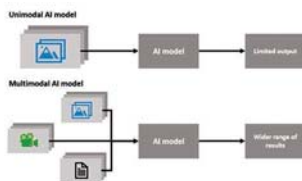

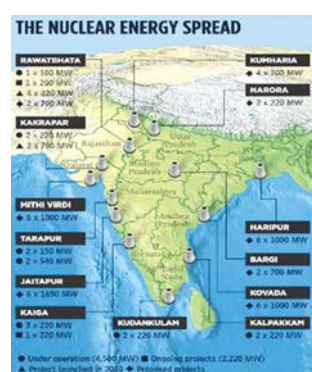
33	<p>C</p> <p>It was established in 1997 as an intergovernmental organisation of States on the rim of the Indian Ocean and India is the founding member. Statement 1 is correct.</p> <p>Forming Members</p> <ul style="list-style-type: none"> • The Indian Ocean Rim Initiative was initially formed by South Africa and India. • Mauritius and Australia were subsequently brought in. <p>In March 1997, the IOR-ARC was formally launched, with seven additional countries as members: Indonesia, Sri Lanka, Malaysia, Yemen, Tanzania, Madagascar and Mozambique</p> <p>IORA has identified six priority areas namely: Trade and Investment, Maritime Safety and Security, Fisheries Management, Disaster Risk Management and Blue Economy.</p> <p>Member countries:</p> <p>It has members from Africa, West Asia, South Asia, Southeast Asia, Europe and Oceania.</p> <p>The Association's membership has expanded to 23 member states and 11 dialogue partners. Statement 2 is correct.</p> <p>Asia: India, Bangladesh, Indonesia, Iran, Malaysia, Maldives, Oman, Singapore, Sri Lanka, Thailand, United Arab Emirates and Yemen.</p> <p>Africa: Kenya, Madagascar, Mozambique, Somalia, South Africa, Tanzania, Comoros, Mauritius, Seychelles. Statement 2 is incorrect.</p> <p>Oceania: Australia. Europe: France</p> <p>Dialogue Partners:</p> <p>China, Egypt, Saudi Arabia, Germany, Italy, Japan, South Korea, Russia, Turkey, the United Kingdom, and the United States of America.</p> <p>Its apex body is the Council of Foreign Ministers (COM) which meets annually.</p> <p>The secretariat is based in Ebène Mauritius</p>	<p>and is overseen by a secretary-general who is appointed for a three-year period.</p> <p>Flagship Projects</p> <ul style="list-style-type: none"> • A special fund was created in 2004 for the implementation of special projects that would further IORA's commitment to its priority areas by narrowing the focus of member states' contributions. <p>Fisheries Support Unit (FSU)</p> <ul style="list-style-type: none"> • The aims of the FSU are to enhance cooperation among member states in regard to fisheries and to conduct research to manage and protect fish stocks. • Critically, the FSU is exclusively dialogue-based: it does not make decisions or even provide advice on the management of fisheries or issues such as IUU fishing. Statement 3 is incorrect. <p>Regional Centre for Science and Technology Transfer (RCSTT)</p> <ul style="list-style-type: none"> • The IORA Regional Center for Science and Technology Transfer (IORA RCSTT) was formed in October 2008, and is based in Tehran, Iran. • The center uses its resources to address issues ranging from disaster response to creating a gene banking database for medicinal plants. <p>Indian Ocean Dialogue (IOD)</p> <ul style="list-style-type: none"> • Originating in the 13th Council of Ministries meeting in 2013, the IOD acts as a stand-alone Track 1.5 discussion that brings together scholars and policymakers from member states to participate in discussions on the topics affecting the Indian Ocean Region and IORA member states. <p>The IORA Sustainable Development Program (ISDP)</p> <p>Introduced in 2014, the ISDP is dedicated to the least developed countries in an attempt to share best practices among member states in the Blue Economy, effectively bridging the gap between the rich and poor member states. Statement 4 is correct.</p>
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	<p>Agencies and Observer-ships</p> <p>Specialised Agencies of IORA</p> <p>a) The Fisheries Support Unit (FSU) - Oman (2003)</p> <p>b) The Regional Centre for Science and Transfer of Technology (RCSTT) - Iran (2008)</p> <p>Observers to IORA</p> <ul style="list-style-type: none">Indian Ocean Research Group (IORG)Western Indian Ocean Marine Science Association (WIOMSA) <p>IORA Observers to</p> <ul style="list-style-type: none">UN Conference on Trade and Development (2014)UN General Assembly (2015)African Union (2015)	<p>Manipur</p> <p>Odisha</p> <p>Tamil Nadu</p> <p>Andaman and nicobar islands</p> <p>Marram Nagas</p> <p>Birhor, Bondo, Didayi, Dongria-Khond, Juangs, Kharias, Kutia Kondh, Lanjia Sauras, Lodhas, Mankidias, Paudi Bhuyans, Soura, Chuktia Bhunjia</p> <p>Kattu Nayakans, Kotas, Kurumbas, Irulas, Paniyans, Todas</p> <p>Great Andamanese, Jarawas, Onges, Sentinelese, Shorn Pens</p> <p>During the Fourth Five Year Plan, a sub-category was created within Scheduled Tribes to identify the most vulnerable groups which were considered to be at the lowest levels of development. Consequently, on the basis of the Dhebar Commission report, a criterion for identifying Particularly Vulnerable Tribal Groups was established as:</p> <ul style="list-style-type: none">Pre-agricultural level of technology,Low level of literacy,Economic backwardness,A declining or stagnant population.PVTGs were formerly known as primitive tribal groups. <p>How many particularly vulnerable tribal groups are there?</p> <p>As per Census 2011, there are a total of 75 PVTGs out of 705 Scheduled Tribes, spread over 17 states and one Union Territory (UT). The categorization is done by the Ministry of Home Affairs and not by the Ministry of Tribal affairs.</p> <p>As per census 2001:</p> <p>There are 12 PVTGs having a population above 50,000.</p> <p>The remaining groups have a population of 1000 or less.</p> <p>The PVTG of Sahariyas has the highest population of 4,50,217.</p>																
34	<p>B</p> <table><tr><th>STATE</th><th>TRIBES FOUND</th></tr><tr><td>Andhra Pradesh and Telangana</td><td>Bodo Gadaba, Bondo Poroja, Chenchu, Dongria Khond, Gutob Gadaba, Khond Poroja, Kolam, Kondareddis, Konda Savaras, Kutia Khond, Parengi Poroja, thoti</td></tr><tr><td>Bihar and Jharkhand</td><td>Asurs, Birhor, Birjia, Hill Kharia, Konvas, Mal Paharia, Parhaiyas, Sauda Paharia, Savar</td></tr><tr><td>Gujarat</td><td>Kathodi, Kohvalia, Padhar, Siddi, Kolgha</td></tr><tr><td>Karnataka</td><td>Jenu Kuruba, Koraga</td></tr><tr><td>Kerala</td><td>Cholanaikayan (a section of Kattunaickans), Kadar, Kattunayakan, Kurumbas, Koraga</td></tr><tr><td>Madhya Pradesh and Chhattisgarh</td><td>Abujh Macias, Baigas, Bharias, Hill Korbas, Kamars, Saharias, Birhor</td></tr><tr><td>Maharashtra</td><td>Katkaria (Kathodia), Kolam, Maria Gond</td></tr></table>	STATE	TRIBES FOUND	Andhra Pradesh and Telangana	Bodo Gadaba, Bondo Poroja, Chenchu, Dongria Khond, Gutob Gadaba, Khond Poroja, Kolam, Kondareddis, Konda Savaras, Kutia Khond, Parengi Poroja, thoti	Bihar and Jharkhand	Asurs, Birhor, Birjia, Hill Kharia, Konvas, Mal Paharia, Parhaiyas, Sauda Paharia, Savar	Gujarat	Kathodi, Kohvalia, Padhar, Siddi, Kolgha	Karnataka	Jenu Kuruba, Koraga	Kerala	Cholanaikayan (a section of Kattunaickans), Kadar, Kattunayakan, Kurumbas, Koraga	Madhya Pradesh and Chhattisgarh	Abujh Macias, Baigas, Bharias, Hill Korbas, Kamars, Saharias, Birhor	Maharashtra	Katkaria (Kathodia), Kolam, Maria Gond	
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	<p>PVTGs of Sentinelese and Andamanese have a very small population of 39 and 43, respectively.</p> <p>Odisha has the highest number of PVTGs in India while no PVTGs are found in the states of Punjab and Haryana.</p>	<p>protecting and conserving for sustainable use.</p> <p>About Community forest resource rights (CFRRs)</p> <p>CFRRs are the rights of forest-dwelling communities to access, use, and manage forest resources for their livelihood and cultural needs. CFRRs are recognized under the FRA 2006.</p> <p>CFRRs include the following rights:</p> <ul style="list-style-type: none"> • The right to hold forest land for habitation or self-cultivation for livelihood needs. • The right to access, use, and manage forest resources for livelihood and cultural needs. • The right to protect, conserve, and regenerate community forest resources. • The right to receive compensation for any damage caused to their forest resources. <p>CFRRs give forest-dwelling communities a stake in the sustainable management of forest resources. They promote social justice and equity.</p> <p>The implementation of CFRRs is still in its early stages. However, there are some examples of successful CFRR implementation in India.</p> <ul style="list-style-type: none"> • For example, in Madhya Pradesh, the FRA has helped to reduce deforestation by 50%. • In Odisha, the FRA has helped to increase the incomes of forest-dwelling communities by 20%. <p>There have been challenges in the implementation of Community Forest Resource Rights (CFRR) under the Forest Rights Act, 2006.</p> <p>Most prominent reasons for non-implementation are:</p> <p>Uncertainty regarding the location and extent of forest land that may be eligible for CFRR claims.</p> <p>There is no specific "target" set for state governments to achieve in terms of recognizing CFRR, making it difficult to</p>
35	<p>C</p> <p>FRA enacted in 2006 recognises the rights of forest-dwelling tribal communities and other traditional forest dwellers to forest resources on which these communities were dependent for a variety of needs, including livelihood, habitation and other sociocultural needs.</p> <p>It recognizes and vest the forest rights and occupation in Forest land in Forest Dwelling Scheduled Tribes (FDST) and Other Traditional Forest Dwellers (OTFD) who have been residing in such forests for generations.</p> <p>It strengthens the conservation regime of the forests while ensuring livelihood and food security of the FDST and OTFD.</p> <p>The Gram Sabha is the authority to initiate the process for determining the nature and extent of Individual Forest Rights (IFR) or Community Forest Rights (CFR) or both that may be given to FDST and OTFD. Statement 1 is correct.</p> <p>Rights Under the Forest Rights Act:</p> <p>Title rights: It gives FDST and OTFD the right to ownership to land farmed by tribals or forest dwellers subject to a maximum of 4 hectares.</p> <p>Ownership is only for land that is actually being cultivated by the concerned family and no new lands will be granted.</p> <p>Use rights: The rights of the dwellers extend to extracting Minor Forest Produce, grazing areas etc.</p> <p>Relief and development rights: To rehabilitate in case of illegal eviction or forced displacement and to basic amenities, subject to restrictions for forest protection.</p> <p>Forest management rights: It includes the right to protect, regenerate or conserve or manage any community forest resource which they have been traditionally</p>	




<p>measure their performance against a benchmark. Statement 2 is correct.</p> <p>Forest rights of forest-dwelling scheduled tribes and other traditional forest dwellers. It recognizes and grants the possession of forest land to other traditional forest dwellers (OTFD) and forest-dwelling scheduled tribes (FDST) who have lived for multiple generations. The forest right act recognizes the following rights:</p> <ul style="list-style-type: none"> • Right to hold and live • Community rights • Right of ownership, access to collect use, and disposal of Minor Forest Produce (MFP) • Rights for the conversion of leases • Right of settlement • Other community rights • Right to protect, regenerate, conserve, or manage any forest resources • Right to access biodiversity <p>Eligibility for Forest Rights</p> <p>According to Section 2(c) of the FRA Act 2006, to be eligible as a Forest Dwelling Scheduled Tribe (FDST) and claim forest rights under FRA, three conditions must be fulfilled by the applicant. The applicant could be a "member or community." The three conditions are -</p> <ul style="list-style-type: none"> • Applicants should primarily reside in forest or forest land prior to the cut-off date of 13th December 2005. • Applicant must have the status of a designated Scheduled Tribe (ST) in the area where the right is claimed • Applicants should depend on the forest or forest's land for bonafide livelihood needs. <p>Conditions for eligibility as Other Traditional Forest Dweller (OTFD) to claim forest rights under FRA, 2006 are -</p> <ul style="list-style-type: none"> • Applicants should primarily reside in forest or forest land for at least three generations, i.e., 75 years prior to the cut-off date of 13th December 2005. Statement 4 is incorrect, 	<ul style="list-style-type: none"> • Applicants should depend on the forest or forest's land for bonafide livelihood needs. <p>Implementation of the Forest Rights Act 2006</p> <ul style="list-style-type: none"> • Gram Sabha is the authority to initiate a process to vest rights on marginally and tribal communities after assessment of the extent of their needs from forest lands. • Gram Sabha after its assessment, receives claims of the communities, consolidates and verify these to help them exercise their rights • Gram Sabha then passes such a resolution to sub-divisional level committee (formed by the state governments.) • If one or more communities are not satisfied by such a resolution, may file a petition to sub-divisional level committee • Sub-Divisional Level committee after its assessment, passes the resolution to Sub- divisional officer to district level committee for its final decision • The district-level committee's decisions are considered final and binding. Statement 1 is correct. • A state-level monitoring committee is constituted by the state government to monitor the process of recognition of these rights. Statement 2 is correct but it is not the correct explanation. <p>The officers included in the sub-divisional level committee, district-level committee and state-level monitoring committee include:</p> <ol style="list-style-type: none"> a) Officers of Department of Revenue of state government b) Officers of Department of Forests of state government c) Officers of Department of Tribal Affairs of state government d) Three members of Panchayati Raj Institutions including two Scheduled Tribes members and at least one woman
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	<p>The Act recognizes and vest the forest rights and occupation in Forest land in Forest Dwelling Scheduled Tribes (FDST) and Other Traditional Forest Dwellers (OTFD) who have been residing in such forests for generations.</p> <p>The Act identifies four types of rights:</p> <ul style="list-style-type: none"> • Title rights: It gives FDST and OTFD the right to ownership to land farmed by tribals or forest dwellers subject to a maximum of 4 hectares. Ownership is only for land that is actually being cultivated by the concerned family and no new lands will be granted. • Use rights: The rights of the dwellers extend to extracting Minor Forest Produce, grazing areas etc. • Relief and development rights: To rehabilitate in case of illegal eviction or forced displacement and to basic amenities, subject to restrictions for forest protection. • Forest management rights: It includes the right to protect, regenerate or conserve or manage any community forest resource which they have been traditionally protecting and conserving for sustainable use. 	<ul style="list-style-type: none"> • The main source of Niobium element is the mineral columbite. • This mineral also contains tantalum and the two elements are mined together. • Columbite is found in Canada, Brazil, Australia, Nigeria and not in INDIA. Statement 2 is incorrect. • Some niobium is also produced as a by-product of tin extraction. • The Mines and Minerals (Development and Regulation) Amendment act, 2023 delisted 6 minerals, including Lithium and Niobium, from the list of atomic minerals. Statement 4 is incorrect.
36	<p>A</p> <ul style="list-style-type: none"> • Niobium also known as columbium, is a chemical element with the symbol Nb and atomic number 41. • Niobium is a light grey, crystalline and ductile transition metal. • It has oxide layer on its surface which makes it resistant to corrosion. Statement 1 is correct. • Pure niobium has a hardness similar to that of pure titanium, and it has similar ductility to iron. • Niobium is used in alloys, tools and dies and superconductive magnets. • Niobium in one of the Critical Minerals in India. • It is not one of the 17 rare earth elements (REE). Statement 3 is incorrect. 	<p>37</p> <p>B</p> <p>Mera Yuva Bharat:</p> <p>Recently the Union Cabinet approved establishment of an autonomous body Mera Yuva Bharat (MY Bharat) to focus on Youth led development.</p> <ul style="list-style-type: none"> • It is an autonomous body to serve as an overarching enabling mechanism powered by technology for youth development youth led development. Statement 1 is correct. • It provides equitable access to youth to actualize their aspirations and build Viksit (advanced) Bharat across the entire spectrum of the Government. • The primary objective of Mera Yuva Bharat (MY Bharat) is to make it a whole of Government platform for youth development. • It will benefit the youth in the age group of 15-29 years, which is in line with the definition of 'Youth' in the National Youth Policy. Statement 3 is correct. • The country has around 40 crore people in the age group of 15-29 years. • In case of programme components specifically meant for the adolescents, the beneficiaries will be in the age group of 10-19 years. • It will centralize youth database and offer suitable opportunities to engage in voluntary work across the country.

