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| Question | **Which of the following is/are correct with reference to the Secretary-General of Rajya Sabha?**1. He/she is appointed by the Chairman of Rajya Sabha.
2. He/she is the custodian of the records of the House.

**Select the correct answer using the code given below.** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 only |
| Option | Both 1 and 2 |
| Option | Neither 1 nor 2 |
| Answer | 3 |
| Solution | * Both the houses of parliament comprises an office of Secretary-General.
* The Secretary-General is the administrative head of the Secretariat of respective houses.
* **Secretary-General of Rajya Sabha is appointed by the Chairman, Rajya Sabha**, and holds a rank

equivalent to the Cabinet Secretary, the highest civil servant of the Union Government.* Role of Secretary-General
* He assists the Presiding Officers in conducting the proceedings of the House by giving them advice
* and expert opinion.
* He does not participate in the debate except for reporting messages from the other house about Bills
* or any other matter.
* All notices under the rules are addressed to him.
* **He is the custodian of the records of the House.**
* He prepares full reports of the proceedings of the House and also issues the List of Business for the
* day.
* On behalf of the President of India, he/she summons members to attend session of Parliament
* The Secretary General remains in office till his/her retirement at the age of 60. He/she is answerable only

to the presiding officer, his action cannot be discussed or criticised in or outside the house.* **Hence both the statements are correct.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which of the following statements are correct regarding the Ahom Kingdom?**1. The Ahom kingdom was the only kingdom which remained undefeated by the Mughals.
2. The Ahom kings depended upon forced labour called paiks.
3. The capture of wild elephants was declared a royal monopoly by the Ahom kings.

**Select the correct answer using the code given below.** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 2 and 3 only |
| Option | 1, 2 and 3 |
| Option | 1 and 3 only |
| Answer | 2 |
| Solution | * The Ahoms migrated to the **Brahmaputra valley (Northeast India)** from present-day Myanmar in the

thirteenth century. They created a new state by suppressing the older political system of the bhuiyans(landlords). The Ahoms built a large state, and for this, they used firearms as early as the 1530s.* However, the Ahoms faced many invasions from the south-west. **In 1662, the Mughals under Mir**

**Jumla attacked the Ahom kingdom.** Despite their brave defence, the Ahoms were defeated. But directMughal control over the region could not last long. **Hence statement 1 is not correct.*** The Ahom state depended upon forced labour. **Those forced to work for the state were called paiks.** A

census of the population was taken. Each village had to send a number of *paiks* by rotation. People fromheavily populated areas were shifted to less populated places. Ahom clans were thus broken up. **Hence****statement 2 is correct.*** By the first half of the seventeenth century, the administration became quite centralised. Almost all adult

males served in the army during the war. At other times, they were engaged in building dams, irrigationsystems and other public works. The Ahoms also introduced new methods of rice cultivation. **The****capture of wild elephants was declared a royal monopoly by the Ahom kings. Hence statement 3 is****correct.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which of the following is/are correct with reference to the C. Rajgopalachari Formula?**1. It recommended the Muslim majority areas to exercise the right to selfdetermination.
2. It wanted the Muslim League's to endorse the Congress demand for independence.
3. The formula received Gandhiji's support.

**Select the correct answer using the code given below.** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 3 only |
| Option | 1, 2 and 3 |
| Option | 1 and 3 only |
| Answer | 3 |
| Solution | * During the 1940s, several efforts were on to solve the ongoing constitutional crisis, basically due to Jinnah

wanting the Congress to accept his idea of Two-nation theory. In the course of time, some individuals alsotried to come up with constitutional proposals. C. Rajagopalachari, the veteran Congress leader, prepareda formula for Congress-League cooperation. **It was a tacit acceptance of the League's demand for****Pakistan. Gandhi supported the formula.** The main points in CR Plan were:* + **Muslim League to endorse Congress demand for independence.**
	+ League to cooperate with Congress in forming a provisional government at the centre.
	+ **After the end of the war, the entire population of Muslim majority areas in the North-West and North-East India to decide by a plebiscite, whether or not to form a separate sovereign state.**
	+ In case of acceptance of partition, agreement to be made jointly for safeguarding defence, commerce, communications, etc.
* **Hence all the statements are correct.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **In the context of the medieval history of South India, the terms Manigramam and Nanadesi referred to:** |
| Type | multiple\_choice |
| Option | Village headmen |
| Option | Sects of Bhakti saints |
| Option | Trade guilds |
| Option | Villages given in the form of gift |
| Answer | 3 |
| Solution | * There were many kinds of traders in Medieval India. These included the Banjaras. Several traders, especially horse traders, formed associations, with headmen who negotiated on their behalf with warriors who bought horses.
* Since traders had to pass through many kingdoms and forests, they usually travelled in caravans and formed guilds to protect their interests. There were several such guilds in south India from the eighth century onwards – the most famous being the Manigramam and Nanadesi. These guilds traded extensively both within the peninsula and with Southeast Asia and China. **Hence option (c) is the correct answer.**

There were also communities like the Chettiars and the Marwari Oswal who went on to become the principal trading groups of the country. Gujarati traders, including the communities of Hindu Baniyas and Muslim Bohras, traded extensively with the ports of the Red Sea, Persian Gulf, East Africa, Southeast Asia and China. They sold textiles and spices in these ports and, in exchange, brought gold and ivory from Africa; and spices, tin, Chinese blue pottery and silver from Southeast Asia and China. |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **The first Global Stocktake synthesis report, 2023 has been released by** |
| Type | multiple\_choice |
| Option | The Intergovernmental Panel on Climate Change (IPCC) |
| Option | The United Nations Environment Programme (UNEP) |
| Option | The United Nations Framework Convention on Climate Change (UNFCCC). |
| Option | The Global Environment Facility (GEF). |
| Answer | 3 |
| Solution | * **The Global stocktake (GST):**
* The global stocktake (GST) aims to serve as a report card on the progress of countries under the 2015 Paris Agreement in achieving their climate action goals. While assessment reports by the Intergovernmental Panel on Climate Change (IPCC) put forth observations made by scientific experts GST summarises 252 hours of conversations between governments, civil society organisations, experts and the UN bodies. The GST, therefore, combines scientific observations with on-ground experiences.
* The **Conference of the Parties serving as the Meeting of the Parties to the Paris Agreement (CMA)** under **UNFCCC has the overall responsibility to conduct the global stocktake**.
* **Global stocktake synthesis report -UNFCCC.**
	+ The first global stocktake technical synthesis report is released by the United Nations Framework Convention on Climate Change (UNFCCC). **Hence option (c) is correct.**
	+ The report warns that the world is **“not on track”** to meet the long-term goal of limiting global temperatures to 2 degrees Celsius.
	+ The **synthesis report ties into a larger exercise called the ‘global stocktake,**’ that is expected to take place once in five years.
	+ T**he report also acknowledged that improved Nationally Determined Contributions (NDC)** from countries with ambitious emissions reduction targets have led to near-universal climate action. However, it is clear that the progress is inadequate and the window to “course correct” is rapidly closing.

The synthesis report culminates the second phase of the GST process, summarising three technical discussions held between 2022 and 2023. Its findings are expected to provide a strong science-based foundation for the third and final “**politicalphase” of GST** coming up at the 28th Conference of Parties (COP28) to the UNFCCC in Dubai later this year. |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements regarding Electromagnetic Ion Cyclotron (EMIC) Waves:**1. These waves are the discreet electromagnetic emissions observed in the Earth's magnetosphere.
2. These waves are generated in the equatorial latitudes.
3. These waves can resonate with charged particles causing them to move in a cyclical motion.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 and 3 only |
| Option | 1 and 2 only |
| Option | 1, 2 and 3 |
| Answer | 4 |
| Solution | * **Electromagnetic Ion Cyclotron Waves:**
	+ Scientists have identified Electromagnetic Ion Cyclotron (EMIC) waves, a form of plasma waves in the Indian Antarctic station, Maitri.
	+ The EMIC waves are the discreet electromagnetic emissions observed in the Earth's magnetosphere. Their signatures can be recorded in both spaces as well as ground-based magnetometers. **Hence, statement 1 is correct.**
	+ These waves are **generated in the equatorial latitudes** and propagate along magnetic field lines to their footprint in the high-latitude ionosphere. **Hence, statement 2 is correct.**
	+ These waves **can resonate with charged particles**, particularly ions, that are trapped in the magnetosphere, **causing them to move in a cyclical motion. Hence, statement 3 is correct.**
	+ These waves play an important role in the precipitation of **killer electrons** (electrons having speeds close to the speed of light, which form the radiation belt of planet Earth), which are hazardous to space-borne technology/instruments.
* **Magnetosphere**
	+ Magnetosphere is the cavity in which the Earth lies and stays protected from the wrath of the Sun.
	+ It is formed by the interaction between Earth's magnetic field and the solar wind, which is a continuous stream of charged particles, mainly electrons and protons, flowing from the Sun.
	+ Earth's magnetic field is generated by the motion of molten iron in its outer core.
* **Magnetometer**
	+ A magnetometer is a scientific instrument used to measure the strength and direction of magnetic fields.
	+ It can be used to study the Earth's magnetic field, as well as the magnetic fields of other celestial bodies, such as planets, moons, stars, and galaxies.

Magnetometers work based on the principles of electromagnetic induction or magnetoresistance. |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following countries:**1. Iran
2. Iraq
3. Saudi Arabia
4. Jordan
5. United Arab Emirates

**Which of the countries given above share border with the Persian Gulf?** |
| Type | multiple\_choice |
| Option | 1, 3 and 5 only |
| Option | 1, 3, 4 and 5 only |
| Option | 2, 3 and 5 only |
| Option | 1, 2, 3 and 5 only |
| Answer | 4 |
| Solution | * Persian Gulf is bordered on the **north, northeast, and east by Iran**; on the **southeast and south by part of Oman** and by the **United Arab Emirate**s; on the **southwest and west by Qatar, Bahrain, and Saudi Arabia**; and on the **northwest by Kuwait and Iraq.**
* **Jordan doesn’t border with Persian Gulf**. **Hence option 4 is not correct.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With reference to the Enhanced Collaborative Autonomous Rover System (ECARS), consider the following statements:**1. It is a multi-terrain manned ground vehicle for a wide range of military situations.
2. It is developed by the Defence Research and Development Organisation (DRDO).

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 only |
| Option | Both 1 and 2 |
| Option | Neither 1 nor 2 |
| Answer | 4 |
| Solution | * The Enhanced Collaborative Autonomous Rover System (ECARS), a cutting-edge 4×4 **multi-terrain unmanned ground vehicle (UGV). The speed of the system ranges between 16 and 20 km per hour, with a payload capacity of 350 kg and towing payload capacity of 500 kg. Hence, statement 1 is not correct.**
* ECARS UGV is armed with an enhanced collision avoidance system and advanced mission planning capabilities, rendering it a dependable resource for a wide range of military situations.
* **It is developed by Pune’s Kalyani Strategic Systems Ltd, a fully-owned subsidiary of Bharat Forge. Hence, statement 2 is not correct.**

**A key feature of ECARS is its compatibility with various systems, including Remote Controlled Weapon Stations (RCWS), water jet machines** and capability of transporting heavy materials. This makes ECARS a key tool for border surveillance and more. |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With reference to the Snakes, consider the following statements:**1. All snakes are diurnal.
2. All snakes are cold-blooded and must regulate their body temperatures.
3. All snakes shed their skin because it does not grow with their body size.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 2 and 3 only |
| Option | 1 and 3 only |
| Option | 3 only |
| Option | 1, 2 and 3 |
| Answer | 1 |
| Solution | * **Snake:** There are more than 35,000 species of the snake around the world, of which only 600 are venomous. Of these 600, 330 species are found in India. The most commonly found dangerous snakes are the ones we call the big four — krait, Russel’s viper, saw-scaled viper and Indian-spectacled cobra.
* Snakes have some clear differences from other reptiles. They have no limbs, no moveable eyelids, and no ear openings. About 600 species are venomous, and only about 200—seven percent—are able to kill or significantly wound a human.
* Their upper and lower jaw separate to allow snakes to consume prey up to three times larger than the diameter of their head. Snakes eat their prey whole.
* **Most snakes are nocturnal. Hence, statement 1 is not correct.** Their tongue is used to smell their air.
* **Snakes are cold-blooded**, or ectotherms, and must sun themselves to regulate their body temperatures. **Hence, statement 2 is correct.**
* While most snakes lay eggs, some give live birth. Snakes shed their skin because it doesn't fit anymore or because it's old or worn out. When snakes grow, their skin does not, so they outgrow it. When this happens, they shed their outer layer of skin. Snakes can shed their skin as often as once a month, although it's usually only a handful of times a year at most. **Hence statement 3 is correct.**

There are more than 3,000 species of snakes on the planet and they’re found everywhere except in Antarctica, Iceland, Ireland, Greenland, and New Zealand. They live almost everywhere, in deserts, forests, oceans, streams, and lakes. Snakes cannot survive in places where the ground stays frozen year-round so there **are no snakes in Antarctica.** Radio telemetry has been used to study the movement patterns of snakes to tackle India‘s huge snakebite problem. |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which of the following are essential growth conditions required for Coffee cultivation?**1. Direct Sunlight is necessary for the Coffee plantation.
2. Coffee plant needs abundant rainfall.
3. Fertile soils rich in iron and potash are most suitable for its cultivation.
4. Coffee can not tolerate water stagnation.

**Select the correct answer using the code given below.** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 3 and 4 only |
| Option | 2, 3 and 4 only |
| Option | 1 and 4 only |
| Answer | 3 |
| Solution | * **Coffee is a tropical plantation crop.** Its seeds are roasted, ground and are used for preparing a beverage. There are three varieties of coffee i.e. **arabica, robusta and liberica.** India mostly grows superior quality coffee, arabica, which is in great demand in International market.
* Essential growth conditions required for the cultivation of coffee are as follows:
	+ Climate: Coffee is a **tropical plant** which is also grown in semi-tropical climate. The coffee tree requires heat, humidity and abundant rainfall.
	+ Temperature: Coffee requires an average temperature between 20°-27°C. Although it grows in day temperature over 32°C in the Arabian Peninsula. Growth is most rapid during hot rainy season and during cool dry season berries ripen and ready for picking. Bright sunshine and warm weather are necessary for the harvesting.
	+ Coffee **needs abundant rainfall,** i.e., 100 to 200 cm annually. The hill slopes which receive orthographic rainfall are thus best for coffee cultivation. **Hence statement 2 is correct.**
	+ Shade: **Direct sunlight is harmful for coffee plants**; therefore, these are planted under shade of taller trees such as bananas. In Brazil, leguminous plants are used which not only provide shade but also enrich soil with nitrogen. **Hence statement 1 is not correct.**
	+ **Topography:** Generally, coffee is grown on **slopes having height between 600 to 1,800 meters.** The suitability of slopes for coffee is because these are well-drained and also cooler. **Water stagnation is very harmful for coffee plants;** therefore, hill slopes are best suitable for it. **Hence statement 4 is correct.**
	+ **Soils:** The ideal soil is one with a good **sub-surface drainage.** The presence of humus, nitrogenous matter, potash, iron in the soil is an advantage. **Well-drained volcanic soils** are also suitable. **Hence statement 3 is correct.**

In **India**, **Coffee** is cultivated in the highlands of **Western Ghats** in Karnataka, Kerala and Tamil Nadu. Karnataka alone accounts for more than two-third of total production of coffee in the country. |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **The 'State of the Rhino 2023' report was released recently. In this context, consider the following statements:**1. The 'State of the Rhino' report is released annualy by the World Wide Fund for Nature.
2. The greater one-horned rhinos, which are native to India are categorised as 'endangered' on the IUCN Red List.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 only |
| Option | Both 1 and 2 |
| Option | Neither 1 nor 2 |
| Answer | 4 |
| Solution | * Every September, the **International Rhino Foundation (IRF)** publishes its signature report, **State of the Rhino**, which documents current population estimates and trends, where available, as well as key challenges and conservation developments for the five surviving rhino species in Africa and Asia. **Hence statement 1 is not correct.**
* There are five species of rhino namely **Black rhino, Greater one-horned rhino, Javan rhino, Sumatran rhino and White rhino.** Out of them, three rhino species are found in Asia namely Sumatran rhino, Javan rhino and Greater one-horned rhino (Indian rhino).
* Three species of rhino—black, Javan, and Sumatran—are critically endangered.

**Indian rhino is largest of all rhino species** and commonly found in India (Assam, West Bengal and Utter Pradesh), Nepal, Bhutan, and Pakistan. It is identified by a single black horn and a grey-brown hide with skin folds. It is **presently classified as 'vulnerable' on the International Union for Conservation of Nature (IUCN) Red List. Hence statement 2 is not correct.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With reference to Co-operative Societies, consider the following statements:**1. The right to form co-operative societies is a fundamental right.
2. The Parliament is empowered to make laws regulating the multi-state cooperative societies.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 only |
| Option | Both 1 and 2 |
| Option | Neither 1 nor 2 |
| Answer | 3 |
| Solution | * The 97th Constitutional Amendment Act of 2011 gave a constitutional status and protection to cooperative societies. In this context, it made the following three changes in the Constitution:
	+ It made the right to form co-operative societies a fundamental right (Article 19). **Hence, statement 1 is correct.**
	+ It included a new Directive Principle of State Policy on the promotion of cooperative societies (Article 43-B).
	+ It added a new Part IX-B in the Constitution which is entitled as “The Cooperative Societies” (Articles 243-ZH to 243-ZT).
* The new Part IX-B contains various provisions to ensure that the cooperative societies in the country function in a democratic, professional, autonomous and economically sound manner.
* **It empowers the Parliament in respect of multi-state cooperative societies** and the state legislatures in respect of other co-operative societies to make the appropriate laws regulating Cooperative Societies in India. **Hence, statement 2 is correct.**
	+ State Cooperative Societies Acts of individual states

Multi-State Cooperative Societies Act, 2002 for the multi-state Cooperative societies with Area of operation in more than one State. |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **"The Act made the Legislative Business to be conducted in public instead of in secret and reports of proceedings were officially published. Standing orders were adopted to conduct and regulate proceedings. The Bills were referred to Select Committees before being passed by the Council. It gave the legislature for the first time the right to frame its own rules and procedure."****Which of the following acts is being described in the above-given passage?** |
| Type | multiple\_choice |
| Option | Pitt's India Act of 1784 |
| Option | Charter Act of 1833 |
| Option | Charter Act of 1853 |
| Option | Government of India Act of 1858 |
| Answer | 3 |
| Solution | * Under **the Charter Act of 1853**, discussions in the Council, when acting in its legislative capacity, became oral instead of in writing. Bills passed through the usual three stages and were referred to Select Committees.
* **The legislative business was conducted in public instead of in secret and reports of proceedings were officially published. Standing orders were adopted to conduct and regulate proceedings.**
* The new Council conceived its duties not to be confined only to legislation but also began to assume the character of a miniature representative assembly, assembled for the purpose of enquiry into and redress of grievances.
* **The Act of 1853 gave the legislature for the first time the right to frame its own rules and procedure.** Shri Prasanna Kumar Tagore was appointed to the post of Clerk of the Council and he went on to provide the Council with a parliamentary form of procedure and encouraged it to assert its independence as a separate organ of government.