	<ul style="list-style-type: none">It will act as a one-stop shop for young people and various central government ministries.Under this platform there will be no financial remuneration. Statement 2 is incorrect.Mera Yuva Bharat (MY Bharat) would lead to:<ul style="list-style-type: none">Leadership Development in the Youth,Better alignment between youth aspirations and community needs,Enhanced efficiency through Convergence of existing programmes,Improved two-way communication to connect youth government initiatives and activities of other stakeholder that engage with youth andEnsuring accessibility by creating a physical ecosystem.	<ul style="list-style-type: none">Gemini is multimodal large language model being developed by the google.Gobi is multimodal AI being developed by the OpenAI. <p>However, there are few challenges:</p> <ul style="list-style-type: none">Data Storage: The data sets needed to operate a multimodal AI, involve a huge variety of data (text, images, audio, video). Such data volumes are expensive to store, and costly to process.Data integration: Combining and synchronizing different types of data can be challenging because the data from multiple sources will not have the same formats. Ensuring the seamless integration of multiple modalities and maintaining consistent data quality can be difficult and time-consuming. Statement 2 is incorrect.Data bias: Data bias and maintaining data integrity can be a problem in training the AI model.
38	<p>C</p> <p>Multimodal AI is an advanced form of Artificial Intelligence that can analyse and interpret multiple modes of data simultaneously, allowing it to generate more accurate and human-like reasoning and decision-making. Statement 1 is correct.</p> 	<p>39</p> <p>B</p> 
40	<ul style="list-style-type: none">It revolutionizes the way AI systems process and interpret information by seamlessly integrating various sensory modalities.Multimodal systems allows users to engage with AI in several ways.Unlike conventional AI models, which focus on a single data type, multimodal AI systems have the capability to simultaneously comprehend and utilize data from diverse sources such as text, images, audio, and video.	<p>A</p> 

<p>41</p>	<p>B</p> <p>Today, silicon chips have become as essential as oil reserves.</p> <p>They enable advances in computation and are embedded in smartphones and defence equipment. They are also integral to clean energy appliances and machines such as electric vehicles, solar arrays and wind turbines. Statement 1 is correct.</p> <p>Here lies a paradox.</p> <p>The industry's environmental footprint is large. Chip fabrication plants - fabs - consume large amounts of water and generate hazardous waste. The sector is amongst the top GHG emitters today. In face of pressure from investors, however, a section of the industry is taking steps to clean up its act. Two years ago, the world's largest chip maker, Taiwan's Semiconductor Manufacturing Company, which supplies to APPLE, amongst others, pledged to reach net zero emissions by 2050. Statement 2 is correct but not the correct explanation.</p> <p>Now a report by the global rating firm, Moody's, has underlined another challenge. Climate change can damage manufacturing facilities, disrupt supply chains and lead to significant financial losses.</p> <p>The report warns that risks posed by global warming could deter investments in the industry and come in the way of India realising its ambition of becoming a chip-making hub.</p> <p>India is not the only country that faces such a challenge. Taiwan, the current leader in semi-conductor manufacturing, is also threatened by erratic weather patterns.</p> <p>Semicon India Programme</p> <p>About:</p> <ul style="list-style-type: none"> The Union Cabinet had approved the comprehensive Semicon India programme with a financial outlay of INR 76,000 crore for the development of a sustainable semiconductor and display ecosystem in 2021. 	<ul style="list-style-type: none"> It has been set up as an Independent Business Division within Digital India Corporation having administrative and financial autonomy to formulate and drive India's long term strategies for developing semiconductors and display manufacturing facilities and semiconductor design ecosystem. The Semicon India Program aims to provide attractive incentive support to companies / consortia that are engaged in Silicon Semiconductor Fabs, Display Fabs, Compound Semiconductors / Silicon Photonics / Sensors (including MEMS) Fabs, Semiconductor Packaging (ATMP / OSAT) and Semiconductor Design. This will serve to pave the way for India's growing presence in the global electronics value chains. The program will give an impetus to semiconductor and display manufacturing by facilitating capital support and technological collaborations. <p>Broad Components of Programme:</p> <ul style="list-style-type: none"> Semiconductor Fabs and Display Fabs: The Scheme for Setting up of Semiconductor Fabs and Display Fabs in India shall extend fiscal support of up to 50% of project cost on the pari-passu basis to applicants who are found eligible and have the technology as well as capacity to execute such highly capital intensive and resource incentive projects. It provides fiscal support to eligible applicants for setting up of Semiconductor Fabs which is aimed at attracting large investments for setting up semiconductor wafer fabrication facilities in the country. Semi-conductor Laboratory (SCL): The Ministry of Electronics and Information Technology will take requisite steps for the modernization and commercialization of the Semi-conductor Laboratory (SCL). Compound Semiconductors / Silicon Photonics / Sensors (including MEMS)
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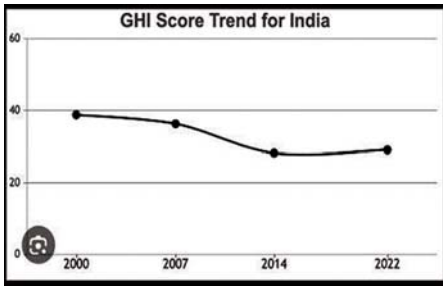
	<p>Fabs and Semiconductor ATMP / OSAT Units: The Scheme for Setting up of Compound Semiconductors / Silicon Photonics / Sensors (including MEMS) Fabs and Semiconductor ATMP / OSAT facilities in India shall extend fiscal support of 30% of capital expenditure to approved units.</p> <ul style="list-style-type: none"> • Semiconductor Design Companies: Design Linked Incentive (DLI) Scheme offers financial incentives, design infrastructure support across various stages of development and deployment of semiconductor design for Integrated Circuits (ICs), Chipsets, System on Chips (SoCs), Systems & IP Cores and semiconductor linked design. • The scheme provides "Product Design Linked Incentive" of up to 50% of the eligible expenditure subject to a ceiling of ₹15 Crore per application and "Deployment Linked Incentive" of 6% to 4% of net sales turnover over 5 years subject to a ceiling of ₹30 Crore per application. <p>'Chips to start-ups' programme:</p> <ul style="list-style-type: none"> • The "chips to start-ups" programme would develop 85,000 well-trained engineers. • Semiconductor designers would be given the opportunity to launch start-ups. 	<ul style="list-style-type: none"> • HQ: Hague, Netherlands. • Members: 123 nations are States Parties to the Rome Statute and recognize the ICC's authority; the notable exceptions being the US, China, Russia, and India. • Funding: The Court is funded by contributions from the States Parties and by voluntary contributions from Governments, international organizations, individuals, corporations, and other entities. <p>Composition:</p> <ul style="list-style-type: none"> • Judges: The court has eighteen judges, each from a different member country, elected to non-renewable nine-year terms. • The Presidency: Consists of three judges (the President and two Vice-Presidents) elected from among the judges. It represents the Court to the outside world and helps with the organization of the work of the judges. • Judicial Divisions: 18 judges in 3 divisions, the Pre-Trial Division, the Trial Division, and the Appeals Division. • Office of the Prosecutor (OTP): OTP is responsible for receiving referrals and any substantiated information on crimes within the jurisdiction of the Court. OTP examines these referrals and information, conducts investigations, and conducts prosecutions before the Court. • Registry: The core function of the Registry is to provide administrative and operational support to the Chambers and the Office of the Prosecutor. <p>Jurisdiction of ICC:</p> <ul style="list-style-type: none"> • Unlike the International Court of Justice, which hears disputes between states, the ICC handles prosecutions of individuals. • The ICC is only competent to hear a case if: <ul style="list-style-type: none"> • the country where the offence was committed is a party to the Rome Statute; or Statement 2 is correct. • the perpetrator's country of origin is a party to the Rome Statute • The ICC may only exercise its jurisdiction if the national court is unable or unwilling to do so.
42	<p>D</p> <p>About International Criminal Court (ICC):</p> <ul style="list-style-type: none"> • It is the only permanent international criminal tribunal. • Background: It was created by the 1998 Rome Statute of the International Criminal Court (its founding and governing document), and began functioning on 1 July 2002 when the Statute came into force. Statement 1 is correct. • Mandate: It investigates and, where warranted, tries individuals charged with the gravest crimes of concern to the international community: genocide, war crimes, crimes against humanity, and the crime of aggression. 	

<ul style="list-style-type: none"> The ICC only has jurisdiction over offences committed after the Statute's entry into force on 1 July 2002. <p>Relation with UN:</p> <p>While not a United Nations organization, the Court has a cooperation agreement with the United Nations.</p> <p>When a situation is not within the Court's jurisdiction, the United Nations Security Council can refer the situation to the ICC, granting it jurisdiction.</p> <p>This has been done in the situations in Darfur (Sudan) and Libya.</p> <p>Key points about legal procedure of ICC</p> <ul style="list-style-type: none"> The ICC cannot prosecute persons of the age of 18 or below when the crime was committed. Statement 3 is correct. A Primary examination recognising such situations as enough proof, jurisdiction, & in interest of law must be conducted by the prosecutor before starting the investigation. During the investigation, the prosecutor must gather and reveal both the incriminating and exoneration proof. The accused is treated innocent till proven guilty. Burden of proof is always on prosecutor. Throughout every phase of proceeding, accused is having the right of information in the language which he or she understands clearly, that is why ICC's proceedings are carried out in different languages; during the proceedings, a team of interpreters and translators is always present. Judges of pre-trial chamber issues arrest warrants and make sure that there is sufficient evidence before a matter goes for hearing. Throughout the pre-trial stage the accused is said as a suspect and as soon as case has reached the trial chamber, as the charges against the defendants are confirmed in pre-trial phase so in trial phase defendant is referred as accused. When a case is terminated without any judgement of guilty, the case can be open 	<p>again if the prosecutor introduces fresh proofs.</p> <p>India's stand on International Criminal Court</p> <p>The International Criminal Court is many times in highlight not for its role in tackling impunity but for the desertion of its state members. South Africa has informed its intent to withdraw from the Rome Statute. India has not yet signed the Rome Statute, but attended the conference of the Rome Statute which was held in 1998. India is amongst those countries which have neither signed nor accepted the Rome Statute of the ICC. Statement 5 is correct.</p> <p>The government of India has frequently opposed the ICC. India with holds in the vote adopting the Rome Statute in 1998.</p> <p>The main reason of not accepting the Rome Statute is that the Rome Statute of the ICC defines war crimes including the 'Armed Conflict not of an international character'. The insertion of armed dispute not of Global nature for describing war crime in the Article eight of Rome Statute for ICC has meet up with r efusal by Indian Government.</p> <p>Russia signed the Rome Statute in 2000 but never ratified it to become a member of the ICC, and finally withdrew its signature in 2016. Statement 4 is incorrect.</p> <tr> <td>43</td><td>B</td></tr> <tr> <td>44</td><td>A</td></tr> <tr> <td></td><td> <p>Cashew was native to northeast Brazil in Latin America and was introduced to Goa by the Portuguese in the 16th century (1570). Statement 1 is incorrect.</p>  </td></tr>	43	B	44	A		<p>Cashew was native to northeast Brazil in Latin America and was introduced to Goa by the Portuguese in the 16th century (1570). Statement 1 is incorrect.</p> 
43	B						
44	A						
	<p>Cashew was native to northeast Brazil in Latin America and was introduced to Goa by the Portuguese in the 16th century (1570). Statement 1 is incorrect.</p> 						

	<p>At the time of its introduction on Indian coasts, cashew was known mainly as a crop for afforestation and soil conservation. Statement 2 is incorrect.</p> <p>The first cashew factory in Goa started operations in 1926 and the first consignment of cashew kernels was exported in 1930. Statement 3 is incorrect.</p> <p>Statement 4 is correct. Goa Cashew has been granted GI tag.</p>	<p>Israel admitted that it used phosphorus shells during the battle against Hezbollah during the 2006 Lebanon War.</p> <p>What are incendiary weapons?</p> <ul style="list-style-type: none"> • They are weapons or munitions designed to set fire to objects or cause burns or respiratory injuries to people through the action of flame, heat, or a combination thereof, resulting from a chemical reaction of a flammable substance such as napalm or white phosphorus. • In 1972, the United Nations General Assembly passed a resolution calling incendiary weapons a "category of arms viewed with horror." • The definition in Article 1 of Protocol III of the Convention on Certain Conventional Weapons excludes multipurpose munitions, particularly those containing white phosphorus. • Because white phosphorus has legal uses, shells filled with it are not directly prohibited by international humanitarian law.
45	<p>B</p> <p>White phosphorus is a waxy, yellowish-to-clear chemical with a pungent, garlic-like odour. Statement 1 is correct.</p> <p>It is used in incendiary weapons by militaries around the world for a variety of purposes, such as illuminating targets at night or to inflicting damage on enemies.</p> <p>White phosphorus can cause fast-moving and widespread fires on the ground.</p> <p>It is a highly combustible chemical that burns quickly and brightly when exposed to air. Statement 2 is correct.</p> <p>It burns at a temperature of 800°C and spontaneously ignites at up to 1,300 degrees Celsius when it is exposed to oxygen, and producing white, dense smoke, which is used by armies to create smokescreens in sensitive zones.</p> <p>Once ignited, the substance is very difficult to put out, as it clings to many surfaces, including skin and clothing.</p> <p>Since it is a wax-like substance, it is very hard to remove and often lights up again when the bandages are removed.</p> <p>White phosphorus munitions are not banned under international law, but because of their incendiary effects, their use is supposed to be tightly regulated. Statement 3 is incorrect.</p> <p>Examples of White Phosphorous usage in wars:</p> <p>The British army used it in both World Wars.</p> <p>US forces, after invading Iraq, used the chemical weapon against insurgents in the city of Fallujah.</p>	<p>46</p> <p>A</p> <p>The European Space Agency Copernicus Sentinel-5P satellite made the recordings of ozone hole. The large ozone hole over Antarctica is one of the biggest on record, roughly three times the size of Brazil.</p> <p>Statement I is correct: Most of the ozone depletion happens over Antarctica, in the south polar stratosphere, the conditions become most favorable for ozone destruction. The primary chemicals involved in ozone depletion are chlorofluorocarbons (CFCs), halons, and carbon tetrachloride.</p> <p>Statement II is correct: The size of the ozone hole over Antarctica fluctuates each year, opening each year in August and closing again in November or December. The key factor leading to ozone hole formation is the presence of stratospheric clouds and the lack of atmospheric mixing between the south polar latitudes and air from elsewhere during this period.</p>


	<p>Statement-II is the correct explanation for Statement-I: The ozone hole opens up because of the rotation of the Earth causing special winds over the closed landmass of Antarctica. The winds create a mini climate, creating a shield over Antarctica preventing it from mixing with surrounding air. When the winds die down, the hole closes.</p>	<ul style="list-style-type: none"> • The Montreal Protocol, 1987 was created to protect the ozone layer by phasing out the production of these harmful substances. Statement 3 is incorrect. • The protocol was effective that ozone holes got smaller in the decades after ozone-depleting gas emissions were controlled. • Kigali agreement is upgradation of the Montreal Protocol. <p>How Ozone is formed in troposphere?</p> <p>Photochemical smog refers to a chemical reaction of sunlight, nitrogen oxides, and organic compounds in the atmosphere. This smog is visible as a brown haze. Furthermore, this smog depends on the primary pollutants and also on the formation of secondary pollutants.</p> <p>Smog can occur at any time, both during the day and night. On the other hand, photochemical smog occurs only in the presence of sunlight.</p> <p>The primary pollutants include nitrogen oxides, particularly nitric oxide and nitrogen dioxide, and organic compounds of volatile nature. The major secondary pollutants consist of peroxyacetyl nitrates, tropospheric ozone, and aldehydes. Statement 4 is correct.</p>
47	<p>C</p> <ul style="list-style-type: none"> • Ozone (O₃) is a highly reactive gas composed of three oxygen atoms. Statement 1 is correct. • It is both a natural and a man-made product that occurs in the Earth's upper atmosphere ozone (the stratosphere) and lower atmosphere (the troposphere). Statement 2 is correct. • Stratospheric ozone is formed naturally through the interaction of solar ultraviolet (UV) radiation with molecular oxygen (O₂). • Tropospheric or ground-level ozone is formed primarily from photochemical reactions between 2 major classes of air pollutants such as volatile organic compounds (VOC) and nitrogen oxides (NO_x). • Tropospheric ozone concentrations can and do occur anywhere and it is not just limited to big cities. • The "ozone layer," above the Earth's surface, reduces the amount of harmful UV radiation reaching the Earth's surface. • The ozone layer is a trace gas in the stratosphere. • The ozone layer functions as a protective gas shield that absorbs ultraviolet radiation, protecting humans and ecosystems from dangerous amounts of UV. • Most skin cancers are caused by exposure to high amounts of UV radiation. • The ozone holes were caused by widespread use of chemicals called chlorofluorocarbons. 	<p>48</p> <p>D</p> <p>Nagapattinam is a town in the Indian state of Tamil Nadu.</p> <p>The town came to prominence during the period of Medieval Cholas (9th-12th century CE) and served as their important port for commerce and east-bound naval expeditions. Statement 1 is correct.</p> <p>It was also called CholakulaVallipattinam during the period of Kulottunga I, named after one of his queens, when it was one of the important ports</p> <p>The Chudamani Vihara in Nagapattinam constructed by the Srivijayan king Sri Mara Vijayattungavarman of the Sailendra dynasty with the help of Rajaraja Chola I was an important Buddhist structure in those times. Statement 2 is correct.</p> <p>Nagapattinam was settled by the Portuguese and, later, the Dutch under</p>

	<p>whom it served as the capital of Dutch Coromandel from 1660 to 1781. In November 1781, the town was conquered by the British East India Company. It served as the capital of Tanjore district from 1799 to 1845 under Madras Presidency of the British. Statement 4 is correct.</p> <p>Kayarohanaswami Temple and Soundarajaperumal Temple, Nagapattinam are the major Hindu pilgrimage sites. The Soundarajaperumal temple finds a mention in the Brahmanda Purana in the Utharkanda Gyana Yoga section. The temple is revered in Nalayira Divya Prabandham, the 5th to 9th century CE Vaishnava canon, by Alvars</p> <p>Appar and Tirugnanasambandar, the 7th-century saint poets refer to the city as Nagai in their verses in Tevaram. The town was originally called "Nagai" and the word Pattinam was attached during the Chola era when it emerged as an important port. There are urn burials in and around the city from the Sangam period indicating some level of human habitation. Statement 3 is correct.</p> <p>The neighbouring port, Kaveripoompattinam (modern day Poompuhar), was the capital of the Chola Kingdom of the Sangam Age, referred to widely in Tamil scriptures such as Pattinappalai.</p> <p>In the early 16th century the Portuguese made commercial contacts with the town and established a commercial centre in 1554 CE. The Portuguese also conducted missionary enterprise here. In 1658, the Dutch made an agreement with King Vijaya Nayakkar of Thanjavur on 5 January 1662, by which ten villages were transferred from the Portuguese to the Dutch. The town was taken by the British from the Dutch. When the Dutch and British reached a peace agreement in 1784, Nagapattinam was formally ceded to the British.</p>	<ul style="list-style-type: none"> • It is released by Concern Worldwide and Welthungerhilfe, Non-Government Organisations from Ireland and Germany respectively. Statement 3 is correct. • The index suffers from methodological issues as three out of the four indicators used for calculation of the index are related to the health of children and cannot be representative of the entire population. • GHI scores are based on the values of 4 component indicators that includes: <ol style="list-style-type: none"> 1. Undernourishment - The share of the population with insufficient caloric intake. 2. Child stunting - The share of children under age five who have low height for their age, reflecting chronic undernutrition. 3. Child wasting - The share of children under age five who have low weight for their height, reflecting acute undernutrition. 4. Child mortality - The share of children who die before their fifth birthday, partly reflecting the fatal mix of inadequate nutrition and unhealthy environments. Statement 4 is correct. • Based on the values of the 4 indicators, a GHI score is calculated on a 100-point scale reflecting the severity of hunger. • '0' is the best possible score (no hunger) and '100' is the worst. • Each country's GHI score is classified by severity, from low to extremely alarming. • The 2023 GHI score for the world is 18.3, which is considered moderate. • The following combination of the crises have led to a cost of living crisis and exhausted the coping capacity of many countries: <ol style="list-style-type: none"> 1. COVID-19 pandemic, 2. Russia-Ukraine war, 3. Economic stagnation, 4. Impacts of climate change and 5. Intractable conflicts facing many countries of the world.
49	<p>C</p> <ul style="list-style-type: none"> • The Global Hunger Index (GHI) is a tool for comprehensively measuring and tracking hunger at global, regional and national levels. 	

	<p>India</p> <ul style="list-style-type: none">• 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. Statement 2 is correct.• 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.• India made significant strides between 2000 and 2015, with its score improving from 38.4 in 2000 to 35.5 in 2008 and 29.2 in 2015.• Over the past 8 years, the country has improved on the GHI by only 0.5 points. However, India's rank has not improved consistently. Statement 1 is incorrect.• The Ministry of Women and Child Development (MoWCD) has questioned the GHI and called it a "flawed measure of hunger that doesn't reflect India's true position".  <table><caption>GHI Score Trend for India</caption><tr><th>Year</th><th>GHI Score</th></tr><tr><td>2000</td><td>38.4</td></tr><tr><td>2008</td><td>35.5</td></tr><tr><td>2014</td><td>29.2</td></tr><tr><td>2022</td><td>28.7</td></tr></table>	Year	GHI Score	2000	38.4	2008	35.5	2014	29.2	2022	28.7	<ul style="list-style-type: none">• Vaccination is being provided against eight vaccine-preventable diseases nationally, i.e. Diphtheria, Whooping Cough, Tetanus, Polio, Measles, severe form of Childhood Tuberculosis and Hepatitis B and meningitis & pneumonia caused by Haemophilus influenza type B; and against Rotavirus Diarrhoea and Japanese Encephalitis in selected states and districts respectively• It aids to vaccinate all the children up to 5 years of age and pregnant women left out or dropped out from Routine Immunization.• The previous phases of IMI covered children up to 2 years of age and were conducted in selected high-priority districts. IMI 5.0 is the first time that the campaign is being conducted across all the districts in the country and includes children up to 5 years of age. Statement 2 is correct.• IMI 5.0 campaign aims to enhance immunization coverage for all vaccines provided under the Universal Immunization Programme (UIP) as per the National Immunization Schedule (NIS). Statement 1 is correct.• Universal Immunisation Programme (UIP) is a vaccination programme launched by the Government of India in 1985.• The campaign aims to enhance immunization coverage for vaccines provided under the Universal Immunization Programme (UIP), including BCG, OPV, IPV, Pentavalent, Rotavirus, PCV, Measles-Rubella, and others.
Year	GHI Score											
2000	38.4											
2008	35.5											
2014	29.2											
2022	28.7											
50	<p>A</p> <ul style="list-style-type: none">• Mission Indradhanush (MI) is the flagship routine immunization campaign that was launched by the Ministry of Health and Family Welfare (MoHFW) on December 2014. Statement 3 is incorrect.• It is a special catch-up campaign under the Universal Immunization Program (UIP), conducted in the areas of low immunization.	<ul style="list-style-type: none">• IMI 5.0 campaign has a special focus on improvement of Measles and Rubella vaccination coverage with the aim of Measles & Rubella elimination by 2023.• Vaccination will be provided free of cost on all public hospitals, health centres as well as selected public places.• It also aims to use U-WIN digital platform for Routine Immunization in pilot mode across all districts in the country.										

<ul style="list-style-type: none"> • U-WIN platform is a one stop digital platform which will maintain an electronic registry of vaccinations and immunisation programs. • It is designed on the lines of Co-WIN, will be used to register and vaccinate pregnant women, register births and record immunisation and vaccination details till age 13. <p>Status of Immunization in India</p> <ul style="list-style-type: none"> • India has significantly improved its immunization coverage, as indicated by data from the National Family Health Survey-5 (NFHS-5). Full immunization coverage among children aged 12-23 months increased from 62% in NFHS-4 (2015-16) to 74% in NFHS-5 (2019-20). This demonstrates substantial progress in ensuring that a larger proportion of children receive the necessary vaccines. • The coverage of the measles and rubella vaccine also saw a notable increase, rising from 81% to 88% between NFHS-4 and NFHS-5. This signifies a focused effort on improving immunization against Measles and Rubella, key components in preventing these diseases. • India's certification as polio-free by the World Health Organization (WHO) in 2014 is a significant achievement. This demonstrates the country's successful efforts in eradicating polio, a debilitating and potentially fatal disease, through widespread vaccination campaigns and surveillance systems. • India has introduced new vaccines such as Rotavirus, PCV (Pneumococcal Conjugate Vaccine), and IPV (Inactivated Polio Vaccine) under the Universal Immunization Programme (UIP). These vaccines are crucial in protecting children from diseases like diarrhoea, pneumonia, and polio, contributing to the overall reduction of child mortality and morbidity rates. • India began administration of COVID-19 vaccines on 16 January 2021. As of 4 March 2023, India has administered 	<p>over 2.2 billion doses overall, including first, second and precautionary doses of the currently approved vaccines.</p> <p>Universal Immunization Programme (UIP)</p> <ul style="list-style-type: none"> • Universal Immunization Programme was launched in 1985 after renaming expanded immunization programme of 1978. • In 1992, Child Survival and Safe Motherhood programme got Universal Immunization Programme as its part. • In 1997, Universal Immunization Programme became a part of the National Reproductive and Child Health Programme. • Universal Immunization Programme is an integral part of NRHM. • The Universal Immunization Programme is taken as one of the largest public health programmes. • As per the government data, 2.67 crores newborns and 2.9 crores pregnant women are targeted under this programme. • The programme is said to be largely responsible for the reduction of vaccine-preventable under-5 mortality rate. • Total of 12 vaccine-preventable diseases are covered against which free immunization is provided: <ol style="list-style-type: none"> 1. Diphtheria 2. Pertussis 3. Tetanus 4. Polio 5. Measles 6. Rubella, severe form of Childhood Tuberculosis 7. Hepatitis B 8. Meningitis 9. Pneumonia caused by Hemophilus Influenza type B 10. Rotavirus diarrhea 11. Pneumococcal Pneumonia and 12. Japanese Encephalitis
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	<ul style="list-style-type: none"> • Elimination of Polio in 2014 and maternal and neonatal tetanus elimination in 2015 are the two major milestones covered under Universal Immunization Programme. 		<ul style="list-style-type: none"> • Seychelles - Recently, India signed a defence agreement with Seychelles for the construction of an Indian naval base on Assumption Island. The main purpose of this Indian naval base outside India is to counter the String of Pearls strategy by China.
51	<p>B</p> <ul style="list-style-type: none"> • Tajikistan - The Indian air base in Tajikistan or the Farkhor Air Base is the first and one of the most important Indian air bases outside India. It is located 130 km to the southeast of Dushanbe, the capital of Tajikistan. This air base is operated by the Indian Air Force in collaboration with the Tajik air force. • Bhutan - The Indian Military Training Team more commonly referred to as the IMTRAT is based in Haa Dzong in Western Bhutan. This military base outside India is an Indian army base specifically serving as a training facility in Bhutan. • Nepal -The Indian air force has set up an overseas air force base in Surkhet. This airstrip also protects Nepal against all forms of aerial threats. Apart from these arrangements, India also provides armament, high altitude warfare and hand to hand combat training to Nepalese military forces. • Madagascar - This Indian military base was established In 2007 in northern Madagascar to detect and monitor shipping movements and listen in on marine communications in the Indian Ocean. This was India's first foreign listening post. • Mauritius - India is working with Mauritius to set up a military base on North Agalega Island. This island has been leased to the Indian military for deploying a coastal surveillance radar system and developing several strategic assets. • Maldives - The Indian military base in Maldives i.e., the Coastal Surveillance Radar station protects the Maldives against the danger of piracy in the surrounding waterways. 		<ul style="list-style-type: none"> • Oman - India has a total of 4 military bases in Oman - 3 naval bases and 1 air base. India has a listening station in Ras al Hadd in Oman. Listening stations are stations set up by a country near enemy lines to detect movements by sound and also for intercepting crucial electronic communications. India also has berthing privileges at the Muscat naval base. This means that the Indian navy vessels can enter and leave the base at all times and access the facilities at the Muscat naval base. Duqm, the central-eastern port town of Oman on the Arabian Sea has an Indian Air Force base and an Indian Naval base. • Iran - Chabahar Port in south-eastern Iran is Iran's one and only oceanic port located on the Gulf of Oman. In December 2018, India took over the operations of the Chabahar Port. India signed a \$2 billion rail cooperation pact with Iran in January 2018. The agreement includes an MoU (Memorandum of understanding) worth 600 million US Dollars to help Iran acquire freight wagons and locomotives from India. • Mozambique - India has a strong working military relationship with the southeast African nation of Mozambique. The Indian Navy was in charge of Mozambique's maritime security during the World Economic Forum and the African Union summit held in Mozambique in 2003. • Sri Lanka - India acquired a Sri Lankan Air Force base in Hambantota in 2018 to monitor the Chinese Navy. This Air Force Base outside India could be converted into a fully operational Indian Air Force base in Sri Lanka and be used to counter any potential Chinese threats.