The public was allowed to witness the proceedings of the Council and press reporting was permitted in 1856. Despite the progressive establishment of legislative practices and procedures, there was, however, no Indian participation in the Council. **Hence the correct answer is option (c)** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements about the office of the High Court in India:**1. The power to extend the jurisdiction of High court is vested with the Parliament.
2. The judges of a high court are appointed by the Governor of the respective states.
3. A High Court can settle dispute between two states.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 1 and 2 only |
| Option | 2 and 3 only |
| Option | 1, 2 and 3 |
| Answer | 1 |
| Solution | * The **Parliament can extend** the jurisdiction of a high court to any union territory or exclude the jurisdiction of a high court from any union territory. **Hence statement 1 is correct.**
* The judges of a high court are **appointed by the President**.
* The chief justice is appointed by the President after consultation with the chief justice of India and the governor of the state concerned.
* For appointment of other judges, the chief justice of the concerned high court is also consulted.
* In case of a common high court for two or more states, the governors of all the states concerned are consulted by the president. **Hence statement 2 is not correct.**

When there is a dispute which arises **between the States of India** or between the State Government and the Union Government then it is the jurisdiction of **the Supreme Court** under **Article 131** of the Constitution that gives it the power to resolve these kinds of disputes. **Hence statement 3 is not correct**. |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Bhoramdeo Wildlife Sanctuary (BWS), which has been designated as the Tiger Reserve recently is located at** |
| Type | multiple\_choice |
| Option | Chattisgarh |
| Option | Madhya Pradesh |
| Option | Rajasthan |
| Option | Jharkhand |
| Answer | 1 |
| Solution | * Recently Chhattisgarh State Wildlife Board rejected National Tiger Conservation Authority's (NTCA) recommendation to assign Bhoramdeo Wildlife Sanctuary (BWS) the status of a Tiger Reserve. Hence option (a) is the correct answer.
* Challenging the governments decision a public interest litigation (PIL), demanding to designate the Bhoramdeo Wildlife Sanctuary (BWS) as a tiger reserve and the Chilpi Range as a buffer zone has been filed. But the Chhattisgarh high court has dismissed a public interest litigation (PIL).
* The court emphasized that the National Tiger Conservation Authority (NTCA) had only suggested measures for the potential declaration of BWS as a Tiger Reserve and had not issued a binding recommendation.
* There are to date 54 tiger Reserves and the last one to get the status was Guru Ghasidas National Park and Tamor Pingla Wildlife Sanctuary which is located in the state of Chhattisgarh.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which of the following are the criteria for declaring a Biodiversity Heritage Sites (BHS)?**1. High endemism
2. Presence of rare and threatened species and Keystone species
3. High density of forest and tree cover.

**Select the correct answer using the code given below.** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 2 and 3 only |
| Option | 1 and 3 only |
| Option | 1, 2 and 3 |
| Answer | 1 |
| Solution | * **“Biodiversity Heritage Sites” (BHS) are well-defined areas that are unique, ecologically fragile ecosystems - terrestrial, coastal and inland waters and, marine having rich biodiversity** comprising of any one or more of the following components: the richness of wild as well as domesticated species or intra-specific categories, high endemism, presence of rare and threatened species, keystone species, species of evolutionary significance, wild ancestors of domestic/cultivated species or their varieties, past pre-eminence of biological components represented by fossil beds and having significant cultural, ethical or aesthetic values and are important for the maintenance of cultural diversity, with or without a long history of human association with them. **Hence option 1 is correct**.
* Under **Section 37 of Biological Diversity Act, 2002 (BDA) the State Government** in consultation with local bodies may notify in the official gazette, areas of biodiversity importance as Biodiversity Heritage Sites (BHS). Under subsection (2) of Section 37, the State Government in consultation with the Central Government may frame rules for the management and conservation of BHS. **Hence option 2 is correct.**
* **Criteria:**
	+ **The richness of wild as well as domesticated species or intra-specific categories.**
	+ High endemism.
	+ **Presence of rare and threatened species, keystone species, species of evolutionary significance**
	+ Wild ancestors of domestic/cultivated species or their varieties.
	+ Past pre-eminence of biological components represented by fossil beds and having significant cultural, ethical or aesthetic values are important for the maintenance of cultural diversity with or without a long history of human association with them.

**High density and forest cover is not a criteria used to identify BHS. Hence option 3 is not correct.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which of the following are the determinants of Minimum Support Price (MSP)?**1. Demand and supply
2. Amount of annual rainfall
3. International price trends
4. Implications of MSP on consumers

**Select the correct answer using the code given below.** |
| Type | multiple\_choice |
| Option | 1, 3 and 4 only |
| Option | 2 and 3 only |
| Option | 1 and 4 only |
| Option | 1, 2, 3 and 4 |
| Answer | 1 |
| Solution | * The minimum support price is an agricultural product price, set by the Government of India to purchase directly from the farmer. This rate is to safeguard the farmer to a minimum profit for the harvest if the open market has a lesser price than the cost incurred.
* Commission for Agricultural Costs & Prices (CACP) is mandated to recommend minimum support prices (MSPs) to incentivize the cultivators to adopt modern technology and raise productivity and overall grain production in line with the emerging demand patterns in the country
* While recommending price policy of various commodities under its mandate, the Commission keeps in mind the various Terms of Reference (ToR) given to CACP in 2009. Accordingly, it analyses
	+ **demand and supply**
	+ cost of production
	+ **price trends in the market, both domestic and international**
	+ inter-crop price parity
	+ terms of trade between agriculture and non-agriculture
	+ a minimum of 50 per cent as the margin over the cost of production
	+ **likely implications of MSP on consumers of that product.**
* CACP submits its recommendations to the government in the form of Price Policy Reports every year, separately for five groups of commodities namely Kharif crops, Rabi crops, Sugarcane, Raw Jute and Copra.
* As of now, CACP recommends MSPs of 23 commodities, which comprise 7 kinds of cereal (paddy, wheat, maize, sorghum, pearl millet, barley and ragi), 5 pulses (gram, tur, moong, urad, lentil), 7 oilseeds (groundnut, rapeseed-mustard, soybean, sesame, sunflower, safflower, nigerseed), and 4 commercial crops (copra, sugarcane, cotton and raw jute).

**Hence only options 1, 3 and 4 are correct.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements:**1. In a closed economy, savings and investment remain equal.
2. In an open economy, savings are always more than investments.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 only |
| Option | Both 1 and 2 |
| Option | Neither 1 nor 2 |
| Answer | 1 |
| Solution | * A closed economy refers to an economy that does not interact with other economies. Saving and investment are equal in a closed economy.
* Let's now consider how saving (S) and investment (I) are related to the international flows of goods and capital as measured by net exports and net capital outflow.
* Each unit of output sold in a closed economy is consumed, invested, or bought by the government. To see what this identity can tell us about financial markets, subtract C and G from both sides of this equation. We obtain, **Y - C - G = I. (Y = GDP and C = Consumption).**
* The left side of this equation **(Y - C - G)** is the total income in the economy that remains after paying for consumption and government purchases:
* This amount is called national saving, or just saving, and is denoted by S. Substituting S for Y - C - G, we can write the last equation as S = I.
* National saving is the income of the nation that is left after paying for current consumption and government purchases. National saving (S) equals Y - C - G.
* If we rearrange the equation to reflect this fact, we obtain, **Y - C - G = I + NX**
* **S = I + NX.**
* Because net exports (NX) also equal net capital outflow (NCO), we can write this equation as **S = I + NCO**
* **Saving = Domestic Investment + Net capital outflow**
* This equation shows that a nation's saving must equal its domestic investment plus its net capital outflow. **In a closed economy, net capital outflow is zero (NCO = 0), so saving equals investment (S = I).**
* By contrast, an open economy has two uses for its saving: domestic investment and net capital outflow.
* When a nation’s saving exceeds its domestic investment, its net capital outflow is positive, indicating that the nation is using some of its saving to buy assets abroad. When a nation’s domestic investment exceeds its saving, its net capital outflow is negative, indicating that foreigners are financing some of this investment by purchasing domestic assets. **Therefore, savings are not always more than investments.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Bandi Jeevan' that served as a textbook for the revolutionary movement in India was written by** |
| Type | multiple\_choice |
| Option | Ramprasad Bismil |
| Option | Sachindranath Sanyal |
| Option | Jogesh Chatterjea |
| Option | Surya Sen |
| Answer | 2 |
| Solution | * Determined to fight the oppressive British rule, **Sachindranath Sanyal** (**or Sachindra Nath)** started participating in revolutionary activities from a young age. **In 1913, when he was just 20 years old, he** **opened a chapter of the revolutionary organization ‘Anushlian Samiti’ in Benaras.** He used to organize fitness activities and motivate youth to fight for the motherland.
* **In 1915, Sachindra Nath and Rash Bihari Bose were involved the Ghadar Party’s armed rebellion plan to overthrow British rule.** Sanyal trained the youth in revolutionary tactics and prepared them forthe uprising. But to their misfortune, their plan was leaked to the British and the efforts of the Ghadar party to overthrow the British government went in vain.
* This incident alerted the British and led to the arrest of many Ghadarites and revolutionaries, including Sachindra. **Sachindra was sentenced to life and deported to the Cellular Jail of Andaman for his involvement in the Benaras Conspiracy**; his house was also confiscated by the British. **Here he wrote the famous book “Bandi Jeevan” (A Life of Captivity). This book is by revered by freedom fighters like Bhagat Singh.** In 1920 in the wake of the victory of Britain and its allies in the First World War, the British had freed many prisoners, among them Sachindra Nath.
* The harrowing time spent at the Cellular Jail did not break the spirit of Sachindra Nath and he continued with his revolutionary ways. **He co-founded the Hindustan Republican Association (HRA)** which was later renamed to Hindustan Socialist Republican Association (HSRA) and mentored great freedom fighters such as Bhagat Singh, Sukhdev, Bhagwati Chandra Vohra among others.
* Sachindra Nath was arrested again in 1924 for what was considered as a provocative speech against the government. He was sent for the second time to the Cellular Jail for his involvement in the Kakori raid.

He had contracted Tuberculosis and was released from jail due to his deteriorating health condition in 1937. However, this was not the end of his jail confinement and Sachindra continued to participate in the freedom struggle. He was again imprisoned in Rajasthan in 1939 and in Uttar Pradesh in 1942. He was later moved to Gorakhpur jail where he succumbed to TB and passed away on February 6, 1943. **Hence option (b) is the correct answer.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements:**1. Light waves are longitudinal waves.
2. Photon energy of visible light is lesser than the infrared radiation.
3. Sun appears red during sunset and sunrise due to scattering of light.
4. The shorter the wavelength of the light, the more it is refracted.

**Which of the statements given above are correct?** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 3 and 4 only |
| Option | 1 and 3 only |
| Option | 2, 3 and 4 only |
| Answer | 2 |
| Solution | * **Visible light** is a form of **electromagnetic (EM) radiation**, as are radio waves, infrared radiation, ultraviolet radiation, X-rays and microwaves. Generally, visible light is defined as the wavelengths that are visible to most human eyes. Visible light falls in the range of the EM spectrum **between infrared (IR) and ultraviolet (UV).** It has **frequencies of about 4 × 10^14 to 8 × 10^14 hertz (Hz)** and wavelengths of about 740 nanometers (nm) to 380 nm.
* Waves are classified into two groups: transverse or longitudinal. In a transverse wave, the particles are displaced perpendicular to the direction the wave travels. In a **longitudinal wave** the particles are displaced **parallel to the direction** the wave travels (e.g.. Sound waves). **Light waves are transverse** i.e., the vibrating electric vector associated with each wave is perpendicular to the direction of propagation. **Hence statement 1 is not correct.**
* **Photon energy** is the energy carried by a single photon. The amount of energy is directly proportional to the photon's electromagnetic frequency and thus, equivalently, is inversely proportional to the wavelength. **The higher the photon's frequency, the higher its energy.** Since the **frequency of visible light is more than infrared radiation,** photon energy of visible light is more than infrared energy. **Hence statement 2 is not correct.**
* During sunrise and sunset, the rays have to travel a larger part of the atmosphere because they are very close to the horizon. Therefore, light other than red is mostly scattered away. Most of the **red light**, which is the least **scattered**, enters our eyes. Hence, the sun and the sky appear red **due to scattering of sun rays**. **Hence statement 3 is correct.**
* When light passes from a more dense to a less dense substance, (for example passing from water into air), the light is **refracted** (or bent) away from the normal. The normal is a line perpendicular (forming a 90 degree angle) to the boundary between the two substances. The bending occurs because light travels more slowly in a denser medium. The amount of refraction increases as the wavelength of light decreases. **Shorter wavelengths of light** (violet and blue) are slowed more and consequently **experience more bending** than do the longer wavelengths (orange and red). **Hence statement 4 is correct.**

**Hence option (b) is the correct answer.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **The Central Information Commission (CIC) is required to receive and inquire into a complaint from a person in which of the following cases?**1. If a person has been refused information that was requested.
2. If a person has not received response to his information request within the specified time limits.
3. If a person thinks information given is incomplete, misleading or false.

**Select the correct answer using the code given below.** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 1 and 3 only |
| Option | 2 and 3 only |
| Option | 1, 2 and 3 |
| Answer | 4 |
| Solution | * **Central Information Commission:** It is a statutory body constituted under Right to Information Act, 2005.It consists of a Chief Information Commissioner and not more than ten Information Commissioners. Department of Personnel and Training (DoPT) under Ministry of Personnel, Public Grievances & Pensions is the nodal ministry for the Central Information Commission.
* It is the duty of the Commission to receive and inquire into a complaint from any person:
* who has not been able to submit an information request because of non-appointment of a Public Information Officer;
	+ **who has been refused information that was requested;**
	+ **who has not received response to his information request within the specified time limits;**
	+ who thinks the fees charged are unreasonable;
	+ **who thinks information given is incomplete, misleading or false; and**
	+ any other matter relating to obtaining information.

**Hence, all the statements are correct**. |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **In the context of the employment scenario in India, consider the following statements:**1. Compared to urban areas, the proportion of workforce residing in rural areas is higher.
2. While women account for fifty per cent of the total workforce in the country, they form just one-third of the urban workforce.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 only |
| Option | Both 1 and 2 |
| Option | Neither 1 nor 2 |
| Answer | 1 |
| Solution | * Those activities which contribute to the gross national product are called economic activities. All those who are engaged in economic activities, in whatever capacity — high or low, are workers. Even if some of them temporarily abstain from work due to illness, injury or other physical disability, bad weather, festivals, social or religious functions, they are also workers. Workers also include all those who help the main workers in these activities.
* While estimating the number of workers, all those who are engaged in economic activities are included as employed. Since the majority of our people reside in rural areas, the proportion of the workforce residing there is higher (about 70%). **Hence statement 1 is correct.**
* Men form the majority of the workforce in India. About 70 per cent of the workers are men and the rest are women (men and women include child labourers in respective sexes). Women workers account for one-third of the rural workforce whereas, in urban areas, they are just one-fifth of the workforce. **Hence statement 2 is not correct.**
* The worker-population ratio is an indicator that is used for analyzing the employment situation in the country. This ratio is useful in knowing the proportion of the population that is actively contributing to the production of goods and services of a country. If the ratio is higher, it means that the engagement of people is greater; if the ratio for a country is medium, or low, it means that a very high proportion of its population is not involved directly in economic activities.
* For every 100 persons, about 35 are workers in India. In urban areas, the proportion is about 34, whereas in rural India, the ratio is about 35. People in rural areas have limited resources to earn a higher income and participate more in the employment market.
* Many do not go to schools, colleges and other training institutions. Even if some go, they discontinue in the middle to join the workforce; whereas, in urban areas, a considerable section is able to study in various educational institutions. Urban people have a variety of employment opportunities. They look for the appropriate job to suit their qualifications and skills. In rural areas, people cannot stay at home as their economic condition may not allow them to do so.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With reference to the seaweed, consider the following statements:**1. More than 95% of the seaweed harvested for human consumption is cultivated.
2. The seaweeds do not require fertilizer, pesticides, freshwater and land.
3. India's first multi-purpose seaweed park will be established in Lakshadweep.

**How many of the above statements are correct?** |
| Type | multiple\_choice |
| Option | Only one |
| Option | Only two |
| Option | All three |
| Option | None |
| Answer | 2 |
| Solution | * **Seaweeds are a type of marine algae, often found in coastal waters. It can vary in size and colour and is used in various industries, including food, cosmetics, and agriculture.** Seaweed is rich in nutrients and has diverse applications worldwide.
* They are good source of calcium, magnesium, potassium, zinc, selenium, and a variety of other minerals and amino acids. They are the significant source of iodine, which aids thyroid function and combats infection. **More than 95% of the seaweed harvested for human consumption is cultivated rather than taken from the wild. Hence, statement 1 is correct.**
* **Unlike land-based crops, seaweed doesn’t require fertilizer, pesticides, freshwater, or land.** It grows fast—some marine algae can be ready to harvest in as little as six weeks—and absorbs CO2 while it’s growing, making it a valuable carbon sink. Algae also absorbs other excess nutrients like nitrogen and phosphorus, and creates new habitats for marine life. **Hence, statement 2 is correct.**
* **Recently, the Ministry of Fisheries, Animal Husbandry & Dairying laid the Foundation Stone for a Multi-Purpose Seaweed Park in Tamil Nadu** (Valamavur, Ramanathapuram district). It is in line with the Union Budget 2021 that India’s first Fisheries Aquapark in form of ‘Multipurpose Seaweed Park in Tamil Nadu’ will be established. **Hence, statement 3 is not correct.**

The park aims to promote seaweed cultivation for employment, value-added products, and conservation. It involves 136 coastal fishing villages and offers support to entrepreneurs. The Multipurpose Seaweed Park is a significant investment to promote seaweed cultivation and research, benefiting scientists, researchers, and local communities. |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With regard to Vijayanagara forts, consider the following statements:**1. Cities were fortified along with agricultural tracts and forests.
2. There was a single line of fortification for the cities.
3. No mortar or cementing agent was employed anywhere in the construction of these forts.
4. Gateways to forts were influenced by Turkish architecture.