	<ul style="list-style-type: none"> • Singapore - Singapore signed a naval cooperation agreement with both China and India on the 29th of November 2017, to counter the Chinese expansionism strategy in the Strait of Malacca. This naval cooperation agreement has helped India establish its military presence on the Chinese trade route. This is very crucial since over 70% of China's trade is done through the Strait of Malacca. Singapore's Changi Naval Base serves as an Indian Naval base outside India. 	<p>Detroit has had the most bids whilst failing to win the rights to host the games once. Los Angeles has had the most bids in the Summer Games.</p> <p>Cortina d'Ampezzo and Lake Placid have had the most bids in the Winter Games.</p> <p>Hungary has had the most bids in the Summer Games that have failed to win the rights to host the games at least once, with six bids--all from Budapest. This also ties it with Turkey for most bids for Olympic Games in general without a successful bid (Turkey has bid for the Summer Games five times and the Winter Games once).</p> <p>Sweden has had the most bids in the Winter Games that have failed to win the rights to host the games at least once, with nine bids.</p> <p>Beijing is the only city to host both the Summer and Winter Game.</p>
52	<p>D</p> <p>Bidding process to host Olympics:</p> <p>It must be noted that the bid to host the Olympics does not have to be restricted to just one city, it can be a multi-city, a regional, or even a "multi-nation" bid. Statement 1 is correct.</p> <p>Once a city or a region sends a letter to the IOC signalling its intent to host a future edition of the Olympics, the IOC gets into a "continuous dialogue phase" with them.</p> <p>There is no real timeline for how long the continuous dialogue phase might last as this is a non-committal stage.</p> <p>Once there is a seriousness in a bid to progress to the next level, the bid will enter the "targeted dialogue phase" where a city/region would be known as a preferred host city. Statement 2 is correct.</p> <p>There are over 20 guarantees that a host of the Olympics need to furnish to the IOC before hosting the Olympics.</p> <p>This includes infrastructure guarantees, accommodation agreements, security guarantees, public services guarantee, government services guarantee etc.</p> <p>London is the only city to have bid more than once and never lost a bid. Statement 3 is correct.</p>	<p>If India wins the bid to host Olympics 2036 Then it will become the 4th Asian country to do so after JAPAN, CHINA AND SOUTH KOREA.</p> <p>It is the members of the IOC, meeting at their Session, who choose the host. Electing the host for the Olympic Games is one of the powers of the Session.</p> <p>The host city is elected by a majority of the votes cast by secret ballot. Each active member has one vote. An IOC member must refrain from taking part in a vote when the vote concerns an Olympic Games host election in which a city or any other public authority in the country of which he is a national is a candidate.</p> <p>The International Olympic Committee (IOC) is a non-governmental international organisation that came into existence in 1894. Statement 4 is correct.</p> <p>Objectives of IOC</p> <p>The IOC has the aim of ensuring the regular holding of the Olympic Games and fostering Olympism and the Olympic movement.</p> <p>The Committee decides the rules and regulations of the Olympic Games. It also decides when and where the next Olympics event will be held.</p>

<p>Structure of IOC</p> <p>The IOC is a permanent organisation that elects its own members.</p> <p>Each member must speak French or English and be a citizen of or reside in a country that has a National Olympic Committee.</p> <p>With very few exceptions, there is only one member from any one country.</p> <p>Members were originally elected for life, but those elected after 1965 must retire at 75.</p> <p>The IOC is the final authority on all questions concerning the Olympic games and the Olympic movement.</p> <p>It was for the first time that 204 National Olympic Committees represented their countries at the 2012 London Olympic Games.</p> <p>The Executive Board which meets four-five times a year to manage the IOC's affairs has a President elected for an eight-year term and four Vice-Presidents who are each elected for a four-year term.</p> <p>There are usually six members on the Executive Board. These members are elected for a four-year term.</p> <p>The administration is carried under the authority of a Director-General and a Secretary-General.</p> <p>The Olympic Charter is the codification of the fundamental principles, rules and by-laws adopted by the IOC.</p> <p>It governs the organisation and operation of the Olympic Movement and stipulates the conditions for the celebration of the Olympic Games.</p> <p>Process of inclusion of a new game at Olympics</p> <p>The first step in the process of becoming an Olympic sport is recognition as a sport from the International Olympic Committee (IOC). Once a sport is recognized, it then moves to International Sports Federation (IF) status. At that point, the international organization administering the sport must enforce the Olympic Movement Anti-Doping Code and rules set forth by the Olympic Charter.</p>	<p>A sport may gain IOC recognition but not become a competing event at the Olympic Games</p> <p>Bowling and Chess are recognized sports, but they do not compete at the Games. To become a part of the Games, the sport's IF must apply for admittance by filing a petition establishing its criteria of eligibility to the IOC. The IOC may then admit an activity into the Olympic program in one of three different ways: as a sport; as a discipline, which is a branch of a sport; or as an event, which is a competition within a discipline.</p>
	<p>53</p> <p>A</p> <p>About Special Leave Petition (SLP)</p> <p>The Supreme Court of India has been given extraordinary jurisdiction under Article 136 of the Constitution. Statement 1 is correct,</p> <p>By virtue of this Article, the court can grant special leave to appeal from any judgment, decree, determination, sentence, or order in any cause or matter, passed or made by any court or tribunal in the territory of India (with the exception of military tribunals and court martial). Statement 2 is incorrect.</p> <p>It can only be exercised when a substantial question of law or gross injustice has been committed.</p> <p>A judgement, decree, or order need not be final for an SLP. An interim or interlocutory order, decree or judgement can also be challenged.</p> <p>It is a discretionary/optional power of the SC and the court may, in its discretion, decrease to grant leave to appeal.</p> <p>The aggrieved party can't affirm a special leave to offer under Article 136 as a right. Statement 3 is incorrect.</p> <p>Who can file an SLP?</p> <p>Any aggrieved party can file SLP against judgement or order of refusal of grant of certificate for appeal to SC.</p> <p>An SLP can be filed for any civil or criminal matter, etc. Statement 4 is incorrect.</p> <p>Time limit to file SLP:</p>

	<p>It can be filed against any judgment of the High Court within 90 days from the date of judgment or</p> <p>It can be filed within 60 days against the order of the High Court refusing to grant the certificate of fitness for appeal to SC.</p> <p>Procedure for a Special Leave Petition (SLP):</p> <p>A SLP must contain all the facts upon which the SC is to decide, which revolve around the grounds on which an SLP can be filed.</p> <p>The said petition needs to be duly signed by an Advocate-on-Record.</p> <p>The petitioner must include a statement within the SLP stating that no other petition has been filed in a High Court.</p> <p>Once the petition is filed, the SC will hear the aggrieved party and depending upon the merits of the case, will allow the opposite party to state their part in a counter affidavit.</p> <p>After the hearing, if the Court deems the case fit for further hearing, it will allow the same; otherwise it will reject the appeal.</p>	55	<p>C</p> <p>What is Green Credit?</p> <ul style="list-style-type: none"> • 'Green credit' is a singular unit of an incentive provided for a specified activity, delivering a positive impact on the environment. • Green Credit Programme is a market-based mechanism that focuses on afforestation and water conservation. Statement 1 is correct. • It can be earned by individuals, farmer-producer organisation (FPO), industries, rural and urban local bodies, among other stakeholders for their environment positive actions. • Programme - The Green Credit Programme (GCP) launched, was first announced in the 2023-24 budget under Mission LiFE. Statement 2 is correct. • The Ministry of Environment issued the draft 'Green Credit Programme Implementation Rules 2023' under the Environment Protection Act of 1986.
54	<p>D</p> <p>In line with the announcement made by the leaders of the two countries in July 2023 during the visit of the President of Sri Lanka to India, the ferry service between Nagappatinam in India and Kankesanthurai (KKS) near Jaffna in the Northern Province of Sri Lanka commenced on October 14, 2023.</p> <p>The high-speed ferry operated by the Shipping Corporation of India has a capacity of 150 pax. The distance of about 60 nm (110 Km) between Nagapattinam and KKS will be covered in approx. 3.5 hours depending on sea conditions. In order to commence the service, the Government of India supported the Tamil Nadu Maritime Board in upgrading facilities at the Nagapattinam port. Similarly, the Government of Sri Lanka has created necessary infrastructure at the port of KKS.</p> <p>Vessel Cheriyanpani travelled with 50 passengers on its inaugural journey to Sri Lanka and will return back to India by evening with passengers from Sri Lanka.</p>		<p>How will the program be implemented?</p> <ul style="list-style-type: none"> • The Green Credit Programme (GCP) aims to leverage a competitive market-based approach and incentivise voluntary environmental actions of various stakeholders. • The environment ministry has identified 8 select activities for which green credit can be earned. Statement 3 is incorrect. • The 8 sectors <ol style="list-style-type: none"> 1. Tree plantation-based green credit 2. Water-based green credit 3. Sustainable agriculture-based green credit 4. Waste management-based green credit 5. Air pollution reduction-based green credit 6. Mangrove conservation and restoration-based green credit 7. Eco mark based green credit 8. Sustainable building and infrastructure-based green credit • Thresholds and benchmarks will be

<p>developed for each green credit activity under the programme.</p> <ul style="list-style-type: none"> • The mechanism will be implemented in a phased manner. • Trade Market - The green credits will be tradable and be made available for trading on a domestic market platform. • The Trading Service Provider accredited by the GCP administrator will establish the trading platform for the exchange of Green Credit Certificates. • Implementation - A steering committee headed by the environment secretary will govern the implementation of GCP. • The steering committee will not only approve procedures for institutionalising the GCP. • It also approves its rules and regulations and make recommendations to the central government for issuance of Green Credit Certificate. • Administrator - The Indian Council of Forestry Research and Education (ICFRE) will be the administrator of the programme. Statement 4 is correct. • ICFRE will manage, monitor and operate the entire programme. • The institute will develop guidelines, processes and procedures for implementation of the programme. <p>What are the advantages of GCP?</p> <ul style="list-style-type: none"> • It accounts for and incentivise individual and community actions, besides corporate and businesses. • The environmental activity generating Green Credits under Green Credit Programme (GCP) may have climate co-benefits such as reduction or removal of carbon emissions. • Such activity may accrue both green credits as well as carbon credits which may be sold under Green Credit market or carbon market respectively. • Helps to realise the vision of 'Mission LiFE' through pro-planet people and entities. • The GCP will encourage private sector 	<p>industries and companies as well as other entities to meet their existing obligations, stemming from other legal frameworks.</p> <p>What are the concerns around GCP?</p> <ul style="list-style-type: none"> • There is a strong risk of greenwashing through such market-based mechanisms. <p>Greenwashing refers to the practice of making false or exaggerated claims about environmental sustainability or achievements to create a positive image while not actually delivering significant environmental benefits. Statement 5 is incorrect.</p> <ul style="list-style-type: none"> • It also raises serious questions about how rigour of monitoring will be maintained. <p>56 D</p> <ul style="list-style-type: none"> • An unwanted pregnancy due to failure of contraceptive methods is the same as a forced pregnancy for which termination is allowed up to 24 weeks. • The Medical Termination of Pregnancy Act (MTP Act), 1971 allows termination of pregnancy in 3 stages. (AMENDED IN 2021) • Termination of pregnancy up to 20 weeks is allowed on the advice of one doctor. Statement 1 is correct. • If a pregnancy is 20-24 weeks, the right to seek abortion is determined by two registered medical practitioners as an exception, but only under certain categories. • After 24 weeks of pregnancy, a medical board must be set up in "approved facilities", which may "allow or deny termination of pregnancy" only if there is substantial foetal abnormality. Statement 2 is correct. • Enhancing the upper gestation limit from 20 to 24 weeks for special categories of women which will be defined in the amendments to the MTP Rules and would include 'vulnerable women including survivors of rape, victims of incest and other vulnerable
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	<p>women (like differently-abled women, Minors) etc. Statement 3 is correct</p> <ul style="list-style-type: none"> • Upper gestation: Upper gestation limit not to apply in cases of substantial foetal abnormalities diagnosed by the Medical Board. The composition, functions and other details of Medical Board to be prescribed subsequently in Rules under the Act. • Medical Board: The Medical Board shall consist of a gynaecologist, a paediatrician, a radiologist or sonologist and such other member may be notified. • Protection of Privacy of a Woman: Name and other particulars of a woman whose pregnancy has been terminated shall not be revealed except to a person authorised in any law for the time being in force. • Section 3B of the Rules under the MTP Act lists 7 categories of forced pregnancies that includes • Statutory rape in case of minors or sexual assault and • Women with disabilities or when there is a change in marital status of women during pregnancy. • But in several cases the Supreme Court has allowed termination beyond 26 weeks for rape survivors. • Foetal viability is the ability of a human foetus to survive outside the uterus. • The criticism of India's law is that the decision to terminate after 20 weeks is shifted to doctors and not the woman. <p>Unmarried women can also access abortion under the above-mentioned conditions, because it does not mention the requirement of spousal consent. So, statement 4 is correct.</p> <p>If the woman is a minor, however, the consent of a guardian is required</p>		<p>immune cells called T-cells are genetically modified in a laboratory and are injected back into the patient to enable the cells to locate and destroy cancer cells more effectively.</p> <ul style="list-style-type: none"> • CAR T-cell therapy is generally accompanied by some side effects. One of them, according to the American Cancer Society, is cytokine release syndrome (CRS). Statement 2 is correct. <p>It is when CAR T-cells multiply, they can release large amounts of chemicals called cytokines into the blood, which can ramp up the immune system.</p> <ul style="list-style-type: none"> • NexCAR19 is an indigenously developed CD19-targeted CAR-T cell therapy. Statement 3 is correct. • CD-19 is biomarker for B lymphocytes and can be utilised as a target for leukemia immunotherapies. • It was developed by the Immunoadoptive Cell Therapy Private Limited (ImmunoACT), an IIT Bombay-incubated company. • NexCAR19 has shown an excellent balance of efficacy and low toxicity, which is a significant advantage in clinical management (post-infusion) of the patients in our resource-constrained settings.
57	<p>C</p> <ul style="list-style-type: none"> • Statement 1 is correct: CAR-T-cell therapy is a type of cancer immunotherapy treatment. • Statement 1 is correct: In this, blood is first drawn from the patient. Then, 	58	<p>B</p> <ul style="list-style-type: none"> • It is a unique traditional ginger variety of Meghalaya. Statement 1 is incorrect. • It is also known as "Syng Makhir" or "Ing Makhir" and is one of the best varieties found in India. Statement 2 is correct. • In India, Madhya Pradesh tops in the production of Ginger. Statement 3 is correct. <p>Conditions for ginger Production:</p> <p>Ideal pH range of ginger is 5- 7.5. It grows well in humid climate and is cultivated from sea level up to an altitudes of about 1500 m above Mean Sea Level. However, the optimum elevation for its successful cultivation is in the range of 300-900 m. Ginger can be grown both, under rainfed and irrigated conditions.</p>