**Which of the statements given above are correct?** |
| Type | multiple\_choice |
| Option | 1 and 4 only |
| Option | 2 and 3 only |
| Option | 1, 3 and 4 only |
| Option | 1, 2, 3 and 4 |
| Answer | 3 |
| Solution | * **Abdur Razzaq, an ambassador sent by the ruler of Persia to Calicut (present-day Kozhikode) in the fifteenth century, was greatly impressed by the fortifications and mentioned seven lines of forts**. **These encircled not only the city but also its agricultural hinterland and forests**. **Hence statement 1 is correct but statement 2 is not correct**.
* The massive masonry construction was slightly tapered. **No mortar or cementing agent was employed anywhere in the construction.** The stone blocks were wedge-shaped, which held them in place, and the inner portion of the walls was of earth packed with rubble. **Hence statement 3 is correct.**
* What was most significant about this fortification is that it enclosed agricultural tracts. Abdur Razzaq noted that “ between the first, second and the third walls there are cultivated fields, gardens and houses”.
* And Paes observed: “From this first circuit until you enter the city there is a great distance, in which are fields in which they sow rice and have many gardens and much water, in which water comes from two lakes.” **This tract was serviced by an elaborate canal system drawing water from the Tungabhadra**.
* A second line of fortification went around the inner core of the urban complex, and a third line surrounded the royal centre, within which each set of major buildings was surrounded by its own high walls.

The fort was entered through well-guarded gates, which linked the city to the major roads. Gateways were distinctive architectural features that often defined the structures to which they regulated access. **The arch on the gateway leading into the fortified settlement as well as the dome over the gate are regarded as typical features of the architecture introduced by the Turkish Sultans**. **Hence statement 4 is correct**. |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which is common to the places known as Sualkuchi, Pochampalli, Paithan?** |
| Type | multiple\_choice |
| Option | Underground cave systems |
| Option | Centers of Silk Production |
| Option | Water reservoirs |
| Option | Uranium deposits |
| Answer | 2 |
| Solution | * **Silk** is known as the “Queen of Textiles” due to grandeur, natural sheen, and inherent affinity for dyes, high absorbance etc. It stands for livelihood opportunity for millions owing to **high employment oriented**, low capital intensive and remunerative nature of its production.
* **Sericulture** industry provides employment to approximately **8 million** persons in rural and semi-urban areas in India. India has the unique distinction of being the **only country** producing all the five known commercial silks, namely, **mulberry, tropical tasar, oak tasar, eri and muga**, of which muga with its golden yellow glitter is unique and prerogative of India. India is the Second largest producer of silk in the World. Among the four varieties of silk produced (2014-15), **Mulberry accounts for (74.51%)**, Tasar (8.5%), Eri (16.5%) and Muga (0.55% ) of the total raw silk production.
* Major centers of silk production are: **Sualkuchi (Assam)**; Dharmavaram, **Pochampally** (Andhra Pradesh); Kanchipuram, Salem (Tamil Nadu); **Paithan** (Maharashtra); Surat, Cambay (Gujarat) etc.

**Hence, option (b) is the correct answer.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With reference to the Green Climate Fund (GCF), which of the following statements is not correct?** |
| Type | multiple\_choice |
| Option | It was set up at the Rio Summit to channelize funds from developed countries to developing countries. |
| Option | It supports investments in both mitigation as well as adaptation projects. |
| Option | It pays particular attention to the needs of Least Developed Countries (LDCs) and Small Island Developing States (SIDS). |
| Option | It allows investment both from the public sector as well as private sector through institutional investors and financial institutions. |
| Answer | 1 |
| Solution | * The **Green Climate Fund (GCF)** is the world’s largest dedicated fund helping developing countries reduce their greenhouse gas emissions and enhance their ability to respond to climate change. It was **set up by the United Nations Framework Convention on Climate Change (UNFCCC) in 2010. The GCF was set up in 2010 under the UNFCCC’s financial mechanism to channel funding from developed countries to developing countries to allow them to mitigate climate change and also adapt to disruptions arising from a changing climate. Hence, option (a) is not correct.**
* **GCF invests in adaptation and mitigation activities in developing countries, managing a project portfolio that is implemented by its partner organisations, known as Accredited Entities.** GCF has a crucial role in serving the Paris Agreement, supporting the goal of keeping average global temperature rise well **below 2 degrees C**. It does this by channelling climate finance to developing countries, which have joined other nations in committing to climate action. It is intended to be the centre piece of efforts to raise Climate Finance of **$100 billion a year by 2020.**
* GCF’s investments are aimed at achieving maximum impact in the developing world, supporting paradigm shifts in both mitigation and adaptation. **The Fund aims for a 50:50 balance between mitigation and adaptation investments over time.** It also aims for a floor of 50 percent of the adaptation allocation for particularly vulnerable countries, including Least Developed Countries (LDCs), Small Island Developing States (SIDS), and African States. **Hence option (b) is correct.**
* The Fund pays particular attention to the needs of societies that are highly vulnerable to the effects of climate change, in particular **Least Developed Countries (LDCs), Small Island Developing States (SIDS), and African States. Hence option (c) is correct.**
* In order to scale up GCF’s activities and de-risk the delivery of capital flows, GCF has set up the Private Sector Facility (PSF), a dedicated division designed to fund and mobilise private sector actors, including institutional investors, project sponsors and financial institutions. PSF promotes private sector investment through concessional instruments, including low-interest and long-tenor project loans, lines of credit to banks and other financial institutions, equity investments and risk mitigators, such as guarantees, first-loss protection, and grant-based capacity-building programmes. **Hence option (d) is correct.**
* GCF aims to catalyse a flow of climate finance to invest in low-emission and climate-resilient development, driving a paradigm shift in the global response to climate change.
* **Who will govern the Fund?**
	+ The Fund is governed and supervised by a Board that will have full responsibility for funding decisions and that receives the guidance of the **Conference of Parties (COP)**. The Fund is accountable to, and functions under the guidance of, the COP.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With reference to the transport network in India, consider the following statements:**1. Rural roads constitute the maximum length of the road network in India.
2. Indian Railways is the world’s largest freight carrier.
3. India has one of the fastest-growing aviation markets with the third-largest domestic aviation market.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 3 only |
| Option | 1 and 3 only |
| Option | 1, 2 and 3 |
| Answer | 3 |
| Solution | * The road network is the backbone of the transport system in India and it is very well integrated with the multi-modal system of transportation, which provides crucial links with airports, railway stations, ports, and other logistical hubs. With 63.86 lakh km of rural-urban roads and national-state highways, India is next only to the United States of America that has a road network of 66.45 lakh km. Rural roads have the longest length among the road network of India. **Hence, statement 1 is correct.**
* Indian Railways (IR) with over 67,580 route kilometres, is the third-largest network in the world under single management. During the FY20, IR carried 1.2 billion tonnes of freight and 8.1 billion passengers – making it the world’s largest passenger carrier and fourth-largest freight carrier. **Hence, statement 2 is not correct.**
* The GoI has allowed the private players to operate in the Railway sector through the PPP mode under the "New India New Railway" initiative. The initiative is expected to garner an investment of about ` 30,000 crores from the private sector.
* The aviation market in India is one of the fastest-growing in the world. India’s domestic traffic has more than doubled from around 61 million in FY14 to around 137 million in FY20, a growth of over 14 per cent per annum. **From the third-largest domestic aviation market, it is expected to become the thirdlargest overall (including domestic and international traffic) by the year FY25. Hence statement 3 is correct.**
* According to the IATA (International Air Transport Association), China would displace the United States as the world's largest aviation market in the mid-2020s. The aviation market is defined in terms of traffic to, from and within a country, as per the grouping. India will take 3rd place after the US, surpassing the UK around 2024.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Recently Santiniketan has been designated as the 41st UNESCO World Heritage Site (WHS) of India. In this context, consider the following statements:**1. Its design has been predominantly inspired from Greek and Roman architecture.
2. It is the only world heritage site in Bengal.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 only |
| Option | Both 1 and 2 |
| Option | Neither 1 nor 2 |
| Answer | 4 |
| Solution | * **Recent Context: Santiniketan (District Birbhum, West Bengal) has been designated as the 41st UNESCO World Heritage Site (WHS)** of India.
* It is the **third WHS of West Bengal, after the Sundarbans National Park and the Darjeeling Mountain Railways. Hence statement 1 is not correct.**
* **Along with Rabindranath Tagore, Surendranath Kar, Nandalal Bose, Patrick and Arthur Geddes played key roles in shaping it.**
* Santiniketan is an ensemble of historic buildings, landscapes and gardens, pavilions, artworks, and continuing educational and cultural traditions.
* It drew elements from ancient, medieval, and folk traditions of India as well as **Japanese, Chinese, Persian, Balinese, Burmese and Art Deco forms (Western Europe and the United States).**
* **Indigenous Architecture Style: It veered away from the prevalent Beaux Arts (Roman and Greek classicism but combined with more flamboyant French and Italian Renaissance) and European modernism. Hence statement 2 is not correct.**
* **Buildings Material:** Both traditional materials (mud and thatch) and reinforced cement concrete.
* **Open spaces:** Integral part of complex, has been used for cultural exchange and safeguard Indian art and cultural events through the mediums of fairs and seasonal festivals.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **What is ‘Deepfake’ a term often mentioned in the news?** |
| Type | multiple\_choice |
| Option | It is manufacturing of the counterfeit products which looks alike original products. |
| Option | It is an internet fraud related to the digital payments. |
| Option | It is a software malware that steals data of host computer by behaving as an original owner of the system. |
| Option | It is a manipulated digital representation produced by artificial intelligence that yields fabricated images and sounds that appear to be real. |
| Answer | 4 |
| Solution | * The word Deepfake is made from deep learning and fake. **Deepfake is an Artificial Intelligence (AI) software that superimposes a digital composite on to an existing video (or audio).** These are AIpowered algorithms that manipulate appearances and voices of people into real-looking footage. **Hence option (d) is the correct answer.**
* **Background:** The origin of the word “deepfake” can be traced back to 2017 when a Reddit user, with the username “deepfakes”, posted explicit videos of celebrities.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements:**1. Bhakti saints in the region of modernday Karnataka were popularly called Dasa saints.
2. The important contribution of Karnataka's bhakti movement was the development of Carnatic music.
3. Purandaradasa was one of the earliest Dasa bhakti poets

**Which of the above statements is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 and 3 only |
| Option | 1 and 3 only |
| Option | 1, 2 and 3 |
| Answer | 4 |
| Solution | * In **Karnataka,** t**he Dasa saints** propagated the bhakti movement. They rejected the social and caste distinctions and included all sections of people in their movement**. Hence statement 1 is correct.**
* The earliest Dasa bhakti poets were **Sripadaraja, Purandaradasa and Kanakadasa. Hence statement 3 is correct.**
* The greatest gift of the Karnataka's bhakti movement was the **development of Carnatic classical music. Hence statement 2 is correct.**
* **Puranadaradasa** is considered as the **father of Carnatic classical music.**
* The Dasa saints expressed their love towards God Krishna through music and dance. The Dasa saints **did not worship Radha**.
* Some of their compositions are as -Sripadaraja composed **Bhramargeet, Benugeet and Gopigeet.** Jagannath Dasa composed **‘Harikathamritsar’**. Tipamma Dasa and Maddhavadasa made the Vaishnava music popular in their vernacular language.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With reference to the Enemy Property, consider the following statements:**1. It is the property captured by warring nations in each other's territory.
2. It is held by the Union Government under the custodianship of the President.
3. Civil courts are barred from hearing disputes relating to enemy property.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 3 only |
| Option | 1 and 3 only |
| Option | 1, 2 and 3 |
| Answer | 2 |
| Solution | * **Enemy Property:** When nations go to war, they often seize the properties in their countries of the citizens and corporations of the enemy country. Properties that are seized under these circumstances are referred to as alien properties or enemy properties. **Hence, statement 1 is not correct.**
* During India-China war in 1962, and India – Pakistan war in 1965 and 1971, Central government took over properties of citizens of China and Pakistan in India under the Defence of India Acts.
* The responsibility of the administration of enemy properties was handed over to the Custodian of Enemy Property for India (CEPI), an office under the Central government. **Hence, statement 2 is not correct.**
* Enemy Property Act, 1968, defines ‘enemy’ as a country (and its citizens) that committed external aggression against India (i.e., Pakistan and China).
* The expanded definition of the term “enemy subject”, and “enemy firm” under Enemy Property (Amendment and Validation) Act, 2017 include the legal heir and successor of an enemy, whether a citizen of India or a citizen of a country which is not an enemy; and the succeeding firm of an enemy firm, irrespective of the nationality of its members or partners.
* **It prohibits Indian citizens who are legal heirs of enemies from inheriting enemy property and brings them within the definition of ‘enemy’.**
* CEPI, with prior approval of the central government, may dispose or sale enemy properties.
* It prohibits civil courts and other authorities from hearing certain disputes relating to enemy property. **Hence, statement 3 is correct.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which of the following powers enjoyed by the Chief Justice of India are mentioned in the Indian Constitution?**1. Appoint other place or places as the seat of the Supreme Court.
2. Appointment of ad hoc judge in Supreme Court.
3. Assignment of cases to judges of Supreme Court.

**Select the correct answer using the code given below.** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 2 and 3 only |
| Option | 1 and 3 only |
| Option | 1, 2 and 3 |
| Answer | 1 |
| Solution | **Administrative Position of Chief Justice of India (CJI) can be analyzed from the following:*** **Seat of the Supreme Court (Article 130):** The Constitution declares Delhi as the seat of the Supreme Court. But, it also authorises the chief justice of India to appoint other place or places as seat of the Supreme Court. He can take decision in this regard only with the approval of the President. **Hence option 1 is correct.**
* **Ad hoc Judge (Article 127):** When there is a lack of quorum of the permanent judges to hold or continue any session of the Supreme Court, the Chief Justice of India can appoint a judge of a High Court as an ad hoc judge of the Supreme Court for a temporary period. He can do so only after consultation with the chief justice of the High Court concerned and with the previous consent of the president. **Hence option 2 is correct.**
* Retired Judges (Article 128): At any time, the chief justice of India can request a retired judge of the Supreme Court or a retired judge of a high court (who is duly qualified for appointment as a judge of the Supreme Court) to act as a judge of the Supreme Court for a temporary period. He can do so only with the previous consent of the president and also of the person to be so appointed.
* Freedom to Appoint its Staff (Article 146): The Chief Justice of India can appoint officers and servants of the Supreme Court without any interference from the executive. He can also prescribe their conditions of service.
* **The assignment of cases** is done by CJIA as per the Supreme Court Rules. Although, the Supreme Court Rules are framed by the Supreme Court in exercise of powers under Article 145 of the Constitution. **Hence option 3 is not correct.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Recently Kokborok language was in the news. Its widely spoken in which of the following states/UT?** |
| Type | multiple\_choice |
| Option | Ladakh |
| Option | Odisha |
| Option | Lakshadweep |
| Option | Tripura |
| Answer | 4 |
| Solution | * **Recent Context:** Recently many people were detained in Tripura during a 12-hour statewide strike called by the Twipra Students’ Federation (TSF) to **press for the introduction of Roman script for Kokborok, state’s indigenous lingua franca,**and other demands.
* **Kokborok is the language spoken by the Borok people belonging to Tripura.**
	+ Borok is a branch of the Boro people of Assam belonging to the Sino-Tibetan linguistic group and racial Mongoloids.
	+ Kokborok belongs to the Tibeto-Burman family and has a close affinity with other language families like Bodo, Garo, Dimasa etc.
		- **Doulot Ahammad wrote the first Kokborok Grammar (1897).**

**Hence option (d) is the correct answer.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which of the following statements is correct about the Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI)?** |
| Type | multiple\_choice |
| Option | Foreign investment greater than 10 percent of the paid-up capital of a company can be considered as the FDI. |
| Option | FDI is more liquid asset for an investor than FPI. |
| Option | FPI investors are active investors and take controlling positions in domestic firms. |
| Option | All the statements (a), (b) and (c) are correct. |
| Answer | 1 |
| Solution | * According to IMF and OECD definitions, the acquisition of at least ten percent of the ordinary shares or voting power in a public or private enterprise by non-resident investors makes it eligible to be categorized as a foreign direct investment (FDI). In India, a particular FII is allowed to invest up to 10% of the paid-up capital of a company, which implies that any investment above 10% will be construed as FDI, though officially such a definition did not exist. It may be noted that there is no minimum amount of capital to be brought in by the foreign direct investor to get the same categorized as FDI. Hence option (a) is the correct answer.
* FDI investors cannot easily liquidate their assets and depart from a nation, since such assets may be very large and quite illiquid. FPI investors can exit a nation literally with a few mouse clicks, as financial assets are highly liquid and widely traded.
* FDI can be used to develop infrastructure, set up manufacturing facilities and service hubs, and invest in other productive assets such as machinery and equipment, which contributes to economic growth and stimulates employment. FDI is obviously the route preferred by most nations for attracting foreign investment since it is much more stable than FPI and signals long-lasting commitment.
* FDI investors typically take controlling positions in domestic firms or joint ventures and are actively involved in their management. FPI investors, on the other hand, are generally passive investors who are not actively involved in the day-to-day operations and strategic plans of domestic companies, even if they have a controlling interest in them.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements:**1. Pure water reaches its maximum density at 4°C.
2. The boiling point of water increases with increase in altitude.
3. The mixture of hydrogen and oxygen is often referred to as water gas.
4. Compared to land surfaces, water warms and cools more slowly.