	<p>Mrs. Trinity Saioo also known as Turmeric Trinity is from Mulieh village, West Jaintia Hills District, Meghalaya. She is working with the Lakadong Variety of turmeric and assists the unread women in learning the methods of organic farming to boost their earnings. Today she is working with more than 900 farmers and probably touching thousands. She was presented with the fourth highest civilian award 'Padma Shri' for leading turmeric farming.</p> <p>Lakadong turmeric</p> <ul style="list-style-type: none"> • It is a variety of turmeric that is found in the Jaintia Hills district of Meghalaya. • It is known as the world's best turmeric due to its high curcumin content with 7-12%. • Curcumin has numerous health benefits, including anti-inflammatory and antioxidant properties. 	<p>European Commission and eight other countries.</p> <p>Statement 2 is incorrect: Initially it was mandated to examine and develop measures to combat money laundering and in 2001, the FATF expanded its mandate to also combat terrorist financing.</p> <p>Statement 3 is correct: FATF mutual evaluations are in-depth country reports analysing the implementation and effectiveness of measures to combat money laundering and terrorist financing. Mutual evaluations are peer reviews, where members from different countries assess another country. A mutual evaluation report provides an in-depth description and analysis of a country's system for preventing criminal abuse of the financial system as well as focused recommendations to the country to further strengthen its system.</p> <p>To assist assessment teams in upcoming mutual evaluations, the FATF compiles input from non-profit organisation (NPOs) and other civil society organisation on money laundering and terrorist financing risk and context.</p> <p>For NPOs-as defined by the FATF-this could include information related to the implementation of risk-based measures to protect the sector from potential terrorist financing abuse. Similarly, input could include experiences of the application of the risk-based measures set out in Recommendation 8, or suggestions to help the assessment team identify which NPOs to gather more input from and/or interview during the on-site visit.</p>
59	<p>B</p> <p>Statement 1 is incorrect: Haifa city is located in northwestern Israel. The Port of Haifa is the second largest port in Israel in terms of shipping containers and the biggest in shipping tourist cruise ships.</p> <p>Statement 2 is incorrect: The principal port of the country lies along the Bay of Haifa overlooking the Mediterranean Sea.</p> <p>Statement 3 is correct: Haifa city is a UNESCO World Heritage Site and a destination for Bahai pilgrimage.</p> 	
60	<p>A</p> <p>Statement 1 is incorrect: The Financial Action Task Force (FATF) was established in 1989 by the G7 to examine and develop measures to combat money laundering. It originally included the G7 countries, the</p>	<p>61</p> <p>B</p> <p>Pair 1 and 3 is incorrect. Cholamu Lake is in Sikkim.</p> <p>Hussain Sagar is in Telangana.</p>

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D

Statement 1 is incorrect: Hepatitis C cannot be diagnosed through a physical examination alone. A healthcare provider cannot determine the presence of Hepatitis C based on visible symptoms or physical signs. Diagnosis requires specific blood tests that detect the presence of HCV antibodies and viral RNA in the bloodstream. These tests are essential for confirming the infection.

Statement 2 is correct: Hepatitis C can be

transmitted from an infected mother to her baby during childbirth. This mode of transmission is known as perinatal or vertical transmission. However, with appropriate medical care and antiviral interventions, the risk of transmission from mother to child can be significantly reduced.

Hepatitis C can lead to serious liver complications, including the development of liver fibrosis (scarring of the liver tissue). Over time, this scarring can progress to cirrhosis, a condition where extensive scarring disrupts the liver's function. If left untreated, cirrhosis can lead to liver failure, which is a life-threatening condition.


Statement 3 is correct: There is no approved vaccine for Hepatitis C. While there are vaccines available for Hepatitis A and Hepatitis B, there is no specific vaccine to prevent Hepatitis C. Preventative measures primarily focus on avoiding exposure to infected blood, such as not sharing needles and practising safe sex.

Statement 4 is correct. Egypt has become the first country to achieve the World Health Organization's "gold tier" status on the path to elimination of Hepatitis C.

About Hepatitis			
	Hepatitis A	Hepatitis B	Hepatitis C
Causative Virus	Hepatitis A Virus (HAV)	Hepatitis B Virus (HBV)	Hepatitis C Virus (HCV)
Transmission	Fecal-oral route (contaminated food/water)	Blood and body fluids (unsafe sex, sharing needles)	Blood-to-blood contact (sharing transfusions)
Needles,			
Vaccine Available	Yes	Yes	Yes
Chronic Infection	No (usually acute)	Yes (can become chronic)	Yes (often becomes chronic)
Symptoms	Mild flu-like symptoms, jaundice	Variable, from none to severe symptoms	Often asymptomatic, but can lead to liver damage
Chronic Complications	None	Cirrhosis, liver cancer	Cirrhosis, liver cancer
Preventable by Vaccine	Yes	Yes	No
Treatment	Supportive care	Antiviral medications	Antiviral medications

	<p>Criteria for "gold tier" status:</p> <p>The "gold tier" status to reach the stated goal of eliminating hepatitis C includes meeting specific criteria such as</p> <ul style="list-style-type: none"> • ensuring 100% blood and injection safety Statement 5 is correct. • maintaining a minimum of 150 needles/ syringes per year for people who inject drugs (PWID), • diagnosis of over 80% of people living with chronic hepatitis C virus (HCV), • treating of over 70% of individuals diagnosed with HCV Statement 5 is correct. • and the establishing of a sentinel surveillance programme for hepatitis sequelae, including liver cancer. • According to the WHO, Egypt became the first country to achieve "gold tier" status on the path to elimination of hepatitis C as per the global health body criteria. • Egypt has diagnosed 87% of people living with hepatitis C and has provided 93% of those diagnosed with curative treatment, exceeding the WHO gold tier targets of diagnosing at least 80% of people living with hepatitis C and providing treatment to at least 70% of diagnosed people. <p>How did Egypt achieve this?</p> <ul style="list-style-type: none"> • "100 Million Healthy Lives" Initiative: Egypt's ambitious initiative led to a substantial reduction in hepatitis C prevalence, from 10% in 2016 to 5% in 2018 and an estimated less than 1% in 2019, as reported by the Africa CDC. • Leadership Role: Egypt extends support to other African countries, aiming to replicate its success in hepatitis C elimination, including enhancing access to affordable treatment. 	<p>human-health impacts, both beneficial and adverse.</p> <ul style="list-style-type: none"> • Environment Impact Assessment in India is statutorily backed by the Environment Protection Act, 1986 which contains various provisions on EIA methodology and process. Statement 1 is correct. • The EIA process finds its origin from United States where due to huge public pressure; the government enacted National Environmental Policy Act (NEPA) in 1970s. • The role of EIA process was formally recognized at the Earth Summit in Rio Conference in 1992. <p>The Indian experience with Environmental Impact Assessment began over 20 years back. It started in 1976-77 when the Planning Commission asked the Department of Science and Technology to examine the river-valley projects from an environmental angle. This was subsequently extended to cover those projects, which required the approval of the Public</p> <ul style="list-style-type: none"> • On 27 January 1994, the Union Ministry of Environment and Forests (MEF), Government of India, under the Environmental (Protection) Act 1986, promulgated an EIA notification making Environmental Clearance (EC) mandatory for expansion or modernisation of any activity or for setting up new projects listed in Schedule 1 of the notification. Since, there have been 12 amendments made in the EIA notification of 1994. <p>2006 Amendment to the EIA Notification</p> <ul style="list-style-type: none"> • Decentralisation of Project Clearances: It classified the developmental projects in two categories: • Category A (national level appraisal): projects are appraised by Impact Assessment Agency (IAA) and the Expert Appraisal Committee (EAC) • Category B (state level appraisal): State Level Environment Impact Assessment Authority (SEIAA) and State Level Expert
63	<p>B</p> <p>Environmental Impact Assessment (EIA) is a process of evaluating the likely environmental impacts of a proposed project or development, taking into account inter-related socio-economic, cultural and</p>	

<p>Appraisal Committee (SEAC) provide clearance to the Category B projects. Statement 2 is correct.</p> <ul style="list-style-type: none"> • Introduction of Different Stages: The Amendment introduced four stages into EIA Cycle; Screening, Scoping, Public hearing and Appraisal. • Category A projects require mandatory environmental clearance and thus they do not have to undergo the screening process. Statement 3 is incorrect. • Category B projects undergo a screening process and are further classified into B1 (Mandatorily requiring EIA) and B2 (Not requiring EIA). • Projects with Mandatory Clearance: Projects such as mining, thermal power plants, river valley, infrastructure (road, highway, ports, harbours and airports) and industries including very small electroplating or foundry units are mandated to get environment clearance. <p>The Ministry of Environment, Forest and Climate Change (MoEF&CC) has published the draft Environment Impact Assessment (EIA) Notification 2020, with the intention of replacing the existing EIA Notification, 2006 under the Environment (Protection) Act, 1986.</p> <p>The Key Proposals of the 2020 Draft include:</p> <p>Reduced Time for Public Hearings: One of the major steps of the EIA Mechanism is the public participation. The 2020 draft proposes to reduce the notice period for public hearings from 30 days to 20 days. Statement 4 is incorrect.</p> <p>Exemption of Projects: Furthermore, by classifying a number of projects into A, B1 and B2, a host of projects are exempted from public scrutiny.</p> <p>Category B2 projects do not require mandatory Environment Clearance (EC), unlike the Category A and B1 projects.</p> <p>Exempted Projects: The projects under this exempted category include:</p> <ul style="list-style-type: none"> • Offshore and onshore oil, gas and shale exploration. • Hydroelectric projects up to 25 MW. 	<ul style="list-style-type: none"> • Irrigation projects between 2,000 and 10,000 hectares of command area. • Small and medium cement plants. • Acids other than phosphoric or ammonia, sulphuric acid. • MSMEs in dye and dye intermediates, bulk drugs, synthetic rubbers, medium-sized paint units. • All inland waterway projects and expansion or widening of highways between 25 km and 100 km with defined parameters. • These include roads that cut through forests and dredging of major rivers. • Aerial ropeways in ecologically sensitive areas. • Specified building construction and area development projects; built-up area up to 1,50,000 sq. m. <p>Post-clearance compliance: It implies that once a project gets approved by the concerned authority, the proponent projects are required to adhere to certain rules laid down in the EIA report in order to ensure that no further environmental damages take place.</p> <p>Annual Submission of Reports: The new draft EIA, proposes the submission of compliance reports annually whereas as per the 2006 notification, the compliance report was to be submitted every six months.</p> <p>Report Prepared Solely by Project Proponents</p> <p>No Public Reporting for Non-Compliance: The EIA Notification 2020 excludes reporting of violations and non-compliance by the public. Instead, the government will take cognisance of reports only from the violator-promoter, government authority, Appraisal Committee or Regulatory Authority.</p> <p>Post-facto Clearance: Another major proposal in the draft 2020 is granting 'post-facto clearance' where a project that has been operating without environmental clearance, can be regularised or allowed to apply for clearance.</p> <p>Penalty for Firms: Firms found violating the</p>
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	terms of their establishment, if they have to get the clearance, however, will have to pay a penalty.		<ul style="list-style-type: none">It would be one of the greenest ports in the world, a fitting complement to the natural beauty of environment-conscious Kerala. <p>Statement 4 is incorrect. It is situated in Kerala.</p> <p>The depth at Vizhinjam is more than that of any competing port in the country and is either more than or equal to that of international competing ports like Singapore, Colombo and Salalah in Oman. This will enable large container vessels traversing the international shipping routes to seamlessly access the port at Vizhinjam. The strategic location of the port, being the only one in India to be so close to the east-west shipping channel, is a major asset.</p> <p>Vizhinjam port location with respect to International East-West shipping route.</p>								
64	<p>D</p>  <p>Vizhinjam Port Project</p> <p>The Vizhinjam Port Project, which started in 2015, is a large-scale project undertaken by the Kerala government. It is primarily intended for container transshipment, as well as multi-purpose and break bulk cargo. The Vizhinjam port is being built on a public-private-partnership (PPP) mode with funding from the Kerala government, Centre and the Adani Ports Private Limited being the developer. In fact, it is the first greenfield port project to receive viability gap funding from the government of India. Statement 2 is correct.</p> <ul style="list-style-type: none">The Vizhinjam port is developed as an all-weather in a landlord model on a design, build, finance, operate, and transfer (DBFOT) basis. Statement 1 is correct.Once completed it will be India's first Mega Transshipment Container (first exclusive transshipment port) Terminal with 30 berths and the capacity to handle massive "megamax" container ships. Statement 5 is correct.The port is expected to compete for transshipment traffic with Colombo, Singapore, and Dubai.It is the first semi-automated container terminal in India. It will be a global bunkering hub, supplying clean and green fuel like hydrogen and ammonia. Statement 3 is correct.	65	<p>D</p> <ul style="list-style-type: none">The Centre seeks to include traditional Indian medicines in the 11th revision of the World Health Organisation's International Classification of Diseases (ICD).The traditional Indian medicine system is categorized into Ayurveda, Siddha, Unani and Yoga, Naturopathy, and Homoeopathy <p>About International Classification of Diseases (ICD):</p> <table><tr><td>Purpose</td><td>Standardized system for classifying and coding diseases, health conditions, and related information. Statement 1 is correct.</td></tr><tr><td>Established</td><td>1893, by International Statistical Institute (WHO's predecessor)</td></tr><tr><td>Authority</td><td>Developed and maintained by the World Health Organization (WHO). Statement 2 is correct.</td></tr><tr><td>Scope</td><td>Covers a wide range of diseases, health conditions, injuries, and health-related factors.</td></tr></table>	Purpose	Standardized system for classifying and coding diseases, health conditions, and related information. Statement 1 is correct.	Established	1893, by International Statistical Institute (WHO's predecessor)	Authority	Developed and maintained by the World Health Organization (WHO). Statement 2 is correct.	Scope	Covers a wide range of diseases, health conditions, injuries, and health-related factors.
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	<p>Coding System Assigns unique alphanumeric codes to each health condition for consistent recording and reporting. Statement 3 is correct.</p> <p>Global Applicability Internationally recognized and used for health data collection, analysis, and reporting.</p> <p>Updates Periodically updated to reflect advances in medical knowledge and changing health trends.</p> <p>Latest Version ICD-11 became effective in January 2022. Statement 4 is correct.</p> <p>Uses Clinical diagnosis, health record documentation, research, health policy, and resource allocation.</p> <ul style="list-style-type: none"> • Universal Language: The ICD provides a universal language that enables healthcare professionals worldwide to share standardized information. • Traditional Medicine Module: The 11th revision includes a module dedicated to traditional medicine conditions, offering a standardized way to collect and report data on these conditions internationally. • Formal Recognition: Ayurveda and related Indian traditional healthcare systems are formally recognized and widely practised in India, making a strong case for their inclusion. • Chinese Medicine Inclusion: After a decade of consultations, ICD-11 included Module-1, covering traditional medicine conditions originating in ancient China. 	<p>Los Angeles was formalised after a vote at the 141st International Olympic Committee (IOC) Session in Mumbai. Statement 3 is incorrect.</p> <p>The sport is set to be a six-team T20 event, with the USA likely to get a direct berth on the virtue of being hosts. This would leave just five spots for other teams from around the world to vie for. The qualification process will be announced at a later date, the IOC said. Statement 2 is incorrect.</p> <p>Cricket was last played at the Olympics in Paris 1900, when just two teams competed: France and Great Britain. The two played a Test match over two days, fielding 12 players on each side. While the match was never given the status of a first-class game, Great Britain won the contest. Statement 1 is incorrect.</p> <p>What is the rule?</p> <p>Olympic host cities can propose new sports for the games they host. However, the total number of athletes must not exceed 10,500 to control costs. Statement 4 is correct.</p> <p>E.g., Tokyo 2020's organising committee was allowed to add surfing, baseball/softball and skateboarding when it hosted the event. So, if cricket and other sports are added, some existing categories may be removed.</p> <p>Additionally, four other sports were also approved by the IOC in its 141st session:</p> <ol style="list-style-type: none"> 1. Baseball/Softball: These sports have a rich history in the Olympics, with recent inclusion in Tokyo 2020. They are particularly popular in countries like Japan and the USA. 2. Flag Football: A variant of American football, flag football will make its debut at the Los Angeles 2028 Olympics. 3. Lacrosse (Sixes): Lacrosse was previously included in the St Louis 1904 Olympics and the London 1908 Olympics. 4. Squash: Squash will also make its Olympic debut in 2028. <p>Process of inclusion of a new game at Olympics</p>
66	<p>C</p> <p>Cricket and squash were included into the LA 2028 program along with lacrosse, flag football and baseball/softball. It must be noted that the inclusion of the sports was not unanimous, with two IOC members voting against it.</p> <p>Both sports' inclusion at the Olympics in</p>	