**Which of the statements given above are correct?** |
| Type | multiple\_choice |
| Option | 1, 2 and 3 only |
| Option | 2, 3 and 4 only |
| Option | 1 and 4 only |
| Option | 2 and 3 only |
| Answer | 3 |
| Solution | * Water is an inorganic, transparent, tasteless chemical substance. It is the main constituent of Earth's hydrosphere and the fluids of all known living organisms. It is vital for all known forms of life, even though it provides no calories or organic nutrients.
* Chemical formula of water is H2O. A **water molecule** consists of **two atoms of hydrogen linked by covalent bonds** to the same atom of oxygen. Atoms of oxygen are electronegative and attract the shared electrons in their covalent bonds. Consequently the electrons in the water molecule spend slightly more time around the oxygen atomic center and less time around the hydrogen atomic centers. The covalent bonds are therefore polar, and the oxygen atoms have a slight negative charge (from the presence extra electron share), while the hydrogens are slightly positive (from the extra un-neutralized protons). **correct.**
* When water is a liquid, the water molecules are packed relatively close together but can slide past each other and move around freely. **Pure water has a density of 1.000 g/cm3 at 4˚ C (which is maximum)**. As the temperature increases or decreases from 4˚ C, the density of water decreases. **Hence statement 1 is correct.**
* The temperature at which liquid water begins turning to vapor, which occurs when its vapor pressure equals the atmospheric pressure. At **higher elevation**, atmospheric pressure declines. This means **heated water reaches its boiling point more quickly** i.e., at a lower temperature. Hence boiling point decreases with increase in altitude. **Hence statement 2 is not correct.**
* **Water gas** is a combustion fuel containing **carbon monoxide (CO) and hydrogen gas (H2).** Water gas is made by passing steam over heated hydrocarbons. The reaction between steam and hydrocarbons produces synthesis gas. The water-gas shift reaction can be used to reduce carbon dioxide levels and enrich hydrogen content, making water gas. **Hence statement 3 is not correct.**
* Specific heat is defined by the amount of heat needed to raise the temperature of 1 gram of a substance 1 degree Celsius (°C). **Water has a high specific heat capacity.** This is why water is valuable to industries as a coolant. The high heat capacity of water also helps regulate the rate at which air changes temperature, which is why the temperature change between seasons is gradual rather than sudden, especially near the oceans.
* This same concept can be expanded to a world-wide scale. **Water** surrounding or near cities **take longer to heat up and longer to cool down than do land masses**, so cities near the oceans will tend to have less change and less extreme temperatures than inland cities. This property of water is one reason why states on the coast and in the center of the country can differ so much in temperature patterns. **Hence statement 4 is correct.**
* **Hence option (c) is the correct answer.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **The Constitution (Seventy-third Amendment) Act, 1992 does not apply to which of the following Indian states/union territories?**1. Nagaland 2. Mizoram3. Meghalaya 4. Kerala**Select the correct answer using the code given below.** |
| Type | multiple\_choice |
| Option | 2 and 4 only |
| Option | 1, 2 and 3 only |
| Option | 1 and 3 only |
| Option | 1, 2, 3 and 4 |
| Answer | 2 |
| Solution | * **Article 243M provides that the Part IX does not apply to certain areas:**
	+ Scheduled Areas referred to in clause (1), and the tribal areas referred to in clause (2), of article 244.
	+ the States of **Nagaland, Meghalaya and Mizoram**; **Hence options 1, 2 and 3 are correct.**
	+ the Hill Areas in the State of Manipur for which District Councils exist under any law for the time being in force.
	+ Nothing in this part apply to - relating to Panchayats at the district level shall apply to the hill areas of the District of Darjeeling in the State of West Bengal for which Darjeeling Gorkha Hill Council exists under any law for the time being in force; shall be construed to affect the functions and powers of the Darjeeling Gorkha Hill Council constituted under such law.
* **Panchayati Raj System in Kerala began with the enactment of the Panchayati Raj Act in 1994.**
* **Hence option 4 is not correct.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With reference to the Asiatic Cheetahs, consider the following statements:**1. They are listed as "Extinct in The Wild" by IUCN across Asia.
2. They primarily occupy areas with dense vegetation.
3. African Cheetahs are bigger in size as compared to Asiatic Cheetahs.

**Which of the statements given above is/are not correct?** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 2 and 3 only |
| Option | 1 and 3 only |
| Option | 3 and 4 only |
| Answer | 1 |
| Solution | * **Cheetah:** Today, there are estimated to be only **7,100 cheetahs** left in the wild – and their future remains uncertain. Cheetahs have vanished from approximately 90 percent of their historic range in Africa, and are **extinct in Asia except** for a single, isolated population of perhaps 50 individuals **in central Iran.**
* **Population:** Cheetahs are listed as **“Vulnerable”** by the IUCN Red List of Threatened Species. Cheetah has been protected under **Appendix I** of the **CITES** since 1 July 1975 which means commercial international trade in wild-sourced cheetah is prohibited. Cheetahs are listed as “Vulnerable” by the International Union for the Conservation of Nature (IUCN) Red List of Threatened Species, but after a recent study revealed significant population declines, scientists are calling for cheetahs to be uplisted to “Endangered.” **In North Africa and Asia, they are considered “Critically Endangered.” Hence statement 1 is not correct.**
* **Vegetation:** Cheetahs primarily **occupy areas without dense vegetation**. These habitats include deserts, plains or grasslands. Cheetahs **also tend to thrive in savannas and scrubland**. Cheetahs can be found in any wide-open habitat where they can find and hunt prey. Open land without dense vegetation is advantageous to the cheetah because these big cats rely on speed for successful hunting. **Hence statement 2 is not correct.** Cheetahs also **avoid wetlands** where swampy ground would inhibit their speed. Cheetahs will inhabit areas where the ground is covered in thick brush, however, since this type of vegetation provides hiding places but does not prevent swift running.
* **Elevation and Climate:** Cheetahs **prefer a habitat with a dry climate**, since low humidity and rainfall often correspond with a low level of vegetation. Similarly cheetahs tend to live at altitudes above sea level and sometimes occupy sparsely vegetated mountains. **Desert vegetation gives cheetahs adequate protection** in seeking lairs and shade without providing prey with hiding places or preventing cheetahs from reaching their maximum running speeds.
* **Cheetah reintroduction programme in India:** The shortlisted locations for reintroduction of Cheetah include **Kuno-Palpur National Park** in Sheopur, **Nauradehi Wildlife Sanctuary** in Damoh, **Madhav National Park** in Shivpuri and **Gandhi Sagar wildlife sanctuary** in Mandsaur. Kuno-Palpur was, in fact, chosen for Gir lions also.
* **Differences between African cheetah and Asiatic cheetah**
	+ **African cheetah:** IUCN status– They are **vulnerable** under the IUCN Red List. Distribution– Around 6,500-7,000 African cheetahs present in the wild. Characteristics– They **are bigger in size as compared to Asiatic Cheetah**. **Hence, statement 3 is correct.**
	+ **Asiatic cheetah:** IUCN status– The Asiatic cheetah is classified as a **“critically endangered”** species by the IUCN Red List. Status in India– The Asiatic Cheetah was declared extinct in India in 1952. Distribution– They are only 40-50 and found **only in Iran**. Characteristics– Smaller and paler than the African cheetah. The neck is much smaller and longer. It has more fur, a smaller head and a longer neck. Usually, they have red eyes and they have a more cat-like appearance. Asiatic cheetahs mostly prey on medium-sized prey like goitered gazelle, wild sheep and goats, cape hares, and chinkara. The Asiatic cheetah’s habitat is not as diverse as the African continent.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With reference to optical fibres, consider the following statements:**1. Data transmission in optical fiber is based on the principle of total internal reflection.
2. They are more fragile than electrical wires.
3. They are immune to electromagnetic interference.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 and 3 only |
| Option | 1 and 3 only |
| Option | 1, 2 and 3 |
| Answer | 4 |
| Solution | * **Optical fibers are flexible, transparent filaments composed of a core made of polymer (polymethylmethacrylate, polycarbonate), silica or quartz, and a sheath made of fluoropolymer.**
* Optical fibers are basically composed of two coaxial layers: core and cladding. The core is the inner part of the fiber, which guides light, whereas the cladding surrounds it completely. **The principle of light propagation through a fiber is a total internal reflection** at the simple interface between two different dielectric materials. **Hence statement 1 is correct.**
* **Advantages of Fiber Optic Transmission:** Optical fibers have largely replaced copper wire communications in core networks in the developed world, because of its advantages over the electrical transmission.
* **Extremely High Bandwidth.**
	+ **Longer Distance:** in fiber optic transmission, optical cables are capable of providing low power loss, which enables signals can be transmitted to a longer distance than copper cables.
	+ **Resistance to Electromagnetic Interference:** in practical cable deployment, it’s inevitable to meet environments like power substations, heating, ventilating and other industrial sources of interference. However, fiber has a very low rate of bit error. Fiber optic transmission is virtually noise-free. **Hence statement 3 is correct.**
	+ Low-Security Risk: Data or signals are transmitted via light in fiber optic transmission. Therefore there is no way to detect the data being transmitted by "listening in" to the electromagnetic energy "leaking" through the cable, which ensures the absolute security of information.
	+ Small Size and Light Weight
* **Disadvantages of Fiber Optic Transmission**
	+ **Fragility: usually optical fiber cables are made of glass, which lends to they are more fragile than electrical wires. Hence statement 2 is correct.**
	+ **Difficult to Install:** it’s not easy to splice fiber optic cable. And if you bend them too much, they will break. And fiber cable is highly susceptible to becoming cut or damaged during installation or construction activities.
	+ **Attenuation & Dispersion:** as transmission distance getting longer, the light will be attenuated and dispersed, which requires extra optical components like EDFA to be added.
	+ **Cost Is Higher** than Copper Cable.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **In the context of modern Indian history, Kundara Proclamation is associated with which of the following events?** |
| Type | multiple\_choice |
| Option | Bhiwani uprising |
| Option | Kutch rebellion |
| Option | Velu Thampi's revolt |
| Option | Palamau uprisings |
| Answer | 3 |
| Solution | * The East India Company’s harsh conditions imposed on the state of Travancore, after both of them agreed to a subsidiary alliance arrangement under Wellesley in 1805, caused deep resentment in the region. The ruler was not able to pay the subsidy and fell in arrears. The British resident of Travancore was meddling in the internal affairs of the state. The highhanded attitude of the Company compelled Prime Minister (or Dalawa) Velu Thampi to rise against the Company, assisted by the Nair troops.
* Velu Thampi addressed a gathering in Kundara, openly calling for taking up arms against the British to oust them from the native soil. This was later known as the Kundara Proclamation. There was a large scale rebellion against the British as a result. A large military operation had to be undertaken to restore peace. **Hence option (c) is the correct answer.**

The Maharaja of Travancore had not wholly supported the rebellion and defected to the side of the Company. Velu Thampi killed himself to avoid capture. The rebellion petered out. |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **The Government of India has come out with a new set of National Awards in the field of Science, Technology and Innovation known as “Rashtriya Vigyan Puraskar’’. In this context, consider the following pairs:**1. Vigyan Ratna (VR) award: To recognize distinguished contributions made in any field of science and technology (S&T).
2. Vigyan Yuva-Shanti Swarup Bhatnagar (VY-SSB) award: To recognize young scientists up to the age of 45 years who made an exceptional contribution in any field of S&T.
3. Vigyan Shri (VS) award: To recognize lifetime achievements in any field of S&T.

**How many of the above pairs are correctly matched?** |
| Type | multiple\_choice |
| Option | Only one |
| Option | Only two |
| Option | All three |
| Option | None |
| Answer | 1 |
| Solution | * **Recent Context:** The Government of India has come out with a new set of National Awards in the field of Science, Technology, and Innovation known as “Rashtriya Vigyan Puraskar’’.
* The Rashtriya Vigyan Puraskar shall be one of the highest recognitions in the field of science, technology, and innovation in India.
* **Scientists/ technologists/innovators working in government, private sector organizations or any individual working outside any organization,** who have made distinguished contributions in terms of path-breaking research or innovation or discovery in any field of science, technology, or technology-led- led innovation shall be eligible for the awards.
* **People of Indian Origin staying abroad with exceptional contributions benefiting the Indian communities or society shall also be eligible for the awards.**
* The awards shall be given in the following **four categories**:-
* **Vigyan Ratna (VR) award** will recognize **lifetime achievements & contributions** made in any field of science and technology. **Hence pair 1 is not correctly matched.**
* **Vigyan Shri (VS) award** will recognize **distinguished contributions** in any field of science and technology. **Hence pair 3 is not correctly matched.**
* **Vigyan Yuva-Shanti Swarup Bhatnagar (VY-SSB) award** will **recognize & encourage young scientists up to the age of 45 years who made an exceptional contribution** in any field of science and technology. **Hence pair 2 is correctly matched.**
* **Vigyan Team (VT) award** to be given to a **team comprising of three or more scientists/ researchers/innovators who have made an exceptional contribution working in a team** in any field of science and technology.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **The Asiatic Society of Bengal translated various Indian literature into English, with reference to it consider the following pairs:*****Literature Translated By***1. Bhagavadgita : Charles Wilkins
2. Manusamhita : William Jones
3. Meghaduta : H.H. Wilson

**Which of the pairs given above are correctly matched?** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 2 and 3 only |
| Option | 1 and 3 only |
| Option | 1, 2 and 3 |
| Answer | 4 |
| Solution | * **Asiatic Society of Bengal, a scholarly society, was founded on January 15, 1784, by Sir William Jones,** a British lawyer and Orientalist, to encourage Oriental studies. The Asiatic Society had the support and encouragement of Warren Hastings, the governor-general (1772–85) of Bengal. It laid emphasis on the importance of Hindu culture and learning and about the vital role of Sanskrit in the Aryan languages.
* The founding fathers of the Asiatic Society were responsible for the rediscovery of India and her past and translated a number of ancient Indian texts into English:
* **Sir Charles Wilkins (1750-1 833) translated the Bhagavadgita** into English in 1785, deciphered a number of Sanskrit inscriptions published a translation of Hitopadesa (1787) and a Grammar of the Sanskrit Language. **Hence pair 1 is correctly matched.**
* **Sir William Jones** translated Kalidasa's Sakuntala (1789), Jayadeva's Gitagovinda (1789) and **Manusamhita** (1794), and edited Ritusamhara (1792). Jones also translated a Persian work Laila Majnu. **Hence pair 2 is correctly matched.**
* **Colebrooke** was the President of the Society from 1806 to 1815. He published an English translation of Jagannath Tarkapanchanan's celebrated work on Hindu law, the Vivadabhangarnava under the title Digest of Hindu Law on Contracts and Successions (1798). He also published a criticaledition of the Sanskrit lexicon Amarakosha (1808).
* **Wilson** was Secretary to the Asiatic Society from 1811 to 1833 and published **Kalidasa's Meghaduta** (1813) and got the eighteen principal Puranas also translated into English. He also published an edition of Kalhana's Rajatarangini (1825).
* **Sir John Shore** (1751-1834) who succeeded William Jones as President of the Society in 1794, published from a Persian version an abridged English translation of the Yoga Vasistha and contributed six papers to the Asiatick Researches. **Hence pair 3 is correctly matched.**
* Most of the works of the Society are research-based and research-oriented. **Hence option (d) is the correct answer.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which of the following are chemically radioactive elements?**1. Actinium 2. Astatine3. Rhodium 4. Radon**Select the correct answer using code given below.** |
| Type | multiple\_choice |
| Option | 2 and 3 only |
| Option | 1, 2 and 4 only |
| Option | 1, 3 and 4 only |
| Option | 1, 2, 3 and 4 |
| Answer | 2 |
| Solution | * Radioactivity is a property exhibited by certain types of matter of emitting energy and subatomic particles spontaneously. It is, in essence, an attribute of individual atomic nuclei. An unstable nucleus will decay into a more stable configuration but will do so only in a few specific ways by emitting certain particles or certain forms of electromagnetic energy.
* **Radioactive decay** is a property of several naturally occurring elements as well as of artificially produced isotopes of the elements. The rate at which a radioactive element decays is expressed in terms of its **halflife**; i.e., the time required for one-half of any given quantity of the isotope to decay. The emissions of the most common forms of spontaneous radioactive decay are **the alpha(α) particle, the beta (β) particle, the gamma(γ) ray, and the neutrino.**
* **Naturally occurring** radioactive elements **Uranium**, Radium, **Radon**, Polonium, Thorium, **Actinium, Astatine** etc.
* Some of the Artificially produced radioactive elements are **Bohrium, Nobelium,** Lawrencium, Hassium, Fermium, Curium etc.
* **Rhodium** is a chemical element with the symbol Rh and atomic number 45. It is an ultra-rare, silverywhite, hard, corrosion-resistant, and chemically inert transition metal. It is a noble metal and a member of the platinum group. It is **not a radioactive element.**
* **Hence option (b) is the correct answer.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements with respect to Influenza viruses:**1. The genome of influenza viruses contains double stranded segmented DNA.
2. Influenza virus is transmitted primarily by droplets or respiratory secretions of infected persons.
3. Severe respiratory disease in birds called avian influenza is caused by H1N1 type of influenza virus.
4. Influenza virus has high mutation rates enabling the virus to cause repetitive influenza outbreaks by evading immune recognition.