The first step in the process of becoming an Olympic sport is recognition as a sport from the International Olympic Committee (IOC). Once a sport is recognized, it then moves to International Sports Federation (IF) status. At that point, the international organization administering the sport must enforce the Olympic Movement Anti-Doping Code and rules set forth by the Olympic Charter.

A sport may gain IOC recognition but not become a competing event at the Olympic Games.

Bowling and Chess are recognized sports, but they do not compete at the Games. To become a part of the Games, the sport's IF must apply for admittance by filing a petition establishing its criteria of eligibility to the IOC. The IOC may then admit an activity into the Olympic program in one of three different ways: as a sport; as a discipline, which is a branch of a sport; or as an event, which is a competition within a discipline

foreign central and commercial banks. Statement 1 is correct.

Reserve Bank of India Act and the Foreign Exchange Management Act, 1999 set the legal provisions for governing the foreign exchange reserves. Reserve Bank of India accumulates foreign currency reserves by purchasing from authorized dealers in open market operations. Foreign exchange reserves of India act as a cushion against rupee volatility once global interest rates start rising. Statement 2 is incorrect.

The fall in Forex reserve is because of selling dollars by RBI to support and also because of the impact on valuation due to strengthening of dollar. The Rupee has depreciated as the strengthening of dollar index and higher US bond yields have triggered the outflows from India. Statement 3 is incorrect.

67

B



68

B

India's foreign exchange reserves are mainly composed of US dollar in the forms of US government bonds and institutional bonds. with nearly 6.75% of forex reserves in gold. The FCAs also include investments in US Treasury bonds, bonds of other selected governments and deposits with

69

C



70

B

Electoral Bonds Scheme

- Features
- Introduced with the Finance Bill, 2017, the Electoral Bond Scheme was notified on January 29, 2018.
- An Electoral Bond is like a promissory note that may be purchased by a person who is a citizen of India or incorporated or established in India. Statement 1 is incorrect.
- Electoral Bonds, either singly or jointly with other individuals.

	<ul style="list-style-type: none"> • The bonds are like banknotes that are payable to the bearer on demand and are interest-free. Statement 2 is correct. • Only the Political Parties registered under Section 29A of the Representation of the People Act (RPA), 1951 (43 of 1951) and which secured not less than one percent of the votes polled in the last General Election to the House of the People or the Legislative Assembly of the State, shall be eligible to receive the Electoral Bonds. Statement 4 is incorrect. • Procedure • The State Bank of India (SBI) has been authorised to issue and encash Electoral Bonds through its 29 Authorized Branches. Statement 3 is correct. • The bonds are sold by the SBI in denominations of Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh and Rs 1 crore. • One can purchase these bonds only digitally or through cheques. • The Electoral Bonds can be encashed by an eligible Political Party only through a Bank account with the Authorized Bank. • The Electoral Bond deposited by an eligible Political Party in its account is credited on the same day. • Electoral Bonds shall be valid for fifteen calendar days from the date of issue and no payment is being made to any payee Political Party if the Electoral Bond is deposited after expiry of the validity period. 	<ul style="list-style-type: none"> • Constitutional Provisions: Parliamentary privileges are defined in Article 105 of the Indian Constitution. The members of Parliament are exempted from any civil or criminal liability for any statement made or act done in the course of their duties. • Co-terminus with membership: The privileges are claimed only when the person is a member of the house. As soon as he ends to be a member, the privileges are said to be called off. • In India, the privileges of members of Parliament are specified in the Constitution, the Rules of Procedure and Conduct of Business in Lok Sabha, and the Rules of Procedure and Conduct of Business in Rajya Sabha. • It is important to note that parliamentary privileges are not absolute and are subject to certain limits. For example, MPs are expected to use their privileges responsibly and not abuse them for personal gain. <p>According to the Constitution of India, Articles 105 and 122 outline the privileges of Parliament, while Articles 194 and 212 pertain to the privileges of state governments.</p> <p>Facts</p> <ol style="list-style-type: none"> 1. The provisions related to the parliamentary privileges of the parliament (members and committees) can be amended using the simple majority of the parliament. Statement 2 is incorrect. 2. President is not entitled to the parliamentary privileges. Statement 3 is incorrect. 3. Without taking the oath before the Indian President, the privileges and immunities are not granted to the member of the parliament. 4. The Lok Sabha speaker is the guardian of the Lok Sabha members' privileges and the committees of this house of the parliament. 5. The privilege of the deputy speaker of Lok Sabha:
71	<p>A</p> <ul style="list-style-type: none"> • Parliamentary privileges are the rights and immunities enjoyed by members of Parliament (MPs) in India to enable them to discharge their duties and functions without interference or intimidation. • Sources: These privileges are derived from the Constitution of India, parliamentary conventions, laws made by the Parliament, rules of Lok Sabha and Rajya Sabha, and judicial interpretations. Statement 1 is incorrect. 	

<ul style="list-style-type: none"> • He automatically is granted the seat of the chairman of the parliamentary committee he is a member of. <p>6. There is a motion named 'Privilege Motion' used to censure a minister for the breach of the parliamentary privilege.</p> <p>7. Adjournment motion and token cut motion can't be used to raise the question of privilege. Statement 4 is correct.</p> <p>8. Lok Sabha has the exclusive privilege to vote on the demand for grants.</p> <p>9. The parliament has the judicial power to punish the members of the houses</p>	<p>or the outsider for any breach of privilege.</p> <p>10. There is a committee called 'Committee of Privileges' which is of semi-judicial nature. It is responsible for examining the privileges' breach. There are 15 members in the committee of privileges for Lok Sabha while there are 10 members for the same committee in Rajya Sabha.</p> <p>11. The persons who are allowed to speak in the proceedings of either house of the parliament are entitled to the privileges of the Parliament. Example - Attorney General of India and Union Ministers.</p>
<p>Individual Privileges</p> <ul style="list-style-type: none"> • Privileges Members cannot be arrested during the session of Parliament 40 days before the beginning and 40 days after the end of a session. • Members have freedom of speech in Parliament, and no member is liable to any proceedings in any court • They are exempted from jury service when Parliament is in session. 	<p>Collective Privileges</p> <ul style="list-style-type: none"> • Right to publish its reports, debates, and proceedings. • Right to exclude strangers from its proceedings • Right to make rules to regulate its own procedure • Right to punish members as well as outsiders for breach of its privileges • The courts prohibited inquiring into the proceedings of a House. • No person can be arrested without the permission of the presiding officer.
<p>72. B</p> <ul style="list-style-type: none"> • Articles 124(2) and 217 of the Indian Constitution deal with the appointment of judges to the Supreme Court and High Courts. <p>What is a Collegium System and How Did It Evolve?</p> <ul style="list-style-type: none"> • It is the system of appointment and transfer of judges that has evolved through judgments of the SC, and not by an Act of Parliament or by a provision of the Constitution. Statement 1 is incorrect <p>Evolution of the System:</p> <p>First Judges Case (1981):</p> <ul style="list-style-type: none"> • It declared that the "primacy" of the Chief Justice of India recommendation on judicial appointments and transfers can 	<p>be refused for "cogent reasons."</p> <ul style="list-style-type: none"> • The ruling gave the Executive primacy over the Judiciary in judicial appointments for the next 12 years. <p>Second Judges Case (1993):</p> <ul style="list-style-type: none"> • SC introduced the Collegium system, holding that "consultation" really meant "concurrence". • opinion, but an institutional opinion formed in consultation with the two senior-most judges in the SC. <p>Third Judges Case (1998):</p> <ul style="list-style-type: none"> • SC on the President's reference (Article 143) expanded the Collegium to a five-member body, comprising the CJI and four of his senior-most colleagues. Statement 2 is correct.

<p>Who Heads the Collegium System?</p> <ul style="list-style-type: none"> • The SC collegium is headed by the CJI (Chief Justice of India) and comprises four other senior most judges of the court. • A High Court collegium is led by the incumbent Chief Justice and two other senior most judges of that court. • Judges of the higher judiciary are appointed only through the collegium system and the government has a role only after names have been decided by the collegium. <p>What are the Procedures for Judicial Appointments?</p> <p>For CJI:</p> <ul style="list-style-type: none"> • The President of India appoints the CJI and the other SC judges. • As far as the CJI is concerned, the outgoing CJI recommends his successor. Statement 4 is incorrect. • In practice, it has been strictly by seniority ever since the supersession controversy of the 1970s. <p>For SC Judges:</p> <ul style="list-style-type: none"> • For other judges of the SC, the proposal is initiated by the CJI. • The CJI consults the rest of the Collegium members, as well as the senior-most judge of the court hailing from the High Court to which the recommended person belongs. • The consultees must record their opinions in writing and it should form part of the file. • The Collegium sends the recommendation to the Law Minister, who forwards it to the Prime Minister to advise the President. Statement 3 is correct. <p>For Chief Justice of High Courts:</p> <ul style="list-style-type: none"> • The Chief Justice of the High Court is appointed as per the policy of having Chief Justices from outside the respective States. • The Collegium takes the call on the 	<p>elevation.</p> <ul style="list-style-type: none"> • High Court judges are recommended by a Collegium comprising the CJI and two senior-most judges. • The proposal, however, is initiated by the outgoing Chief Justice of the High Court concerned in consultation with two senior-most colleagues. • The recommendation is sent to the Chief Minister, who advises the Governor to send the proposal to the Union Law Minister. <p>What were Attempts to reform the Appointment System?</p> <ul style="list-style-type: none"> • The attempt made to replace it by a National Judicial Appointments Commission (through Ninety-ninth Amendment Act, 2014) was struck down by the court in 2015 on the ground that it posed a threat to the independence of the judiciary. <p>73 C</p> <p>Bara Lacha Pass is in Himachal Pradesh. Rest are correctly matched.</p> <p>74 C</p> <p>Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA)</p> <p>SBSTTA recently conducted a meeting in Nairobi to gauge progress on Kunming-Montreal Global Biodiversity Framework.</p> <p>Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) is an open-ended intergovernmental scientific advisory body established by the article 25 of the Convention on Biological Diversity. Statement 1 is correct.</p> <p>It provides the Conference of Parties (COP) and its other subsidiary bodies, with timely advice relating to the implementation of the Convention. Statement 2 is correct.</p> <p>It is a subsidiary body of the COP that report regularly to the COP on all aspects of its work.</p> <p>SBSTTA comprises government representatives competent in the relevant field of expertise.</p>
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	<p>It functions includes:</p> <ul style="list-style-type: none"> - 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. <p>The 25th meeting of SBSTTA was held at Nairobi, Kenya. Statement 3 is correct.</p>		<p>under control.</p> <ul style="list-style-type: none"> • The South-East Asia Region is prioritizing actions through South-East Asia HEARTS initiative (SEA HEARTS) to bring together tobacco control, salt reduction, and elimination of industrial trans-fat along with hypertension and diabetes control through PHCs.
75	<p>D</p> <p>The Union Health Ministry of India has unveiled the ambitious "75/25" initiative on World Hypertension Day 2023. Statement 1 and 3 is incorrect.</p> <p>"75/25" initiative- 75 million people with hypertension and diabetes to be put on Standard Care by 2025, through the Primary Health Centre PHCs. Statement 2 is incorrect.</p> <p>Indian Government's ambitious target of reaching 75 million people with Hypertension under standard care in primary healthcare by 2025 is the largest cover of NCDs in the world for primary healthcare.</p> <p>About the World Hypertension Day 2023:</p> <ul style="list-style-type: none"> • Theme: Measure Your Blood Pressure Accurately, Control It, Live Longer • The theme provides an opportunity for health managers to advocate for increased availability and use of digital blood pressure measurement devices across healthcare facilities to scale up screening and monitoring. • Celebrated on: 17th May 2023 <p>Hypertension in World:</p> <ul style="list-style-type: none"> • Hypertension is the single most important leading cause of cardiovascular disease mortality globally and in the South-East Asia Region. • A quarter of the adult population in the South-East Asia Region has high blood pressure, but only one in three are on treatment. <p>1 in 10 adults with the condition have it</p>	76	<p>A</p> <p>What is Antimicrobial Resistance?</p> <p>Antimicrobial Resistance is the resistance acquired by any microorganism (bacteria, viruses, fungi, parasite, etc.) against antimicrobial drugs that are used to treat infections.</p> <p>It occurs when a microorganism changes over time and no longer responds to medicines making infections harder to treat and increasing the risk of disease spread, severe illness and death. Statement 1 is correct.</p> <p>The World Health Organisation has identified AMR as one of the top ten threats to global health.</p> <p>Microorganisms that develop antimicrobial resistance are sometimes referred to as "superbugs".</p> <p>Reasons for the Spread of AMR?</p> <p>Antibiotic consumption in humans</p> <ul style="list-style-type: none"> • Unnecessary and injudicious use of antibiotic fixed dose combinations could lead to emergence of bacterial strains resistant to multiple antibiotics. <p>Social factors</p> <ul style="list-style-type: none"> • Include self-medication. • Access to antibiotics without prescription. • Lack of knowledge about when to use antibiotics. <p>Cultural Activities</p> <ul style="list-style-type: none"> • Mass bathing in rivers as part of religious mass gathering occasions. <p>Antibiotic Consumption in Food Animals</p> <ul style="list-style-type: none"> • Antibiotics which are critical to human health are commonly used for growth promotion in poultry.