**Which of the statements given above are correct?** |
| Type | multiple\_choice |
| Option | 1 and 3 only |
| Option | 2 and 4 only |
| Option | 1, 2 and 4 only |
| Option | 2, 3 and 4 only |
| Answer | 2 |
| Solution | * **Influenza viruses** belong to the family Orthomyxoviridae and have a **single-stranded segmented RNA genome.** The influenza viruses are classified into types A, B, and C on the basis of their core proteins. **Hence statement 1 is not correct.**
* Characteristic of many RNA genome viruses, influenza virus undergoes **high mutation rates and frequent genetic reassortment** (combination and rearrangement of genetic material) leading to variability in HA and NA antigens. Minor changes in the protein structure in influenza A strains ("antigenic drift") occur frequently, enabling the virus to cause repetitive **influenza outbreaks** by **evading immune recognition**. Influenza B and C viruses mainly affect humans, whereas influenza A viruses infect a range of mammalian and avian species. **Hence statement 4 is correct.**
* Influenza virus is transmitted primarily by **droplets or respiratory secretions of infected persons.** Influenza is associated with considerable economic burden. Secondary bacterial pneumonia is a frequent complication of influenza infection, particularly in elderly people and individuals with certain chronic diseases, resulting in a significant level of morbidity and mortality. **Hence statement 2 is correct.**
* Two types of influenza vaccine are widely available: inactivated influenza vaccines and live attenuated influenza vaccines. Traditionally, influenza vaccines have been produced to protect against 3 different seasonal influenza viruses (also called trivalent vaccines).
* **H5N1** is a type of influenza virus that causes a highly infectious, severe respiratory disease in birds called **avian influenza (or "bird flu").** Human cases of H5N1 avian influenza occur occasionally. H5N1 infection in humans can cause severe disease and has a high mortality rate. Recently, Bird flu has been reported among wild geese in Himachal Pradesh, crows in Rajasthan and Madhya Pradesh and ducks in Kerala. **Hence statement 3 is not correct.**

**Hence option (b) is the correct answer.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **In comparison to normal diesel, which of the following characteristics make Winter Diesel suitable for high altitude regions?**1. It has a higher cetane rating.
2. It has a lower sulphur content.
3. It contains paraffin wax which allows long term preservation.

**Select the correct answer using the code given below.** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 2 and 3 only |
| Option | 1 and 3 only |
| Option | 1, 2 and 3 |
| Answer | 1 |
| Solution | * **Winter Diesel:** It is a specialised fuel specifically for high altitude regions and low-temperature regions, It contains additives to maintain lower viscosity, It has a higher cetane rating. **Hence option 1 is correct.**
* **What is winter diesel?** Winter diesel is a specialised fuel that was introduced by Indian Oil Corporation Ltd. (IOCL) last year specifically for high altitude regions and low-temperature regions such as Ladakh, where ordinary diesel can become unusable. Winter diesel which contains additives to maintain lower viscosity can be used in temperatures as low as -30°C and that besides a low pour point, it had **higher cetane rating** — an indicator is the combustion speed of diesel and compression needed for ignition—and **lower sulphur content**, which would lead to lower deposits in engines and better performance. **Hence option 2 is correct.**
* **Regular diesel fuel contains paraffin wax** which is added for improving viscosity and lubrication. At low temperatures, the paraffin wax thickens or “gels” and hinders the flow of the fuel in the car engine. **Hence option 3 is not correct.** Special types of diesel are thus used at low temperatures that contain additives enabling the fuel to remain fluid in such conditions. The winter-grade diesel developed by IOC has a low pour point (the temperature below which the liquid loses its flow characteristics) of -33° Celsius, making it capable of withstanding the extreme winter weather conditions in Ladakh.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With reference to the religious history of India, consider the following statements:**1. Hinayana Buddhism claims that the Buddha was an ordinary human being like everyone else.
2. Mahayana Buddhism emphasised on individual salvation through selfdiscipline and meditation.
3. Mahayana Buddhism holds the law of karuna/compassion over and above the law of karma.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 and 3 only |
| Option | 3 only |
| Option | 1 and 3 only |
| Answer | 4 |
| Solution | * Buddhism is a philosophical school that was founded by Gautama Buddha around 6th century B.C. There are many schools in Buddhism and during the time of the Fourth Buddhist council, Buddhism was divided into 2 major sects – Hinayana and Mahayana.
* **Hinayana Buddhism:** ‘Hinayana’ literally means ‘Small Vehicle’ or ‘Small Ship’. Hinayana generally calls themselves Theravada (teaching of elders). It is the Buddha path for those who wish to be **Arhat** (a perfect saint). Arhats are those saints who get enlightened and attain nirvana in a short period of time.
* This branch of Buddhism is the second-largest school of Buddhism after Mahayana. This school is found and followed in Srilanka, Cambodia, Laos, Burma, and Thailand because of which Hinayana is also
* known as Southern Buddhism. Hinayana is further divided into two schools known as – Vaibhasika and Sautrantika.
* **Mahayana Buddhism:** Mahayana literally means ‘Great Vehicle’ or ‘Big Ship’ because this school tries to accommodate a large number of people to attain Nirvana. Mahayana is the major branch of Buddhism today which has the maximum number of followers compared to other Buddhist sects. Mahayana Buddhism also refers to the **path of the Bodhisattva** which seeks complete enlightenment for the benefit of all sentient beings, hence it is also known as ‘Bodhisattvayāna’, or the ‘Bodhisattva Vehicle’. The Mahayana tradition is the largest major tradition of Buddhism existing today. Mahayana is further divided into sects- Madhyamika and Yogacara.
* **Similarities between Mahayana and Hinayana Buddhism:**
* Both schools Hinayana and Mahayana accept Gautama Buddha as their teacher.
* Both of these schools accept the Four Noble Truth exactly the same.
* Buddhist canons of both the schools consist of Buddha's teaching in the form of Sutra, Vinaya, and Shastra.
* For both Hinayana and Mahayana schools mind is superior to matter.
* **Differences between Mahāyāna and Hinayāna Buddhism:**
* Mahāyāna accepts Lord Buddha as a deity while Hinayāna Buddhism does not accept that godly attribution to Lord Buddha. They believe that Lord Buddha is an ordinary human being. **Hence, statement 1 is correct.**
* Mahayana Buddhism believes in the salvation of all living beings. According to them each and every being that is born in this world is qualified to attain nirvana. On the other hand, the word **Hinayana school believes in attaining individual salvation through self- discipline, and meditation.** They aim at the salvation of the individual being only. According to the followers of Hinayana school, only a few people have the quality of attaining Nirvana. Therefore enlightenment cannot be achieved by all beings; hence they don’t aim at universal liberation from sufferings for all beings but individual’s liberation from suffering. **Hence, statement 2 is not correct.**
* Mahāyāna Buddhism followers think that it is better to help others reach Nirvāṇa before you do. But Hinayāna Buddhism followers think that everyone needs to gain Nirvāṇa on their own.
* Although both schools believe in compassion as an important virtue in Buddhist philosophy, the level of its importance differs. Mahayana puts great stress on love and compassion. For them compassion or Karuna is supreme. It is the highest virtue which is as important as wisdom. **Mahāyāna holds the law of Karuna / compassion over and above the law of karma. Mahayana offers liberation to all beings by knowledge, faith, love, and compassion.** Whereas Hinayana Buddhism lays less stress on compassion as compare to Mahayana. According to Hinayana rationality is more important compare compassion. For them being rational is supreme and thus for them, wisdom comes first. **Hence, statement 3 is correct.**
* Both Hinayana and Mahayana Buddhism are completely based on the teaching of Buddha but the Mahayana school doesn’t follow the traditional rule of Buddhism. They are liberal, practical and progressive in nature. They are inspired by the progressive spirit and try to widen and amplify the original teaching of Buddha as long as it doesn’t oppose the central meaning of the teaching of their master. The Hinayana school strictly follows the traditional rule of Buddhism without any change.
* They are conservative schools. They follow all the rules and teaching as it is and never try to change.
* The rituals followed by the school of Mahayana Buddhism includes setting up the statue of Buddha and bodhisattvas and do their worship by offering flowers, burning candles or lamp or fragrant sticks.
* By following such rituals Mahayana Buddhism became close to the local also. Whereas Hinayana Buddhism doesn’t emphases on following many rituals like they doesn’t believe in statue worship of Buddha or bodhisattva.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements with respect to Capital Account Convertibility:**1. It means freedom to convert local financial assets into foreign ones at market-determined exchange rates.
2. At present, India allows only partial convertibility in the capital account.
3. Tarapore Committee has recommended moving towards full capital account convertibility.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 3 only |
| Option | 1 and 2 only |
| Option | 1, 2 and 3 |
| Answer | 4 |
| Solution | * **Capital Account Convertibility (CAC)**
* Currency convertibility is the ease with which a country's currency can be converted into gold or another currency.
* It means freedom to convert local financial assets into foreign ones at market-determined exchange rates. **Hence, statement 1 is correct.**
* Currently, India allows full convertibility in the current account but only partial convertibility in the capital account. **Hence, statement 2 is correct.**
* S. S. Tarapore Committee has recommended moving towards full CAC. **Hence, statement 3 is correct.**
* Should India move towards full Capital Account convertibility?
* **Positives:**

✓ **RBI recently allowed Indian companies to raise rupee debt offshore.**✓ Convertibility would facilitate further liberalisation and increase foreign investment.✓ Increasing openness to international trade may create opportunities for avoiding capital account restrictions.✓ It can lead to the free exchange of currency at lower rates. Also, it promotes unrestricted mobility of capital – which may impact the economy in times of global recession.* **Negatives:**

✓ It could destabilise an economy in case there are massive capital flows in and out of the country;✓ Currency appreciation/depreciation could affect the trade balance. |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With reference to the carbon credit, consider the following statements:**1. One carbon credit is equal to one metric ton of carbon dioxide, or in some markets, carbon dioxide equivalent gases.
2. It is based on the cap-and-trade model.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 only |
| Option | Both 1 and 2 |
| Option | Neither 1 nor 2 |
| Answer | 3 |
| Solution | * A carbon credit (also known as carbon offset) is a credit for greenhouse emissions reduced or removed from the atmosphere by an emission reduction project, which can be used by governments, industry, or private individuals to compensate for the emissions they generate elsewhere.
* Those that cannot easily reduce emissions can still operate, at a higher financial cost.
* Carbon credits are based on the "**cap-and-trade" model that was used to reduce sulfur pollution in the 1990s. Hence, statement 2 is correct.**
* One carbon credit is equal to **one metric ton of carbon dioxide, or in some markets, carbon dioxide equivalent gases (CO2-eq), and are bought and sold through international brokers, online retailers, and trading platforms. Hence, statement 1 is correct.**
* Offsetting one metric ton of carbon means that there will be one less Mt of carbon dioxide in the atmosphere than there would otherwise have been. **The Kyoto Protocol provides for three mechanisms that enable countries, or operators in developed countries, to acquire greenhouse gas reduction credits:**
* **Under Joint Implementation (JI)** a developed country with relatively high costs of domestic greenhouse reduction would set up a project in another developed country.
* **Under the Clean Development Mechanism (CDM)** a developed country can “sponsor” a greenhouse gas reduction project in a developing country where the cost of greenhouse gas reduction project activities is usually much lower, but the atmospheric effect is globally equivalent. The developed country would be given credits for meeting its emission reduction targets, while the developing country would receive the capital investment and clean technology or beneficial change in land use.
* **Under International Emissions Trading (IET)** countries can trade in the international carbon credit market to cover their shortfall in Assigned Amount Units (AAUs). Countries with surplus units can sell them to countries that are exceeding their emission targets under Annex B of the Kyoto Protocol.
* **Cap and trade** is an approach that harnesses market forces to reduce emissions cost-effectively. Like other market-based strategies, it differs from “command-and-control” approaches where the government sets performance standards or dictates technology choices for individual facilities.
* Cap and trade allows the market to determine a price on carbon, and that price drives investment decisions and spurs market innovation.
* Cap and trade differs from a tax in that it provides a high level of certainty about future emissions, but not about the price of those emissions (carbon taxes do the inverse).
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which of the following are different sources of data on unemployment in India?**1. Reports of Census of India
2. Annual Reports of Periodic Labour Force Survey
3. Data from registration with Employment Exchanges

**Select the correct answer using the code given below.** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 2 and 3 only |
| Option | 1 and 3 only |
| Option | 1, 2 and 3 |
| Answer | 4 |
| Solution | **Sources of Data on Unemployment:** The data regarding unemployment can come from four potential sources viz. Household Surveys; Enterprise Surveys; Administrative Data and Data from GovernmentSchemes.o **Household Surveys:** Currently, there are three datasets on household surveys as follows:✓ Employment-Unemployment Survey of NSSO under MOPSI✓ Annual Labour Force Survey by MoLE✓ Population/census data from the Office of the Registrar General & Census Commissioner and Data from registration with Employment Exchanges. **Hence option (d) is the correct answer.**o **Annual Labour Force Survey (Labour Bureau)**✓ To obtain more regular data on the labour force, the Labour Bureau under MoLE started conducting the Annual Labour Force Survey in 2009-10. Four more surveys have been conducted since then. The most recent one was conducted during 2015-16. The problem with this survey is that it collects data only for a part of a year and is unable to catch the information covering the entire year. Further, while the EUS covers the entire population, this survey reports data only for the population aged 15 and above.o **Population Census**✓ Population Census collects data on main, marginal and non-workers. However, since census data comes every 10 years, these figures hardly get any attention. |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **What is a Central Adverse List, sometimes seen in the news?** |
| Type | multiple\_choice |
| Option | It is a list of blacklisted countries which have provided asylum to India's most wanted criminals. |
| Option | It is a list of individuals who are suspected to have links with terror outfits or violated visa norms in a previous visit to India. |
| Option | It is a list of those high networth individuals who have violated tax norms. |
| Option | It is a list maintained by the National Crime Records Bureau of states having crimes at large scale. |
| Answer | 2 |
| Solution | * **Central Adverse list is a list of individuals who are suspected to have links with terror outfits or violated visa norms in a previous visit to India, those who indulged in criminal activities or been accused of sexual crimes against children in their respective countries.** For example pro-Khalistan “hardliners” who had opposed the Operation Blue Star. It has more than 35,000 names on it. **Hence option (b) is the correct answer.**
* **The list is maintained by the Union Ministry of Home Affairs with inputs from all the state governments.** Various intelligence agencies constantly review this list and add new names to it.
* Central intelligence agencies, as well as the state-level intelligence, contributes to the information determining the inclusion of a person in this list. Since law and order is a state subject, the state police is also utilised for intelligence gathering in order to update the list.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **He himself married a widow in 1893. He dedicated his life to the upliftment of Hindu widows and became the secretary of the Widow Remarriage Association. He also set up an Indian Women’s University in Bombay in 1916.****Who is being described in the above paragraph?** |
| Type | multiple\_choice |
| Option | B. M. Malabari |
| Option | D. K. Karve |
| Option | Justice Govind Mahadeo Ranade |
| Option | Vishnushastri Chiplunkar |
| Answer | 2 |
| Solution | * **D. K. Karve himself married a widow in 1893**. He dedicated his life to the upliftment of Hindu widows and became the secretary of the **Widow Remarriage Association.** He opened a widow home in Poona to give high caste widows an interest in life by providing them with facilities for vocational training. He set up an Indian Women’s University at Bombay in 1916. **Hence option (b) is the correct answer.**
* **Behramji Malabari was a Parsee journalist and writer.** He was born on 18 May 1853 in Vadodara and died in the year 1914. Although he was an advocate of women's social reform in India an a champion of women's suffrage in India, he died in the year 1914, two years before the Women's University in Bombay was set up.
* **Vishnushastri Krushnashastri Chiplunkar was a Marathi prose writer** whose writings have had a decisive influence on modern Marathi prose style. In 1878, Chiplunkar founded another monthly named Kavyetihas Sangraha with the objective of better familiarizing the readers with the poetry and history of Maharashtra.
* **Mahadev Govind Ranade was an Indian scholar, social reformer, judge and author.** He was one of the founding members of the Indian National Congress party and owned several designations as member of the Bombay legislative council, member of the finance committee at the centre, and judge of the Bombay High Court, Maharashtra.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which of the following are the components of the Global Solar Facility under International Solar Alliance (ISA)?**1. Solar Payment Guarantee Fund
2. Solar Insurance Fund
3. Global Energy Alliance for People and Planet
4. Scaling Solar Applications for Agriculture Use

**Select the correct answer using the code given below.** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 1, 3 and 4 only |
| Option | 3 and 4 only |
| Option | 1, 2, 3 and 4 |
| Answer | 1 |
| Solution | * **The International Solar Alliance (ISA) announced that the Global Solar Facility (GSF),** formed by it to stimulate investments into solar power projects, is set to receive a capital contribution of $35 million. The Indian government is considering a $25 million investment as capital contribution in the GSF in addition to $10 million coming from the ISA.
* **It is a payment guarantee mechanism expected to stimulate investments into solar projects, with two financial components:-**
* **Solar Payment Guarantee Fund** to provide a partial guarantee and enable investments in geographies that do not receive investments.
* **Solar Insurance Fund** to reduce the burden of insurance premium for solar developers in prerevenue phase of project.
* **Initiatives taken by ISA but not under Solar Facility:-**
* **Green Grids Initiative - One Sun, One World, One Grid (OSOWOG).**
* **Global Energy Alliance for People and Planet (GEAPP) launched at COP26 with USD10 billions.**
* **ISA’s Programme on Scaling Solar Applications for Agriculture Use (SSAAU).**

**Hence option (a) is the correct answer.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which of the following was/were correct with reference to various social developments that took place during the first half of 1st millennium CE?**1. The castes proliferated into numerous sub-castes on account of absorption of tribal people into brahminical society.
2. The position of Shudras improved and they were allowed to perform domestic rites.

**Select the correct answer using the code given below.** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 only |
| Option | Both 1 and 2 |
| Option | Neither 1 nor 2 |
| Answer | 3 |
| Solution | * The Gupta Empire was the dominant kingdom ruling over India during the first half of the 1st millennium CE. There were striking developments in social life during the Gupta period.
* Land grants to the Brahmanas on a large scale suggest that the brahmana supremacy continued in Gupta times. The Brahmanas represented the Gupta kings as possessing the attributes of gods, and the Gupta princes became great supporters of the Brahmanical order. The Brahmanas accumulated wealth on account of numerous land grants. So they claimed many privileges, which are listed in the law-book of Narada.
* The castes proliferated into numerous subcastes as a result of two factors. On the one hand, a large number of foreigners had been assimilated into Indian society, and each group of foreigners was considered a kind of Hindu caste. The other reason for the increase in the number of castes was the absorption of many tribal peoples into Brahmanical society by way of land grants. To the ruling chiefs of the tribes were ascribed a respectable origin, But most of the rest of the tribal people were given a low origin, and every tribe now became a kind of caste in Hindu society. **Hence statement 1 is correct.**
* The position of Sudras improved in this period. They were now permitted to listen to the epics and the Puranas. They could also worship a new god called Krishna. **They were allowed to perform certain domestic rites** that naturally brought fee to priests. All this can be attributed to a change in the economic status of Shudras. **Hence statement 2 is correct.**
* But during this period the untouchables increased in number, especially the chandalas. The chandalas appeared m society as early as the fifth century B.C By the fifth century A.D their number had become so enormous and their disabilities so glaring that it attracted the attention of the Chinese pilgrim Fa-Hsien. He informs us that the chandalas lived outside the village and dealt in meat and flesh. Whenever they entered the town the upper caste people kept themselves at a distance from them because the road was supposed to have been polluted by them.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **In the context of modern Indian history, which of the following dealt with dominion status for India?**1. Cripps Proposals (Mission) of 1942
2. August Offer of 1940
3. Communal Award of 1932
4. Nehru Report of 1928

**Select the correct answer using the code given below.** |
| Type | multiple\_choice |
| Option | 3 and 4 only |
| Option | 1, 2 and 4 only |
| Option | 1 and 2 only |
| Option | 1, 2, 3 and 4 |
| Answer | 2 |
| Solution | * The August Offer was an offer made by Viceroy Linlithgow in 1940 promising the expansion of the Executive Council of the Viceroy of India to include more Indians, the establishment of an advisory war council, giving full weight to the minority opinion, and the recognition of Indians' right to frame their own constitution (after the end of the war). The declaration marked an important advance over the existing state of things, as it recognized at least the natural and inherent right of the people of the country to determine the form of their future constitution, and explicitly promised Dominion status. **Hence option 2 is correct.**
* **From 22 March to 11 April 1942, Stafford Cripps, a member of the War Cabinet, was dispatched to India to discuss the British Government’s Draft Declaration on the Constitution of India** with representative Indian leaders from all parties. The Cripps Mission failed and the issue of India’s constitution was postponed until the end of the war. According to the preamble of the **Draft Declaration of Cripps Mission, the object was ‘the creation of a new Indian Union which shall constitute a Dominion associated with the United Kingdom and other Dominions by a common allegiance to the Crown but equal to them in every respect, in no way subordinate in many aspects of its domestic and external affairs’.** The Declaration also stated that any province not willing to accept the constitution would be given ‘the same full status as the Indian Union’, designed to appease the Muslim League’s call for Pakistan. **Hence option 1 is correct.**
* An All-Parties Conference was held in Delhi on February 12, 1928. It was attended by the representatives of 29 organizations in response to the appointment of Simon Commission and challenge given by Lord Birkenhead secretary of state for India. It was presided over by M.A Ansari. On May 19, 1928, at its meeting at Bombay, the All Parties Conference appointed a committee with Motilal Nehru as its chairman. The purpose was to consider and determine the principles of the Constitution for India. The Nehru Report, prepared under the leadership of Motilal Nehru, was released on 28 August 1928. It was a memorandum to appeal for new dominion status and a federal set-up of government for the constitution of India. **Hence option 4 is correct.**
* The Communal Award was made by the British prime minister Ramsay MacDonald. It is also known as MacDonald Award and was announced after Round Table Conference and extended the separate electorate to depressed Classes and other minorities. It did not deal with the issue of Dominion Status for India. **Hence option 3 is not correct.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements:**1. The real effective exchange rate (REER) is the relative price of the goods of two countries.
2. The nominal effective exchange rate (NEER) is the relative price of the currencies of two countries.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 only |
| Option | Both 1 and 2 |
| Option | Neither 1 nor 2 |
| Answer | 4 |
| Solution | **Types of Exchange Rates*** **Nominal Exchange Rate is the relative price of the currencies of two countries.** For example, if the exchange rate between the U.S. dollar and the Indian Rupee is Rs. 60 per dollar, then you can exchange one dollar for 60 Rupees in world markets for foreign currency. When people refer to “the exchange rate’’ between two countries, they usually mean the nominal exchange rate.

✓ Nominal exchange rates are established on currency financial markets called "forex markets", which are similar to stock exchange markets.* **Real Exchange Rate** is the relative price of the goods of two countries. That is, the real exchange rate tells us the rate at which we can trade the goods of one country for the goods of another. The real exchange rate is sometimes called the terms of trade.
* Thus, the **Nominal Effective Exchange Rate (NEER) is the weighted average value of the nominal exchange rate of the rupee against the currencies of major trading partners of India. Hence, statement 2 is not correct.**
* On the other hand, the **Real Effective Exchange Rate (REER) is the weighted average of the Real Exchange Rates of the Rupee against the currencies of major trading partners of India. Hence, statement 1 is not correct.** The weights are determined by the importance that a home country places on all other currencies traded within the pool, as measured by the balance of trade.
* **Unlike NER and RER, NEER and REER are not determined for each foreign currency separately.**
* There is a concept of **Effective Exchange Rate** which describes the relative strength of a currency relative to a basket of other currencies.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **It is an epic poem written by Kalidasa. It is widely regarded as his finest work and celebrates the love story of Lord Shiva and Parvati and the origin of the young god Kartikeya.****Which of the following works does the passage refer to?** |
| Type | multiple\_choice |
| Option | Malavikagnimitram |
| Option | Kumarasambhavam |
| Option | Kiratarjuniya |
| Option | Raghuvamsha |
| Answer | 2 |
| Solution | * **Raghuvamsha is a Sanskrit mahakavya by the most celebrated Sanskrit poet Kalidasa**. Though an exact date of composition is unknown, the poet is presumed to have flourished in the 5th century CE. **It recounts the legendary tales of the Raghu dynasty, whose scions include Rama, the hero of the Ramayana.** In this majestic maha kavya, Kalidasa invokes the whole gamut of literary flavours, ranging from the erotic and the heroic to the tragic, horrific and peaceful.
* **Kumārasaṃbhavam or the birth of Kumara (Kartikeya) is an epic poem by Kalidasa. It is widely regarded as the finest work of Kalidasa as well as the greatest kavya poem in Classical Sanskrit.** The style of description of spring set the standard for nature metaphors pervading many centuries of Indian literary tradition. Kumārasaṃbhavam basically talks about the birth of Kumara (Kartikeya), the son of Shiva and Parvati. **Hence option (b) is the correct answer.**
* **Kirātārjunīya is an epic poem by Bhāravi, considered to be the most powerful poem in Sanskrit.** Believed to have been composed in the 6th century or earlier, it consists of eighteen cantos describing the combat between Arjuna and Lord Shiva at Indrakeeladri Hills in present-day Vijayawada.
* Malavikagnimitra written by Kalidasa is The love story of Malavika a maiden of Queen and Agnimitra the son of Pushyamitra Shunga.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Recently, which of the following rice variety of Bihar has been accorded ‘Geographical Indication’ status for its unique aroma and palatability?** |
| Type | multiple\_choice |
| Option | Mircha rice |
| Option | Gobindobhog rice |
| Option | Joha rice |
| Option | Tulaipanji rice |
| Answer | 1 |
| Solution | * Recently, **Mircha’ rice of Bihar’s West Champaran** has been awarded the GI tag. The size and shape of the **grain appear like that of black pepper**, hence it is known as Mircha or Marcha Rice.
* This rice is **famous for its aroma, palatability and its aromatic chura (rice flakes) making qualities.** The cooked rice is fluffy, non-sticky, sweet and easily digestible with a popcorn-like aroma.
* Gobindobhog rice and Tulaipanji rice belong to West Bengal, whereas, Joha rice belongs to Assam.

**Hence, option (a) is the correct answer.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With reference to 5th cycle of India’s Tiger Census in India, consider the following statements:**1. The only landscape in India where the tiger population has gone down is the Eastern Ghats.
2. The National Tiger Conservation Authority, is the nodal authority to conduct the estimation of tiger census.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 only |
| Option | Both 1 and 2 |
| Option | Neither 1 and 2 |
| Answer | 2 |
| Solution | * The Prime Minister released the figures of the 5th cycle of India’s Tiger Census revealing that tiger numbers have once again increased in the country and now stand at 3,167 in the wild as of 2022. The 2018 Tiger Census, released in July 2019, established the presence of 2,967 tigers in India. The animal population in the country has increased by 200 or 6.7 percent in the past four years. While the tiger numbers in the country stood at 1,411 in 2006, it increased to 1,706 in 2010 and 2,226 in the 2014 cycle of evaluations.
* **PM released the Tiger Census while inaugurating the International Big Cat Alliance in Karnataka’s Mysuru, the first of its kind in the country, organised to mark 50 years of Project Tiger. The three day conference will focus on the protection and conservation of seven major big cats of the world –tigers, lions, leopards, snow leopards, pumas, jaguars and cheetahs**.
* Being the 50th year of Project Tiger, it is notable that governments, since 1973, have consistently devoted attention to ensuring that tigers — generally vulnerable to environmental degradation and extinct in several countries — continue to populate India’s forests. However, this does not mean that tiger numbers are ordained to grow in perpetuity**.** The ‘Status of Tiger’ report warns that all of India’s five main tiger zones, while largely stable, face challenges of deforestation and loss of tiger habitat.
* **The only landscape in India where the tiger population has gone down is the Western Ghats, where declaring of an ecologically sensitive zone has been hanging since 2010, according to the latest tiger estimation report. The estimation was done in five landscapes. Population increase is substantial in Shivalik & Gangetic flood plain which is followed by Central India, North Eastern Hills and Brahmaputra flood plains and Sundarbans while Western Ghats population showed decline with major populations being stable. Hence, statement 1 is not correct.**
* The overlap between “wildlife and humans” because of developmental activities has led to a fall in the tiger population in the areas under the World Heritage Western Ghats landscape, which is the “most biodiverse” in the country, according to the report.
* The Western Ghats tiger landscape is 1,600 km long and covers an area of about 1,40,000 square km. It spans six states --- Karnataka, Maharashtra, Goa, Kerala, Tamil Nadu and Telangana -- and contains 12 Tiger Reserves, 20 National Parks, and 68 Wildlife Sanctuaries and is home to several endemic species such as lion-tailed macaque, the Malabar giant squirrel, and the Nilgiri tahr.
* From nine tiger reserves in 1973 to 53 today, the increase in numbers has not translated to all of these reserves becoming suitable habitats for tigers. Serious conservation efforts are needed to help, for instance, tiger population recovery in Jharkhand, Odisha, Chhattisgarh, Telangana, and Andhra Pradesh. Experts have said India’s reserves, in their present state, ought to be able to sustain populations of up to 4,000, and with expanded efforts at improving fledgling reserves, these numbers can increase.
* **The National Tiger Conservation Authority, which conducts the estimation, has not released state or tiger reserve-wise tiger estimation but has provided some state-specific insight in the overall report. Hence, statement 2 is correct.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements:**1. Feldspar is one of the major constituent minerals of granite rock.
2. Katni mine in Madhya Pradesh is famous for Bauxite.
3. Himachal Pradesh does not have salt mines.

**Which of the statements given above is/are not correct?** |
| Type | multiple\_choice |
| Option | 3 only |
| Option | 1 and 2 only |
| Option | 2 and 3 only |
| Option | 1, 2 and 3 |
| Answer | 1 |
| Solution | * **Granite** is a medium-grained intrusive igneous rock that is rich in **quartz and feldspar.** It is the most common plutonic rock of the Earth’s crust, forming by the cooling of magma at depth. Granite may occur in dikes or sills but more characteristically it forms irregular masses of extremely variable size. The principal constituent of granite is feldspar. Both plagioclase feldspar and alkali feldspar are usually abundant in it. **Hence statement 1 is correct.**
* **Bauxite** is basically an aluminous rock that contains hydrated aluminium oxide as main constituent and iron oxide, silica & titania as minor constituents present in varying proportions. Odisha emerged as the leading producing State followed by Gujarat and Jharkhand. Important mining areas are - Odisha - Koraput, Rayagada; **MP - Katni**, Rewa; Jharkhand - Gumla, Latehar. **Hence statement 2 is correct.**
* Common salt, when pure, is the mineral halite (NaCl). **Halite** is mainly an evaporite deposit and found in two forms namely bedded salt and salt domes. The occurrences of rock salt are limited in the country. In India, the only deposit of rock salt is reported from Mandi district, **Himachal Pradesh.** It is dark purple, opaque and contains many impurities. **Hence statement 3 is not correct.**
* **Hence option (a) is the correct answer.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements regarding White Label ATMs (WLAs):**1. ATMs owned and operated by non-bank entities are called "White Label ATMs".
2. WLAs are not allowed to accept cash deposits.
3. FDI up to 100% is allowed under automatic route in setting up WLAs.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 1 and 2 only |
| Option | 1 and 3 only |
| Option | 2 and 3 only |
| Answer | 3 |
| Solution | * Automated Teller Machines (ATMs) set up, owned and operated by non-bank entities are called "White Label ATMs" (WLAs). Non-bank entities incorporated in India under the Companies Act 1956 are allowed to operate WLAs. Brown-label ATMs are owned by these operators but are leased out to banks. **Hence, statement 1 is correct.**
* Non-bank entities are permitted to set up WLAs in India, after obtaining authorization from RBI under the Payment and Settlement Systems (PSS) Act 2007. Such non-bank entities should have a minimum net worth of Rs 100 crore as per the latest financial year’s audited balance sheet, which is to be maintained at all times.
* These entities have a mandate to deploy 67% of ATMs in rural locations (tier III-VI) and 33% in urban locations (tier I and II cities).
* The government has approved 100% foreign direct investment (FDI) under the automatic route for nonbank entities that operate cash machines subject to certain conditions in a bid to boost financial inclusion in semi-urban and rural areas. **Hence, statement 3 is correct.**
* While the WLA operator is entitled to receive a fee from the banks for the use of ATM resources by the bank's customers, WLAs are not permitted to charge bank customers directly for the use of WLAs.
* Until recently, these white label ATMs were not allowed to accept cash deposits, but the latest guidelines have now allowed these ATM operators to provide this service. They can also offer bill payment services through their ATMs. **Hence, statement 2 is incorrect.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **These Europeans were not much interested in empire-building in India; their concerns were trade. They founded their first factory in Masulipatnam (in Andhra) in 1605. Their ambitions in India received a crushing blow after their defeat in the Battle of Chinsurah. They were** |
| Type | multiple\_choice |
| Option | The Dutch |
| Option | The Danes |
| Option | The Portuguese |
| Option | The French |
| Answer | 1 |
| Solution | * **Commercial enterprise led the Dutch to undertake voyages to the East. After their arrival in India, the Dutch founded their first factory in Masulipatnam (in Andhra) in 1605.** They went on to establishtrading centres at different parts of India and thus became a threat to the Portuguese. They capturedNagapatam near Madras (Chennai) from the Portuguese and made it their main stronghold in South India.
* The English were also at this time rising to prominence in the Eastern trade, and this posed a serious
* challenge to the commercial interests of the Dutch. A commercial rivalry soon turned into bloody warfare. After prolonged warfare, both the parties came to a compromise in 1667 by which the British agreed to withdraw all their claims on Indonesia, and the Dutch retired from India to concentrate on their more profitable trade in Indonesia. They monopolized the trade in black pepper and spices.
* **The Dutch were not much interested in empire-building in India; their concerns were trade. In any case, their main commercial interest lay in the Spice Islands of Indonesia from where they earned a huge profit through business.** The Dutch got drawn into the trade of the Malay Archipelago. Further, inthe Third Anglo-Dutch War (1672-74), communications between Surat and the new English settlement of Bombay got cut due to which three homebound English ships were captured in the Bay of Bengal by the Dutch forces. The retaliation by the English resulted in the defeat of the Dutch.
* **The Battle of Chinsurah (also known as the Battle of Biderra or Battle of Hoogly) took place near Chinsurah, India on 25 November 1759 ), which dealt a crushing blow to Dutch ambitions in India.**
* **Battle of Chinsurah:** Situated on the bank of the Hugli river, Chinsurah is about 35 km north of Calcutta. Between the 17th and 19th centuries, Chinsurah was a prosperous trading post of the Dutch East India Company. Dutch, Armenian and native Bengali merchants lived there in this period, trading in saltpetre, spices, cotton and indigo. In 1758, Clive discovered that Mir Jafar had made an understanding with the Dutch at Chinsurah. He had heard that Dutch troops had been sent for from Batavia. Dutch ships of war had been seen in the Hughli. Clive asked Mir Jafar to direct the withdrawal of the Dutch. The Nawab, in turn, sent word to him that at the proper season the Dutch ships would depart. In 1759 the garrison of Chinsurah on its march to Chandernagore attacked a British force under Colonel Forde. The Battle of Chinsurah lasted less than half an hour and ended with the rout of the Dutch attackers.
* **Hence option (a) is the correct answer.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements with respect to the Green Hydrogen Mission of India:**1. It aims to make India a net exporter of green hydrogen.
2. It targets to build capabilities to produce at least 5 million metric tonnes (MMT) of green hydrogen per annum by 2030.
3. NITI Aayog will be responsible for the overall coordination and implementation of the mission.

**How many of the statements given above are correct?** |
| Type | multiple\_choice |
| Option | Only one |
| Option | Only two |
| Option | All three |
| Option | None |
| Answer | 2 |
| Solution | * Union Government of India approved the National Green Hydrogen Mission with an outlay of ₹ 19,744 crore from FY 2023-24 to FY 2029-30. **The overarching objective of the Mission is to incentivize the commercial production of green hydrogen and make India a net exporter of the fuel. The Mission will facilitate demand creation, production, utilization and export of Green Hydrogen. Hence, statement 1 is correct.**
* The Mission will have wide-ranging benefits- the creation of export opportunities for Green Hydrogen and its derivatives; Decarbonisation of industrial, mobility and energy sectors; reduction in dependence on imported fossil fuels and feedstock; development of indigenous manufacturing capabilities; creation of employment opportunities; and development of cutting-edge technologies. **It aims to achieve the above objectives, the Mission will build capabilities to produce at least 5 Million Metric tonnes (MMT) of Green Hydrogen per annum by 2030, with the potential to reach 10 MMT per annum with the growth of export markets.** The Mission will support the replacement of fossil fuels and fossil fuel-based feedstocks with renewable fuels and feedstocks based on Green Hydrogen. **Hence, statement 2 is correct.**
	+ **Achievement of Mission targets is expected to reduce a cumulative ₹ 1 lakh crore worth of fossil fuel imports by 2030.**
* **The Ministry of New and Renewable Energy (MNRE) will be responsible for the overall coordination and implementation of the Mission. The Mission Secretariat, headquartered in MNRE, will formulate schemes and programs for financial incentives to support the production, utilization and export of Green Hydrogen and its derivatives. Hence, statement 3 is not correct.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements regarding nuclear energy in India:**1. It contributes less than 1% of the total electricity generation in the country.
2. India has over 50 nuclear reactors across the country which produces around 10,000 MW of nuclear power.
3. Over two-third of the reactors in India are Pressurised Heavy Water Reactors.