<p>Pharmaceutical Industry Pollution</p> <ul style="list-style-type: none"> The wastewater effluents from the antibiotic manufacturing units contain a substantial amount of antibiotics, leading to contamination of rivers and lakes. <p>Environmental Sanitation</p> <ul style="list-style-type: none"> Untreated disposal of sewage water bodies - leading to contamination of rivers with antibiotic residues and antibiotic-resistant organisms. <p>Infection Control Practices in Healthcare Settings</p> <ul style="list-style-type: none"> A report on hand-washing practices of nurses and doctors found that only 31.8% of them washed hands after contact with patients. <p>Genetic predisposition of some people is not the reason of occurrence of AMR.</p> <p>Statement 4 is incorrect.</p> <p>The Global Antimicrobial Resistance and Use Surveillance System (GLASS):</p> <p>WHO launched the GLASS in 2015 to continue filling knowledge gaps and to inform strategies at all levels.</p> <p>GLASS has been conceived to progressively incorporate data from surveillance of AMR in humans, surveillance of the use of antimicrobial medicines, AMR in the food chain and in the environment. Statement 2 is correct.</p> <p>The AWaRe tool was developed by the WHO Essential Medicines List to contain rising resistance and make antibiotic use safer and more effective by providing guidelines (over the effective use of antibiotics) to the policy-makers and health workers. Statement 3 is correct.</p> <p>It classifies antibiotics into three groups:</p> <p>Access- antibiotics used to treat the most common and serious infections.</p> <p>Watch- antibiotics available at all times in the healthcare system.</p> <p>Reserve- antibiotics to be used sparingly or preserved and used only as a last resort.</p>	<p>77</p> <p>C</p> <p>Habitat rights recognition provides the community concerned rights over their customary territory of habitation, socio-cultural practices, economic and livelihood means, intellectual knowledge of biodiversity and ecology, traditional knowledge of use of natural resources, as well as protection and conservation of their natural and cultural heritage.</p> <p>Habitat rights safeguard and promote traditional livelihood and ecological knowledge passed down through generations. They also help converge different government schemes and initiatives from various departments to empower PVTG communities to develop their habitats. Statement 1 is correct.</p> <p>What does 'habitat' mean, under what law are such rights granted?</p> <ul style="list-style-type: none"> Habitat rights are given to PVTGs under section 3(1)(e) [rights including community tenures of habitat and habitation for primitive tribal groups and pre-agricultural communities] of The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 also known as Forests Rights Act (FRA). Statement 2 is correct. According to Section 2(h) of FRA, "Habitat includes the area comprising the customary habitat and such other habitats in reserved forests and protected forests of primitive tribal groups and pre-agricultural communities and other forest dwelling Scheduled Tribes". Four state-level departments - Forest, Revenue, Tribal and Panchayati Raj are coordinating with the United Nations Development Program (UNDP) to ascertain what can be termed as habitat. <p>Can habitat rights be used to stop activities like mining?</p> <p>Yes, the habitat rights help the PVTG protect their habitat from developmental activities harmful to them. The title may not be an ownership title in nature of a private property owner, but consent and</p>
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valued at more than Rs 23,000 crores that align with the Amrit Kaal Vision 2047.

The Prime Minister laid the foundation stone for the Tuna Tekra all-weather deep-draft terminal in Gujarat, which will be built at a cost of over Rs 4,500 crore. The Tuna Tekra Deep Draft Terminal is a new all-weather deep draft terminal being built at the Deendayal Port Authority in Gujarat, India. The terminal is being developed in a public-private partnership (PPP) mode and is expected to be completed in 2025. Statement 4 is correct.



Partner states do not include all coastal states. Hence statement 3 is incorrect.

81

A

Yak churpi, Khamti rice & Tangsa textile
Recently 3 indigenous products of Arunachal Pradesh such as Yak churpi, Khamti rice & Tangsa textile received GI tag. Statement 2 and 3 is incorrect.

Yak churpi - It is the first ever yak milk product, Arunachal Yak Churpi, to receive the Geographical Indication.

Churpi is prepared from the milk of Arunachali yak, a unique breed found in West Kameng and Tawang districts of the state.

It is reared by tribal yak pastoralists known as Brokpas who migrate along with their yaks to higher reaches during summers and descend to mid-altitude mountainous regions in winters.

Yaks cannot survive in lower altitude during summer and thus, they need to be taken beyond 13,000 ft.

The naturally fermented yak milk product,

will give a major boost to the pastoral production system and yak rearing in the country.

Churpi is an excellent source of proteins and is frequently used as a substitute for vegetables by tribal yak herders in the vegetation-starved cold and hilly mountainous regions of the state.

It is also mixed with vegetable or meat curry and is consumed with rice as a staple food in tribal.

Khaw Tai - Is a chewy sticky rice variety of Namsai region being cultivated by traditional Khampti tribal farmers in Arunachal Pradesh.

It is also called as Khamti rice.

Tangsa textile - Textile products of the Tangsa tribe of Changlang district, Arunachal Pradesh are famous for their exotic designs and colours.

82

B

A cloudburst in Sikkim triggered a massive flash flood leading to Teesta river flowing at the danger mark.

Statement 1 is not correct: The River Teesta originates from a glacial lake Khangchung Chho at an elevation of 5,280m in northeastern Sikkim.

Statement 2 is correct: It flows through the Indian States of Sikkim and West Bengal before entering Bangladesh, where it flows into the Brahmaputra.

Statement 3 is correct: The Rangeet River is a tributary of River Teesta, the largest river in Sikkim.

Rangeet (also known as the Great Rangeet) originates from a glacier of Mount Kabru at the lower Kanchenjunga region.

On its way down, river Ramman which originates from the Singalila region of Darjeeling district joins the Rangeet.

Major Tributaries of Teesta River

Left-bank Right-bank

Tributaries

1. Lachung Chhu


2. Chakung Chhu

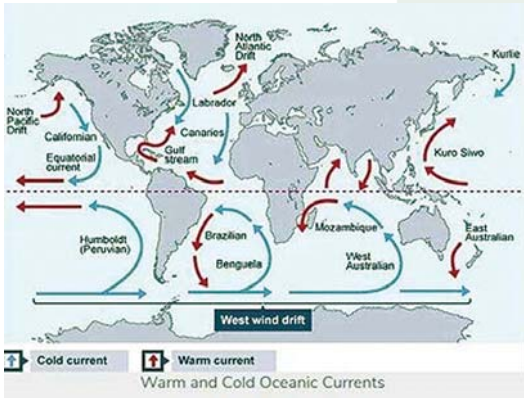
Tributaries

1. Zemu Chhu

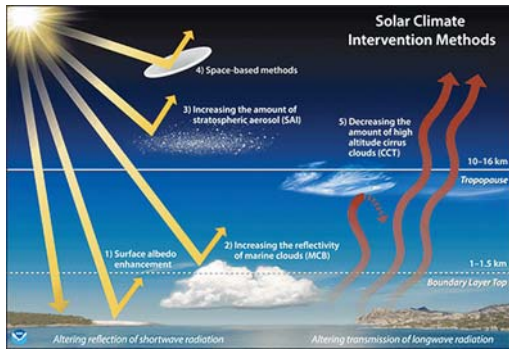
2. Rangyong Chhu

	<p>3. Dik Chhu 3. Rangit River</p> <p>4. Rani Khola</p> <p>5. Rangpo Chhu</p> <p>The left bank Right-bank</p> <p>tributaries originate Right-bank</p> <p>from semi-permanent Tributaries drain</p> <p>and much smaller heavily glaciated</p> <p>snowfields as areas with large</p> <p>compared to right snowfields</p> <p>bank tributaries.</p>		<p>with other institutions and organizations.</p> <ul style="list-style-type: none"> Maxar Technologies is responsible for building the spacecraft.
83	<p>D</p> <p>NASA's Psyche mission is a groundbreaking scientific endeavor aimed at exploring a unique and intriguing metallic asteroid called 16 Psyche.</p> <p>This mission promises to provide valuable insights into the early history of our solar system, the formation of planetary bodies, and the mysteries of Earth's core.</p> <p>Mission Objective</p> <ul style="list-style-type: none"> The primary goal of the Psyche mission is to unravel the mysteries of 16 Psyche, a metallic asteroid located in the asteroid belt between Mars and Jupiter. Statement 1 is incorrect. By studying this asteroid up close, scientists hope to gain a deeper understanding of the processes that shaped the terrestrial planets, including Earth. Statement 2 is correct. <p>Asteroid 16 Psyche</p> <ul style="list-style-type: none"> 16 Psyche is an asteroid that orbits the Sun between Mars and Jupiter. It is believed to be composed mainly of iron and nickel, similar to the Earth's core. This makes it a unique target for study because it offers a rare opportunity to directly investigate the interior of a planetary body made primarily of metal. <p>Collaboration and Leadership</p> <ul style="list-style-type: none"> NASA's Psyche mission is led by Arizona State University (ASU) in collaboration 	84	<p>C</p> <p>Statement 1, 2 and 4 are correct: Capital expenditure is the money a corporate entity spends to buy, maintain or improve its fixed assets such as buildings, vehicles, equipment or land. It includes money spent on the following:</p> <p>Acquiring fixed and intangible assets</p> <p>Upgrading an existing asset</p> <p>Repairing an existing asset</p> <p>Repayment of loan</p> <p>Statements 3 and 5 are not correct: Revenue expenditure implies administrative expenses such as rent, utilities, property taxes and business travel incurred to meet the operational costs of running a business.</p> <p>Salaries of employees, interest payment on past debt, subsidies, pension, etc, fall under the category of revenue expenditure. It is recurring in nature.</p>
		85	<p>A</p> <p>Neo banks are financial institutions with only an online presence and function digitally. Statement 1 is correct.</p> <p>They offer all traditional bank services via a digital setup or mobile apps without having any physical branches.</p> <p>These are 100% digital banks. They cannot apply for a banking license. The expertise of these neo banks lies in tying technology and artificial intelligence together to offer personalized financial services to customers. It is offered at a minimal cost. Statement 2 is incorrect.</p> <p>Neo banks offer limited products like savings accounts, small loans, debit cards, etc. and not all services of banks. Statement 3 is correct.</p> <p>Neo-bank vs Digital bank- A digital bank and a neo-bank aren't quite the same.</p> <p>Digital banks are often the online-only</p>



	<p>subsidiary of an established and regulated player in the banking sector while neo-banks exist solely online without any physical branches independently or in partnership with traditional banks.</p> <p>How are the neo-banks evolving?</p> <ul style="list-style-type: none"> • The term 'Neo-bank' started gaining prominence globally in 2017. • Neo banks are also called 'challenger banks' as they emerged as a new challenger to the traditional banks in terms of customer engagement, connectivity and reach, and the user experience. • Although neo-banks is a relatively new concept in India, the concept has been gaining traction over the last few years. • India's neo-bank startups raised more than \$230 million in 2020, according to a report by a fin-tech research firm. • There are around a dozen neo-banks in India including Razorpay X, EpiFi, Open, NiYo, Jupiter among others. 	<p>value by treating it as income. Statement 4 is correct.</p> <p>Rate: It is levied at a rate of 30.9% on net investments in excess of the fair market value.</p> <p>Objective: To deter the generation and use of unaccounted money through subscription of shares of a closely held company, at a value which is higher than fair market value.</p> <p>In 2019, the Government announced an exemption from the Angel Tax for startups on fulfilment of certain conditions. These are,</p> <ul style="list-style-type: none"> • The startup should be recognized by the Department for Promotion of Industry and Internal Trade (DPIIT) as an eligible startup. Statement 3 is correct. • The aggregate amount of paid-up share capital and share premium of the Startup cannot be more than ₹25 crores. This amount does not include the money raised from Non-Resident Indians (NRIs), Venture Capital Firms, and specified companies. • For angel investors, the amount of investment that exceeds the fair market value can be claimed for a 100% tax exemption. However, the investor must have a net worth of ₹2 crores or an income of more than ₹25 Lakh in the past 3 fiscal years.
86	<p>C</p> <p>It is a tax levied on the capital raised via the issue of shares by unlisted companies if the share price of issued shares is seen in excess of the fair market value of the company. Statement 1 is incorrect.</p> <p>The excess funds raised at prices above fair value is treated as income, on which tax is levied.</p> <p>Angel tax essentially derives its genesis from section 56(2)(viib) of the Income Tax Act, 1961.</p> <p>The finance act, 2012 introduced section 56(2) (vii b) in the IT act which taxes any investment, received by any unlisted Indian company, valued above the fair market</p>	<p>Previously, angel tax provisions were applicable only for investments received from resident investors.</p> <p>However, Finance Bill 2023 has extended its applicability to non-resident investors as well. Statement 2 is correct.</p>
		<p>87 B</p> <p>Reasons for capital flight</p> <ul style="list-style-type: none"> • The tightening of monetary policy by the US Fed (Increase in interest rate) Statement 4 is incorrect. • Rate hiking by other central banks, including in Britain and the Eurozone • An appreciating dollar and depreciating Rupee Statement 2 is incorrect.