**How many of the above statements are correct?** |
| Type | multiple\_choice |
| Option | Only one |
| Option | Only two |
| Option | All three |
| Option | None |
| Answer | 1 |
| Solution | **Status of India’s Nuclear Energy*** **Nuclear energy** is the fifth-largest source of electricity for India **which contributes about 3% of the total electricity generation in the country. Hence statement 1 is not correct.**
* **India has over 22 nuclear reactors in 7 power plants across the country which produces 6780 MW of nuclear power. Hence statement 2 is not correct.**
* In addition, one reactor, Kakrapar Atomic Power Project (KAPP-3) has also been connected to the grid in January- 2021.
* **18 reactors are Pressurised Heavy Water Reactors (PHWRs) and 4 are Light Water Reactors (LWRs). Hence statement 3 correct.**

The existing nuclear power capacity of 6780 MW is going to be increased to 22480 MW by the year 2031 on progressive completion of projects under construction and accorded sanction. More nuclear power plants are also planned in future. |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which of the following statement best describes the difference between Near money and Dear money?** |
| Type | multiple\_choice |
| Option | Near money is readily and easily available for borrowing owing to low interest rates; Dear money is money that turns expensive to borrow owing to high interest rates. |
| Option | Near money is when money turns expensive for borrowing owing to high interest rates; Dear money is highly liquid assets that can be easily converted into cash. |
| Option | Near money is highly liquid assets that can be easily converted into cash; Dear money is when money turns expensive to borrow owing to high interest rates. |
| Option | Near money is highly liquid assets that can be easily converted into cash; Dear money is hard assets such immovable property. |
| Answer | 3 |
| Solution | * **Near money is an economics term describing non-cash assets that are highly liquid, such as bank deposits, certificates of deposit (CDs) and Treasury Bills.** Central Banks and economists may use itdetermine the current money supply. It is also known as quasi-money. Examples of liquid assets that arenear money include bonds, money markets, savings accounts and widely traded foreign currencies.
* **Money is said to be dearer when it turns expensive to borrow owing to high interest rates.** It may also be known as 'tight money'.
* **Hence option (c) is the correct answer.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which of the following Indian cities is located nearest to the Tropic of Cancer?** |
| Type | multiple\_choice |
| Option | Ranchi |
| Option | Kolkata |
| Option | Ahmedabad |
| Option | Dehradun |
| Answer | 1 |
| Solution | * **Tropic of Cancer** is the latitude approximately **23°27′ N** of the terrestrial Equator. This latitude corresponds to the **northernmost declination of the Sun’s ecliptic to the celestial equator.** At the summer solstice in the Northern Hemisphere, around June 21, the Sun attains its greatest declination north and is directly over the Tropic of Cancer.
* Tropic of Cancer is passes through the India, including 8 Indian states. Tropic of Cancer passes through 8 Indian states including: **Gujarat, Rajasthan, Andhra Pradesh, Chhattisgarh, Jharkhand, West Bengal, Tripura and Mizoram.**
* **Ranchi** is located on **23.36°N latitude.** Kolkata is located on 22.57°N latitude. Dehradun is located on 30.31°N latitude. Ahmedabad is located on 23.03°N latitude. **Hence option (a) is the correct answer.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which of the following conditions increases the rainfall during the Southwest Monsoon?**1. Positive Indian Ocean Dipole
2. La Niña Condition in Pacific Ocean
3. Intense heating of Tibetan Plateau

**Select the correct answer using the code given below.** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 2 and 3 only |
| Option | 1 and 3 only |
| Option | 1, 2 and 3 |
| Answer | 4 |
| Solution | * The period June to September is referred to as the 'Southwest Monsoon' period. Southwest Monsoon period is the principal rainy season for the Indian subcontinent.
* Factors Influencing **South-West Monsoon Formation** are
* The **differential heating and cooling** of land and water creates a low pressure on the landmass of India while the seas around experience comparatively high pressure.
* **Inter Tropical Convergence Zone:** The Inter Tropical Convergence Zone (ITCZ,) is a broad trough of low pressure in equatorial latitudes. This is where the northeast and the southeast trade winds converge. This convergence zone lies more or less parallel to the equator but moves north or south with the apparent movement of the sun. There is a shift of the position of Inter Tropical Convergence Zone (ITCZ) in summer, over the Ganga plain (this is the equatorial trough normally positioned about 5°N of the equator.
* The presence of the **high-pressure area, east of Madagascar**, approximately at 20°S over the Indian Ocean. The intensity and position of this high-pressure area affect the Indian Monsoon.
* **Role of Tibetan Plateau:** The average height of these highlands is 4000 m. Heating of these areas leads to a clockwise air circulation in the middle troposphere and two-wind streams originate from this area. One of these wind streams blow southward and develops into the tropical easterly jet stream (TEJ). **Intense heating of Tibetan Plateau correlates well with Indian Monsoon.**
* **Role of ENSO:** El Nino and La Nina are the exact opposite phases of a climatic phenomenon called the El Nino-Southern Oscillation (ENSO) cycle which takes place in Pacific Ocean. El Nino refers to the large-scale ocean-atmosphere climate interaction linked to a periodic warming in sea surface temperatures across the central and east-central Equatorial Pacific. La Nina episodes represent periods of below average sea surface temperatures across the east-central Equatorial Pacific. La Nina is observed when the water temperature in the Eastern Pacific gets comparatively colder than normal, as a consequence of which, there is a strong high pressure over the eastern equatorial Pacific. The difference in pressure between Eastern Pacific and Western Pacific/Asia causes a moisture-laden wind movement from East to West Pacific and Asia. As a result, **La Nina causes drought in the South American countries** of Peru and Ecuador, heavy floods in Australia, high temperatures in Western Pacific, Indian Ocean, off the Somalian coast and a comparatively **better monsoon rains in India.**
* **The Indian Ocean Dipole (IOD)** is a coupled Ocean-atmosphere phenomenon in the Indian Ocean. It is defined by the difference in sea surface temperature between two areas - a western pole in the Arabian Sea (western Indian Ocean) and an eastern pole in the eastern Indian Ocean south of Indonesia. The IOD involves a periodic oscillation of sea-surface temperatures (SST), between "positive", "neutral" and "negative" phases. A positive phase sees greater-than-average sea-surface temperatures and greater precipitation in the western Indian Ocean region, with a corresponding cooling of waters in the eastern Indian Ocean—which tends to cause droughts in adjacent land areas of Indonesia and Australia. The negative phase of the IOD brings about the opposite conditions, with warmer water and. **Positive IOD** which is associated with **warm sea-surface temperatures** of western Indian Ocean is **favourable for monsoon** in Indian subcontinent.
* **Hence option (d) is the correct answer.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements regarding Resilient and Inclusive Supply-chain Enhancement (RISE):**1. It is an initiative of the Organisation for Economic Co-operation and Development.
2. It will help emerging markets and developing countries (EMDCs) increase the manufacturing of clean-energy products.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 only |
| Option | Both 1 and 2 |
| Option | Neither 1 and 2 |
| Answer | 2 |
| Solution | * Resilient and Inclusive Supply-chain Enhancement—or **RISE was launched by World Bank and Japan—joined by Italy, the Republic of Korea, Canada, and the United Kingdom. Hence statement 1 is not correct.**
* **Resilient and Inclusive Supply-chain Enhancement—or RISE—initiative will help emerging markets and developing countries (EMDCs) increase manufacturing of clean-energy products and boost their participation in the minerals industry—leading to quality local jobs and economic growth. Hence statement 2 is correct.**
	+ Japan, Canada, Italy, the Republic of Korea, and the United Kingdom have pledged an initial total contribution of more than $40 million to RISE, and more donors are expected to contribute.
* The energy transition will create a trillion-dollar market, with tens of millions of jobs along global mineral value chains. It represents an opportunity for EMDCs to build manufacturing capacity, boost job growth, and strengthen long-term economic development.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **"This crop requires a cool growing season and a bright sunshine at the time of ripening. It requires 50 to 75 cm of annual rainfall evenly distributed over the growing season. Well drained fertile, friable loams and clay loams are more suited to its cultivation. At lower latitudes winter variety and at higher latitudes a spring variety is cultivated." Which of the following is the crop?** |
| Type | multiple\_choice |
| Option | Rice |
| Option | Sugarcane |
| Option | Groundnut |
| Option | Wheat |
| Answer | 4 |
| Solution | * **Wheat** is the second most important cereal crop. It is the **main food crop**, in north and north-western part of the country. This rabi crop requires a **cool growing season and a bright sunshine at the time of ripening.** It requires **50 to 75 cm of annual rainfall evenly- distributed** over the growing season. About 80 per cent of the world’s wheat is **winter wheat. Spring wheat** is grown in higher latitudes where winters are too cold for wheat.
* Suitable graphical conditions required for wheat cultivation are:
	+ **Temperature:** The temperature required for wheat during growing season is around 15.5°C. The weather should be warm and moist during the early stage of growth and sunny and dry in the later stages.
	+ **Rainfall:** The amount of rainfall required for wheat cultivation varies between 30 cm and 100 cm. The major wheat lands of the temperate regions have an annual rainfall of 38 cm to 80 cm. Wheat is also grown in areas having lesser amount of rainfall, i.e., 25 cm. This has been done by adopting dry farming method. Also where irrigation facilities are available, wheat is cultivated in dry lands also.
	+ The soil suitable for wheat is either **light clay or heavy loam.** The world’s best wheat comes from the chernozem soils in the ‘Black Earth’ region of the Ukrainian Steppes.
	+ **Wheat is grown in plain as well as in rolling topography**, which provides adequate drainage and at the same time facilities of the use of machinery. **Hence option (d) is the correct answer.**
* The world’s largest commercial wheat lands are the undulating temperate grasslands of Steppes, Prairies, Pampas and the Australian Downs. In India There are two important wheat-growing zones in the country - the Ganga-Satluj plains in the north- west and black soil region of the Deccan.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following pairs:*****Protected area River flowing***1. Melghat Tiger reserve : Tapi river
2. Dehing Patkai

Wildlife Sanctuary : Manas river1. Sharavathi Wildlife

Sanctuary : Cauvery river1. Nagarhole National

Park : Kabini river**Which of the pairs given above are correctly matched?** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 2 and 3 only |
| Option | 1, 3 and 4 only |
| Option | 1 and 4 only |
| Answer | 4 |
| Solution | * **Melghat Tiger reserve:** It lies in Melghat Forests of **Amravati district in Vidarbha region** of Maharashtra. It is a part of the Satpura-Maikal landscape.
* **Protected Areas within the Reserve include Gugamal National Park, Wan, Ambawarba and Narnala sanctuaries.** The Tapi river flows through the northern end of the Melghat Tiger Reserve, through a forest which lies within the catchment area of the river system.
* It is the Deccan trap and underlying rock is basalt in one form or another. The forests are of deciduous nature and have been classified as ‘dry deciduous forests’. Most prominent is Teak. It forms a very important catchment to **Tapi river** systems. **Hence pair 1 is correctly matched.** The **Korku tribe** adds to the cultural diversity of the Reserve.
* **Dehing Patkai Wildlife sanctuary:** The Dehing Patkai Wildlife Sanctuary, also known as the Jeypore Rainforest is a part of Dehing Patkai Elephant Reserve. It is located in the districts of **Dibrugarh and Tinsukia**. Dehing Patkai is a deciduous rainforest interspersed with semi-evergreen and lush green flora, the only patch of virgin rainforest in Assam. It comprises of Jeypore, Upper Dehing and Dirok. **Dehing is the name of the river** that flows through this forest and **Patkai is the hill** at the foot of which the sanctuary lies. The Wildlife Sanctuary is endowed with rich bio-diversity. The dense forest with unique vegetation is mesmerizing Dehing is the name of the river that flows through this forest and Patkai is the hill at the foot of which the sanctuary lies. **Hence pair 2 is not correctly matched.**
* **Sharavathi Valley Wildlife Sanctuary:** It is located in the **Sharavathi River Valley** of Sagar taluk in Shivamogga District of Karnataka. The Sanctuary lies in the Western Ghats, mainly covered with evergreen and semi-evergreen forests in the valleys and grassy patches on hilltops, and is immensely rich in flora and fauna both in variety and diversity. **Hence pair 3 is not correctly matched.** The Sanctuary is immensely rich in species like Dhoopa, Gulmavu, Surahonne, Mavu, Nandi, etc. It also harbors wildlife like Bison, Spotted deer, Tiger, Panther, etc.

**Nagarahole National Park:** Nagarahole is named after Nagarahole, a winding river which runs eastwards through its centre. Situated in the two districts of Mysore and Kodagu in the state of Karnataka. Nagarahole National Park forms apart of the Nilgiri Biosphere Reserve and together with Bandipur National Park and Mudumalai Wildlife Sanctuary to its South-East and Wayanad to the South-West, is one of the last remaining and best-protected habitats for endangered species like the Elephant and the Tiger. The **river Kabini** originates in the Wayanad district of Kerala, flows eastward to join the river Cauvery, which empties into the Bay of Bengal. This is the **largest river in the Nagarhole National Park** and was dammed in 1974 for an irrigation project. **Hence pair 4 is correctly matched.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which one of the following statements best reflects the idea behind the " PSLV Orbital Experimental Module " often seen in the news?** |
| Type | multiple\_choice |
| Option | A reusable launch vehicle has parts that can be recovered and reflown, while carrying payloads from the surface to outer space |
| Option | An orbital platform to carry out scientific experiments through nonseparating payloads |
| Option | A warhead delivery system that uses a low earth orbit towards its target destination on the Earth |
| Option | An early warning system in space to detect debris and other hazards to Indian satellites |
| Answer | 2 |
| Solution | * **Recent context:** Indian Space Research Organisation (ISRO), Polar Satellite Launch Vehicle C55 (PSLVC55) mission was launched on 22 April 2023. This was a dedicated commercial mission through NSIL with TeLEOS-2 as the primary satellite and Lumelite-4 as a co-passenger satellite weighing 741 kg and 16 kg respectively.
* The PSLV-C55 mission has the PSLV Orbital Experimental Module (POEM), where the spent PS4 of the launch vehicle would be utilised as an orbital platform to carry out scientific experiments through on separating payloads.
* This is the third time that PS4 will be used after satellite separation as a platform for experiments. According to the space agency, POEM has seven experimental non-separable payload.
* **PSLV Orbital Experimental Module,** Poem is the spent fourth stage of the launch vehicle that would be used as an orbital platform to carry out scientific experiments through non-separating payloads. PSLV is a four-stage rocket, and while the first three stages are jettisoned into the ocean after they push the mission to desired orbit, the four-stage remains in orbit and becomes space junk.
* ISRO is now repurposing this fourth stage to use an experimental platform. The mission will carry seven non-separable payloads from Isro, Bellatrix, Dhruva Space, and the Indian Institute of Astrophysics neatly packed on this fourth stage. The fourth stage or the orbital experimental platform, Poem, is powered by solar panels and is fitted with its own Navigation Guidance and Control (NGC) system, which helps in attitude stabilization. This is not the first time that Isro is repurposing the fourth stage to use for in-house experiments, it has done that a couple of times in the past as well. **Hence, option (b) is the correct answer.**
	+ A **reusable launch vehicle** has parts that can be recovered and reflown, while carrying payloads from the surface to outer space.
	+ A **Fractional Orbital Bombardment System** is a warhead delivery system that uses a low earth orbit towards its target destination. Just before reaching the target, it deorbits through a retrograde engine burn.
	+ **'Project NETRA**' is an early warning system in space to detect debris and other hazards to Indian satellites.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements with reference to the recommendations of the Balwant Rai Mehta Committee on the Panchayati Raj Institutions in India:**1. The District Collector should be the Chairman of the Zila Parishad.
2. The Zila Parishad should be the executive body and made responsible for planning at the district level.
3. The Panchayat Samiti and the Zila Parishad should be constituted with the directly elected members.