	<ul style="list-style-type: none"> Concerns regarding the possibility of a recession in the US Rising inflation Statement 5 is correct. Rise in US bond yield. Statement 1 is correct. Disorder in geopolitics like Russia-Ukraine Conflict. Statement 3 is correct. Foreign Portfolio Investment (FPI) involves holding financial assets from a country outside of the investor's own. FPI holdings can include stocks, ADRs, GDRs, bonds, mutual funds, and exchange traded funds. Foreign Portfolio Investors have only passive ownership. Investors have no control over ventures or direct ownership of property or a stake in a company. Investments of NRIs don't come under FPI. 	<p>throughout the year.</p> <p>Significance</p> <p>CORS based precision services will boost auto navigation and machine control-based solution in Agriculture, Mining, Construction, Transport and Civil Aviation sector. Statement 2 is correct.</p> <p>This will open new domains of innovation and research and create a Geospatial based ecosystem in these sectors.</p> <p>CORS data will also aid in various scientific studies like Upper Atmosphere and Space weather studies, Meteorology and weather forecast, Plate motion and Tectonic studies, Seismology and Hydrology etc.</p> <p>These stations will be operated by the Survey of India. Statement 3 is correct.</p> <p>The Survey of India has set up more than 1,000 CORS stations across India.</p> <p>Survey of India</p> <p>It is the National Survey and Mapping Organization of the country under the Department of Science & Technology, Ministry of Science & Technology.</p> <p>It is the oldest scientific department of India.</p> <p>It was set up in 1767 and has evolved rich traditions over the years</p> <p>It is assigned the role as the nation's Principal Mapping Agency, Survey of India bears a special responsibility to ensure that the country's domain is explored and mapped suitably.</p>
88	<p>B</p> 	<p>90</p> <p>D</p> <p>A stock split happens when a company increases the number of its shares to boost the stock's liquidity. Statement 1 is correct.</p> <p>It is a corporate action in which a company issues additional shares to shareholders, increasing the total by the specified ratio based on the shares they held previously.</p> <p>Why is a stock split done?</p> <p>It is done to infuse liquidity and to make shares affordable for various investors who could not buy the shares of that company</p>
89	<p>C</p> <p>It is capable of precise Location based services, which are capable of providing centimetre level positioning services in real-time. Statement 1 is correct.</p> <p>These stations are capable of providing Real Time Positioning Service through Real Time-Kinematic with an accuracy of + / - 3cm.</p> <p>The CORS network is available 24 / 7</p>	

	<p>before due to high prices.</p> <p>It is sometimes aimed at helping a company meet the minimum requirements to remain listed on an exchange. Statement 2 is correct.</p> <p>This is because some stock indexes are price-weighted, meaning a company wishing to join the index would need to have, among other criteria, a price that falls within a certain band.</p> <p>Although the number of shares outstanding increases, there is no change to the company's total market capitalization as the price of each share will split as well.</p> <p>The most common split ratios are 2-for-1 or 3-for-1 (sometimes denoted as 2:1 or 3:1). This means that for every share held before the split, each stockholder will have two or three shares, respectively, after the split.</p> <p>The number of shares increases, but the price per share goes down in proportion. Statement 3 is correct.</p>	<p>responsible for building the RRTS, also known as "Namo Bharat." It operates under the Ministry of Housing and Urban Affairs. Statement 3 is correct.</p> <ul style="list-style-type: none"> • Scope of the Project: The RRTS project spans across the vast NCR, covering approximately 55,000 square kilometres and serving a population of over 46 crores with a combined GDP of an estimated \$370 billion. <p>How RRTS differ from existing Systems?</p> <ul style="list-style-type: none"> • Impressive Speed: RRTS trains are designed to operate at speeds of 160 km/hour, with the capability to reach a maximum speed of 180 km/hour. • Comparatively faster: In comparison, Delhi Metro trains typically operate at speeds of 100 km/hour to 120 km/hour. Statement 4 is incorrect. • Coverage: Compared to existing metro systems, the RRTS offers higher speeds, making it ideal for covering relatively longer distances across the NCR swiftly. • Frequency and Comfort: In contrast to Indian Railways, while RRTS covers shorter distances, it operates at higher frequencies and provides enhanced passenger comfort. • International Models: The RRTS draws inspiration from successful international models like the RER in Paris, Regional-Express trains in Germany and Austria, and the SEPTA Regional Rail in the United States, among others. <p>Objectives of the RRTS Project</p> <ul style="list-style-type: none"> • Enhancing Connectivity: The RRTS aims to unlock the NCR's potential by improving multi-modal connectivity at existing transportation hubs. • Decongesting Roads and Rails: One of the primary goals is to encourage public transportation, thus alleviating congestion on roads, highways, metro, and railway networks. • Economic Growth: By facilitating shorter travel times, the RRTS seeks to boost
91	<p>A</p> <p>Understanding the RRTS Project</p> <ul style="list-style-type: none"> • Integrated Mass Transit Network: The RRTS is an integrated mass transit network aimed at promoting balanced and sustainable urban development by enhancing connectivity and accessibility across the NCR. • Origin of the Idea: The concept of RRTS emerged from a study commissioned to Indian Railways in 1998-99, envisioning fast commuter trains connecting various NCR locations. Statement 1 is correct. • National Capital Region Planning: The National Capital Region Planning Board (NCRPB) adopted the RRTS concept while developing its "Functional Plan on Transport for NCR-2032" and recommended eight RRTS corridors to connect NCR towns. Statement 2 is correct. <p>Development Agency</p> <ul style="list-style-type: none"> • Nodal Agency: NCRTC, a joint venture of the Central government, Delhi, Haryana, Rajasthan, and Uttar Pradesh, is 	

	<p>economic productivity in the region, allowing more economic activity to thrive around suburban locations in Uttar Pradesh, Rajasthan, and Haryana.</p>		<p>brightening.</p> <ul style="list-style-type: none"> Marine cloud brightening refers to an albedo modification technique that aims to increase the reflectivity of the clouds. Statement 2 is incorrect. It was originally proposed by the John Latham in 1990 as a way to control global warming by altering Earth's energy balance. It is a solar geo-engineering technique that involves spraying sea salt into low-lying clouds to increase the reflectance of cloud cover that will reduce the amount of incoming solar radiation striking the surface. Statement 1 is correct. Spraying large quantities of microscopic seawater droplets will create extra droplets and make the cloud brighter. Sea salt scatters light directly and provides additional shade. Significance - It is a way to shield parts of ocean (absorbs approximately 93% of incident solar radiation) from extreme heat. Modelling studies suggest that it could delay the expected decline in coral cover. It will be short-lived and reversible as sprayed particles persist in the atmosphere for few days. Statement 3 is incorrect.
92	<p>B</p> <p>Future Skill PRIME</p> <ul style="list-style-type: none"> Future Skill Prime is an innovative and evolutionary ecosystem designed to equip learners with cutting-edge skills essential in today's rapidly evolving digital landscape. Statement 1 is correct. It is aimed at making India a Digital Talent Nation. Future Skill Prime's industry-backed NASSCOM certification programs are aligned with National Occupational Standards (NOS) and National Skills Qualification Framework (NSQF). Statement 3 is correct. Future Skill Prime is India's Technology Skilling Hub which is a joint initiative by NASSCOM & Ministry of Electronics and Information Technology (MeitY). Statement 2 is incorrect. It empowers Empowering learners at every step of their journey, from course selection to skill-building to finding employment. One can begin by assessing their technical aptitude with the Competency Diagnostic Test. The people can progress with learning content aligned to industry standards, choose courses among 10 digital technologies and 10 professional skills. Nasscom is a not-for-profit industry association that is the apex body for the \$245 billion technology industry in India. It is established in 1988 and ever since, nasscom's relentless pursuit has been to constantly support the technology industry. 		
93	<p>A</p> <p>Marine Cloud Brightening</p> <ul style="list-style-type: none"> Marine Cloud Brightening is also called as Cloud whitening and cloud 		<p>94</p> <p>A</p> <p>Election Seizure Management System (ESMS)</p>

	<ul style="list-style-type: none"> The Election Seizure Management System is a new technology-driven platform for real-time updates on seizures from the field by multifarious state and central enforcement agencies. Statement 1 is correct. The system ensures seamless coordination and intelligence sharing amongst enforcement agencies. The platform is developed by the Election Commission of India (ECI). Statement 3 is incorrect. It will also monitor action taken by central and state enforcement agencies against such offences. The enforcement agencies are required to upload details of every recorded movement and seizure of illicit cash, liquor, drugs etc. The ESMS is set to be introduced by the Election Commission in the upcoming assembly elections in 5 states, scheduled for November 2023. Statement 2 is incorrect. It keeps the record of the seizure of cash, drugs and freebies to induce voters during the assembly poll in 5 states. It will also facilitate qualitative analysis and planning. 		Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY).
96	D	<p>The Flight Test Vehicle Abort Mission-1 (TV-D1) will demonstrate the performance of the Crew Escape System of the Gaganyaan project. The flight will be the first of two abort missions to test the safety mechanisms that will allow the Gaganyaan crew to leave the spacecraft in an emergency.</p> <p>The test exercise will see the rocket rise to an altitude of almost 17 km before an abort signal is triggered, leading to the separation of the crew module, which will descend using a parachute for a splashdown in the Bay of Bengal.</p> <p>TV-D1 flight will demonstrate, first, the new Test Vehicle - this is the reason why the test has been named Test Vehicle-Demonstration 1 (TV-D1).</p> <p>Second, it will demonstrate a basic version of the crew module - the capsule in which the astronauts will be seated during the Gaganyaan human space flight. The test will check the functioning of systems for separating the crew module from the rocket in case of a mid-flight emergency (abort mission) and the escape of astronauts. Statement 1 is correct.</p> <p>The new Test Vehicle</p> <p>While the full-fledged test flight of the crew module into space and back will be carried out on the human rated LVM3 rocket (an upgraded version of the heavy lift GSLV Mk III rocket) in 2024, for the TV-D1 mission, ISRO used a low-cost basic rocket it has built specifically to test systems.</p> <p>This Test Vehicle will use existing liquid propulsion technology, but has innovations such as the throttleable and restartable L110 Vikas engine (which forms the core second stage of the LVM3 rocket), which is capable of controlling propellant use. Statement 2 is correct.</p> <p>The only previous test flight of the crew module - called the Crew module</p>	
95	B	<p>Statements 1 and 2 are correct.</p> <p>Palliative care is a specialized form of medical care and support provided to individuals with serious, life-limiting illnesses like cancers, end-stage kidney disease, debilitating brain disorders, complications of diabetes, and heart disease among others., with the goal of enhancing their quality of life and alleviating suffering. It takes into consideration not just the physical dimension of health but also looks at the social and economic realities of the patient and the family.</p> <p>Currently, palliative care is not covered under most insurance schemes in India. However, palliative care is included in the list of services covered by Ayushman</p>	

<p>Atmospheric Re-Entry Experiment or CARE - on December 18, 2014, used a GSLV Mk III rocket. But since each GSLV Mk III launch costs Rs 300-400 crore, ISRO has developed the cheaper Test Vehicle. Statement 4 is correct.</p> <p>Crew Escape System - PAT</p> <ul style="list-style-type: none"> The Crew Escape System is an emergency accident-avoidance measure. In July 2018, ISRO completed the first successful flight 'pad abort test' or Crew Escape System. Statement 3 is correct. <p>Crew Module Atmospheric Re-entry technology - CARE</p> <ul style="list-style-type: none"> Satellites that are launched for communication or remote sensing are meant to remain in space. However, a manned spacecraft needs to come back. While re-entering Earth's atmosphere, the spacecraft needs to withstand very high temperatures created due to friction. A prior critical experiment was carried out in 2014 along with GSLV MK-III when the CARE (Crew Module Atmospheric Re-entry Experiment) capsule successfully demonstrated that it could survive atmospheric re-entry. 	<p>98 C</p>  <p>ASEAN Association of South East Asian Nation</p> <ul style="list-style-type: none"> The ASEAN, was established on 8 August 1967 in Bangkok, Thailand, with the signing of the ASEAN Declaration (Bangkok Declaration). The 10-member states of ASEAN are: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.
<p>97 B</p> <p>Market-based solutions to carbon mitigation is used by India are: 1) carbon trading, 2) Renewable energy subsidies, 3) Perform, Achieve and Trade (PAT), 4) Energy efficiency certificates (EECs), 5) Energy Conservation Building Code (ECBC).</p> <p>Moreover, India does not currently have a standalone carbon tax. However, the Indian government has implemented a number of policies and measures that put an implicit price on carbon. For example, the Indian government has imposed a coal cess, which is a tax on the production of coal.</p>	<p>99 A</p> <ul style="list-style-type: none"> It is crossing between the Gaza Strip and Egypt and is the sole route for aid to enter Gaza directly outside Israel. Statement 1 is correct. It is the only exit that does not lead to Israeli territory. The crossing is at the south of the Gaza Strip and wedged between Israel, Egypt and the Mediterranean Sea. The crossing is controlled by Egypt. Statement 2 is incorrect. There are only two other border crossings i.e. Erez, a border crossing with Israel in north Gaza, and Kerem Shalom, a commercial crossing between Israel and Southern Gaza. Statement 3 is incorrect. 

100	<p>A</p> <p>Scientists in China are building the world's largest "ghost particle" detector 11,500 feet (3,500 meters) beneath the surface of the ocean. Statement 3 is incorrect.</p> <p>The Tropical Deep-sea Neutrino Telescope (TRIDENT) - called Hai ling or "Ocean Bell" in Chinese - will be anchored to the seabed of the Western Pacific Ocean. Upon completion in 2030, it will scan for rare flashes of light made by elusive particles as they briefly become tangible in the ocean depths. Statement 1 is incorrect.</p> <p>Neutrinos' non-existent electrical charge and almost-zero mass mean they barely interact with other types of matter.</p> <p>Neutrinos are everywhere - they are second only to photons as the most abundant subatomic particles in the universe and are produced in the nuclear fire of stars, in enormous supernova explosions, in cosmic rays and radioactive decay, and in particle accelerators and nuclear reactors on Earth.</p>	<p>Despite their ubiquity, their minimal interactions with other matter make neutrinos incredibly difficult to detect. They were first discovered zipping out of a nuclear reactor in 1956, and many neutrino-detection experiments have spotted the steady bombardment of the particles sent to us from the sun; but this cascade masks rarer neutrinos produced when Cosmic rays, whose sources remain mysterious, strike Earth's atmosphere.</p> <p>Neutrinos pass completely unimpeded through most matter, including the entirety of our planet, but they do occasionally interact with water molecules. As neutrinos travel through water or ice, they sometimes create particle byproducts called muons that give off flashes of light. By studying the patterns these flashes make, scientists can reconstruct the energy, and sometimes the sources, of the neutrinos. It will also help us to understand the origin and evolution of the universe. Statement 2 is correct.</p>
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Students who make it a habit to reflect upon their performance after giving a test show improvement in their performance curve.

Please use the following questionnaire to reflect on your performance and preparation.

Number of Questions Attempted	
Correct	
Incorrect	
Silly Mistakes	
Unkown Questions	

Which concepts need clarity ?

Which questions and concepts need revision ?

Strong and Weak areas :