**How many of the above statements is/are correct?** |
| Type | multiple\_choice |
| Option | Only one |
| Option | Only teo |
| Option | All three |
| Option | None |
| Answer | 1 |
| Solution | **The Recommendations of the Balwant****Rai Mehta Committee:*** Establishment of a three-tier Panchayati Raj System–Gram Panchayat at the village level, Panchayat Samiti at the block level and Zila Parishad at the district level. These tiers should be organically linked through a device of indirect elections.
* **The Village Panchayat should be constituted with the directly elected representatives, whereas the Panchayat Samiti and the Zila Parishad should be constituted with the indirectly elected members.**
* All planning and development activities should be entrusted to these bodies.
* The Panchayat Samiti should be the executive body, while the Zila Parishad should be the advisory, coordinating and supervisory body.
* The District Collector should be the Chairman of the Zila Parishad.
* There should be a genuine transfer of power and responsibility to these democratic bodies.
* ‘The Zila Parishad should be the executive body and made responsible for planning at the district level’ is the part of the recommendations of the Ashok Mehta Committee.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following documents:**1. Finance Bill
2. Outcome Budget
3. Medium Term Fiscal Policy Statement
4. Economic Survey
5. Demands for Grants

**How many of the above documents comprise the Budget presented in the Parliament?** |
| Type | multiple\_choice |
| Option | Only two |
| Option | Only three |
| Option | Only four |
| Option | All five |
| Answer | 3 |
| Solution | * The Budget can also be presented to the House in two or more parts and when such presentation takes place, each part shall be dealt with as if it were the budget. Further, there shall be no discussion of the budget on the day on which it is presented to the House.. The finance minister presents the budget with a speech known as the ‘budget speech’. At the end of the speech in the Lok Sabha, the budget is laid before the Rajya Sabha, which can only discuss it and has no power to vote on the demands for grants. **The budget documents presented to the Parliament comprise of the following :**
	+ Budget Speech
	+ Annual Financial Statement
	+ **Demands for Grants**
	+ Appropriation Bill
	+ **Finance Bill**
	+ Statements mandated under the FRBM Act:
		- Macro-Economic Framework Statement
		- Fiscal Policy Strategy Statement
		- **Medium Term Fiscal Policy Statement**
	+ Expenditure Budget
	+ Receipts Budget
	+ Expenditure Profile
	+ Memorandum Explaining the Provisions in the Finance Bill (xi) Budget at a Glance
	+ **Outcome Budget**
* Earlier, **the Economic Survey** also used to be presented to the Parliament along with the budget. Now, it is presented one day or a few days before the presentation of the budget. This report is prepared by the finance ministry and indicates the status of the national economy. Hence option (c) is the correct answer. **Hence option (c) is the correct answer.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which of the following fuels can be derived from the Algae?**1. Biodiesel 2. Butanol3. Gasoline 4. Methane5. Jet Fuel 6. Vegetable Oil**Select the correct answer using the code given below:** |
| Type | multiple\_choice |
| Option | 1, 2, 4 and 5 only |
| Option | 2, 3, 5 and 6 only |
| Option | 1, 3, 4 and 6 only |
| Option | 1, 2, 3, 4, 5 and 6 |
| Answer | 4 |
| Solution | * **Algae – III generation biofuels (G3)**
* The fuel which is obtained from a chemical method from biomass rather than a slow geological process is known as **Biofuel.**
* The bright or dark green patches found in wet regions are algae, the **non-flowering plants like species containing chlorophyll** yet distinct from floras ranging from micro to macro sizes. The processing of these microorganism diversifies the scope in nutritional industry, bioplastics, pharmaceuticals, special chemicals manufacture, organic fertilizer and the flourishing biofuel industry.
* The **distinctive properties of algae** such as : a) CO2 absorbance for the growth helps in reduction of green-house effect, b) they do not require large area for development compared to other food crops, c) can adjust to brine water and d) also their lipid content is found high .
* The lipids in algae can be converted to biodiesel by the generalized method used for conversion of vegetable oil into biodiesel. Algae biofuels may be the future of alternative, renewable energy resources.
* There are two different types of algae that can be produced to make biofuels: macroalgae and microalgae.
* **Macroalgae** are large, multi-cellular organisms that are measured in inches and grow in ponds. **Microalgae** are micro, unicellular organisms that are measured in micrometers and grow in suspension within a body of water.
* **The list of fuels that can be derived from algae includes:**
* Biodiesel, Butanol, Gasoline, Methane, Ethanol, Vegetable Oil, Jet Fuel. **Hence option (d) is the correct answer.**
* The main **advantages** of this method are (a) it is inexpensive (b) the bio-oil is easy to store, transport and (c) fuels of high demand can be easily prepared by upgrading the oil (d) The algal oil is inedible and therefore do not have to answer for food availability controversies. The higher concentration of lipids/fatty acids present in algae enables its successful conversion into biofuel.
* While the **drawbacks** of bio-oil are (a) highly viscid, harsh and lacks thermal stability, (b) it exhibits low calorific value and (c) resemblance to the reactant oil as it has predominant oxygenated molecules (c) Algae as a bio-fuel is expensive to produce because the research and development of algae biofuel is limited at this point in time, it is still relatively expensive to produce,(d) Algae as bio-fuel would threaten Oil Company profits although some oil companies (Shell, Chevron, BP) are conducting research on this alternative energy source, they are not ready to fully commit to the idea of green crude,(e)Growing algae can be risky because when algae is grown in a pond, it is cheaper to produce oil. However, the process can be disrupted by animals if not placed a closed, controlled system.
* **NOTE:** Indian scientists, under the **INSPIRE program** of Ministry of Science and Technology, have developed low cost biodiesel from microalgae.
* Different types of biofuels that have been explored in India include molasses, agriculture residue, sugarcontaining edible sources like sugarcane and sorghum, starch-containing sources like corn, edible oilseeds and cassava, and non-edible oilseeds like Jatropha.
* **INSPIRE program:** Innovation in Science Pursuit for Inspired Research (INSPIRE) is an innovative programme sponsored and managed by the Department of Science & Technology for the attraction of talent to Science. The basic objective of INSPIRE is to communicate to the youth of the country the excitements of creative pursuit of science, attract talent to the study of science at an early age and thus build the required critical human resource pool for strengthening and expanding the Science & Technology system and R & D base.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements regarding the Ramsar Convention of 1971:**1. It is a legally binding intergovernmental treaty that provides the framework for the conservation of wetlands.
2. Lotic water bodies are not covered under the Ramsar Convention.
3. India has the largest network of Ramsar wetlands in Asia.

**How many of the above statements are correct?** |
| Type | multiple\_choice |
| Option | Only one |
| Option | Only two |
| Option | All three |
| Option | None |
| Answer | 2 |
| Solution | * **The Convention on Wetlands of International Importance (Ramsar Convention):**
	+ The Convention on Wetlands of International Importance (Ramsar Convention) was adopted in 1971 and entered into force in 1975.
	+ It is a **legally binding intergovernmental framework** instrument embodying the commitments of its member countries to maintain the ecological character of their Wetlands of International Importance and to plan for the "wise use", or sustainable use, of all wetlands in their territories. **Hence statement 1 is correct**
	+ The Convention’s mission is “the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world”.
* **What are wetlands under the Ramsar Convention:**
	+ Wetlands are areas where water is the primary factor controlling the environment and the associated plant and animal life. They occur where the water table is at or near the surface of the land, or where the land is covered by water. The Ramsar Convention takes a broad approach in determining the wetlands which come under its aegis.
	+ Under the text of the Convention (Article 1.1), wetlands are defined as: “**areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is *static or flowing*, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters”.**
	+ This definition **includes lotic water bodies, such as rivers and streams,** if they meet specific criteria. For example, they must be important waterbird habitats, representative examples of particular types of wetland systems, or ecologically important for other reasons, such as providing flood control or sediment retention. **Hence statement 2 is not correct.**
* **Lotic water bodies:**
	+ Lotic water bodies are **water bodies that have a current or flow of water, such as rivers, streams, and creeks.**
	+ They are characterized by their high dissolved oxygen content and their ability to transport sediment and nutrients.
	+ Lotic water bodies support a variety of aquatic and riparian (streamside) organisms, including fish, insects, and plants.
* **Lentic water bodies:**
	+ Lentic water bodies are **water bodies that do not have a current or flow of water, such as ponds, lakes, and marshes.**
	+ They are characterized by their low dissolved oxygen content and their tendency to stratify (form layers) due to differences in temperature and density.
	+ Lentic water bodies support a variety of aquatic and emergent (water-loving) plants, as well as amphibians, reptiles, and waterfowl.
* **Five major wetland types are generally recognized under the Ramsar Convention:**
	+ **marine** (coastal wetlands including coastal lagoons, rocky shores, and coral reefs);
	+ **estuarine** (including deltas, tidal marshes, and mangrove swamps);
	+ **lacustrine** (wetlands associated with lakes);
	+ **riverine** (wetlands along rivers and streams);
	+ **palustrine** (meaning “marshy” - marshes, swamps and bogs).
* **Ramsar Wetlands in India:**
	+ In the 75th year of Independence, the number of Ramsar sites in India stands at 75, covering an area of 13,26,678 ha, thanks to the recent addition of 11 more wetlands to the list in 2022.
	+ **Among the eleven new sites**,
* **four are in Tamil Nadu** (Chitrangudi Bird Sanctuary, SuchindramTheroor Wetland Complex, Vaduvur Bird Sanctuary, Kanjirankulam Bird Sanctuary)
* **three in Odisha** (Tampara Lake, Hirakud Reservoir, Ansupa Lake)
* **two in Jammu & Kashmir** (Hygam Wetland Conservation Reserve, Shallbugh Wetland Conservation Reserve)
* **and one each in Madhya Pradesh** (Yashwant Sagar) and **Maharashtra** (Thane Creek).
* **Currently India, with 75, has the largest network of Ramsar Wetlands in Asia surpassing China. Hence statement 3 is correct.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **The term ‘Rules of Origin’ is sometimes seen in the news with reference to** |
| Type | multiple\_choice |
| Option | Permitting foreign educational institutions to set up their campuses in the domestic country. |
| Option | Regulating investment through Participatory-Notes to prevent round tripping of black money. |
| Option | Granting licenses to foreign e-commerce firms to operate in the domestic country. |
| Option | Developing trading norms to prevent dumping of foreign goods in the domestic market. |
| Answer | 4 |
| Solution | * Rules of origin are the rules to attribute a country of origin to a product in order to determine its "**economic nationality**". The need to establish rules of origin stems from the fact that the **implementation of trade policy measures, such as tariffs, quotas, trade remedies,** in various cases, depends on the country of origin of the product at hand.
* Rules of origin are used:
	+ to implement measures and **instruments of commercial policy such as anti-dumping duties and safeguard measures;**
	+ to determine whether imported products shall receive most-favoured-nation (MFN) treatment or preferential treatment;
	+ for the purpose of trade statistics;
	+ for the application of labelling and marking requirements; and
	+ for government procurement.
* **General Agreement on Tariffs and Trade (GATT)** has **no specific rules** governing the determination of the country of origin of goods in international commerce. Each contracting party was **free to determine its own origin rules**, and could even maintain several different rules of origin depending on the purpose of the particular regulation.
* During international trade, an exporting country needs to show a certificate under norms of "**rules of origin**" to prove that the commodity or a product originates there. Rules of origin norms help in containing dumping of goods. **Hence option (d) is the correct answer.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements:**1. Introduction of Constitutional amendment bills.
2. Approval of proclamation of all three types of emergencies.
3. Consideration of the reports of the Finance Commission.

**The Rajya Sabha has equal powers with Lok Sabha in which of the given above circumstances?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 1 and 2 only |
| Option | 2 and 3 only |
| Option | 1, 2 and 3 |
| Answer | 4 |
| Solution | In the following matters, the powers and status of the Rajya Sabha are equal to that of the Lok Sabha:* Introduction and passage of ordinary bills.
* **Introduction and passage of Constitutional amendment bills.**
* Introduction and passage of financial bills involving expenditure from the Consolidated Fund of India.
* Election and impeachment of the president.
* Election and removal of the Vice-President. However, Rajya Sabha alone can initiate the removal of the vice-president. He is removed by a resolution passed by the Rajya Sabha by a special majority and agreed to by the Lok Sabha by a simple majority.
* Making recommendation to the President for the removal of Chief Justice and judges of Supreme Court and high courts, chief election commissioner and comptroller and auditor general.
* Approval of ordinances issued by the President.
* **Approval of proclamation of all three types of emergencies by the President.**
* Selection of ministers including the Prime Minister. Under the Constitution, the ministers including the Prime Minister can be members of either House. However, irrespective of their membership, they are responsible only to the Lok Sabha.
* **Consideration of the reports of the constitutional bodies like Finance Commission, Union Public Service Commission, comptroller and auditor general, etc.**
* Enlargement of the jurisdiction of the Supreme Court and the Union Public Service Commission.

**Hence all the statements are correct.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With reference to Olive Ridley Turtles, consider the following statements:**1. They are the largest of all sea turtle species in the world and are categorized as vulnerable by the International Union for Conservation of Nature.
2. Generally, an Olive Ridley turtle lays 100-150 eggs.
3. Rushikulya Beach is a notified wildlife sanctuary for Olive Ridley Turtles in the state of Odisha.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 and 3 only |
| Option | 2 and 3 only |
| Option | 2 only |
| Option | 1, 2 and 3 |
| Answer | 3 |
| Solution | * **Generally, an Olive Ridley turtle lays 100-150 eggs in a cavity created by them with their front flippers. They scoop out sand for hours to create the void. After laying eggs in one go, these creatures cover it again with sand. Before sunrise, the turtles return to the sea, leaving behind the eggs to hatch after 40-60 days.** Sometimes, a turtle lays eggs in a pit at a place which was previously used by another turtle, leading to the loss of thousands of eggs. **Hence, statement 2 is correct.**
* **The Rushikulya beach is a unique phenomenon, which is not a wildlife sanctuary, yet turtles feel safe to carry out mass nesting. Baby turtles started coming out from eggshells in the second week of April this year. Hence, statement 3 is not correct.**
* Once a turtle finds the right spot, it settles down to make a shallow nest where it will lay about 100 eggs on average. A turtle uses its flippers to scoop out sand to create a cavity 30 cm to 50 cm deep to lay eggs.
* Growing to about half a metre and 50 kg in weight, the Olive Ridley turtle gets its name from its greengrey carapace (top shell). **It is the smallest of all the sea turtle species. Olive Ridley turtles, a vulnerable species according to the International Union for Conservation of Nature, come ashore to the Rushikulya river mouth in Odisha to lay eggs. Hence, statement 1 is not correct.**
* The Olive Ridley turtles do not wait to see the eggs hatch but come back next season to lay eggs again. They spend their lives in the ocean, inhabiting the tropical and subtropical waters of the Pacific, Indian, and Atlantic oceans.
* Turtles also arrive at Gahirmatha Beach in Odisha’s Kendrapara district, known as the world’s largest rookery. Besides, Puri and Devi river mouth beaches too host Olive Ridley turtles this time around.
* As part of a long-term study, researchers of the Zoological Survey of India (ZSI) continued tagging of Olive Ridley turtles at three mass nesting sites – Gahirmatha, Devi river mouth, and Rushikulya. The metal tags affixed to turtles are non-corrosive and they do not harm their body. The metal can be removed later. The tags are uniquely numbered containing details such as the name of the organization, country code, and email address.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements with reference to different Governor Generals and Governor Generals of British India:**1. Lord Reading was the Viceroy of India during the Kakori train robbery.
2. Lord Metcalfe is often called as the Liberator of Indian Press.
3. Lord Dufferin was the Viceroy of India during the establishment of the Indian National Congress.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 2 only |
| Option | 1 and 3 only |
| Option | 1, 2 and 3 |
| Answer | 4 |
| Solution | * Lord Dufferin was appointed the Viceroy of India in 1884 till1888. He was the Viceroy of India during the formation of Indian National Congress (established in the year 1885). But he realized the strength of Indian National Congress and became critical of it and called it “A Microscopic Minority of Indian People”. **Hence statement 3 is correct.**
* Sir Charles Metcalfe was a British colonial administrator. He held appointments including acting Governor-General of India **(20 March 1835 – 4 March 1836**), Governor of Jamaica and Governor-General of the Province of Canada. The Press Act of 1835 or the Metcalfe Act repealed the obnoxious ordinance of 1823. This earned him the title of 'Liberator of Indian Press'. It required a publisher to give a precise account of premises of a publication. **Hence statement 2 is correct.**

Lord Reading succeeded Lord Chelmsford in 1921 as Governor-General and Viceroy of India. His tenure was a testing time for British. The Non-cooperation Movement had reached climax and was abruptly withdrawn in 1922. This period saw a sudden rise in communal growth and fringe elements in both Hindu and Muslim Community. Other events included: Prince of Wales visited India (1921), Repeal of Rowlatt Act (1919), Criminal Law Amendment Act, Moplah Rebellion (1921), Simultaneous Examinations of Civil Services in London and Delhi (1923) Foundation of Communist Party of India (1921), Formation of Swaraj Party (1923), **Kakori Train robbery (1925**) etc. **Hence statement 1 is correct.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With reference to the Comptroller and Auditor General (CAG) of India, consider the following statements**1. The CAG is appointed by the President of India on the recommendation of Prime Minister.
2. CAG audit reports shall be tabled by the President to both the houses of parliament within six months from the date of receipt.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 only |
| Option | Both 1 and 2 |
| Option | Neither 1 and 2 |
| Answer | 1 |
| Solution | * **The Constitution of India (Article 148) provides for an independent office of the Comptroller and Auditor General of India (CAG).**
* The current practice adopted for the appointment of the CAG is that the Cabinet Secretary prepares a shortlist for the finance minister who then submits it before the prime minister. **The Prime Minister recommends one name from that list to the President. If the president approves the same, the appointment of the CAG is made by warrant under the hand and seal of the President. Hence, statement 1 is correct.**
* The CAG submits three audit reports to the President—audit report on appropriation accounts, audit report on finance accounts, and audit report on public undertakings. The President lays these reports before both the Houses of Parliament. After this, the Public Accounts Committee examines them and reports its findings to the Parliament.
* There is no specified timeframe within which the audit reports are to be tabled in parliament. Concerns were recently raised due to delays in the tabling of various crucial reports related to performance audits of various govt departments and programs. In many cases, the delay went beyond 180 days. **Hence, statement 2 is not correct.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With reference to the economy during the British rule in India, consider the following statements:**1. The English East India Company came to India in the search of raw material to feed industries in England.
2. The latter half of the nineteenth century witnessed commercialization of Indian agriculture.
3. As a reaction to the economic policies of the British, 'economic drain' theory was put forward for the first time by Jawaharlal Nehru in his book Discovery of India.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 2 only |
| Option | 1, 2 and 3 |
| Option | 1 and 3 only |
| Answer | 2 |
| Solution | * The British East India Company came to India as traders in spices, a very important commodity in Europe back then as it was used to preserve meat. Apart from that, they primarily traded in silk, cotton, indigo dye, tea and opium. They landed in the Indian subcontinent on August 24, 1608, at the port of Surat. Thus India served as a source of raw material and a market for Britain-manufactured goods only after the Industrial Revolution started. This is the second stage of colonialism in India which spanned1813 to 1858.
* This period saw the classic age of free trader industrial capitalist exploitation. The entire pattern of trade underwent a dramatic change under the mighty impact of England’s industrial revolution. During this period, India was converted rapidly into a market for British textiles and a great source for raw materials. Traditional handicrafts were thrown out of gear—a period when the ‘homeland of cotton was inundated with cotton’ (Karl Marx). **Hence statement 1 is not correct.**
* In the latter phase of the nineteenth century, another significant trend was the emergence of the commercialization of agriculture. Until then, agriculture in India had been a way of life rather than a business enterprise. Now agriculture began to be influenced by commercial considerations. **Hence statement 2 is correct.**
* The ‘Drain Theory’ was first developed by Dadabhai Naoroji in a series of speeches and writings subsequently published in 1901 in a volume entitled Poverty and un-British Rule in India. Marginal contributions to the theory were also made by R.C. Dutt, G. S. Iyer, G.K. Gokhale and P.C. Ray. During the late 19th and early 20th century, ‘the drain theory’ came to be seen as the symbol of Indian economic nationalism. Its message was that financial mechanisms by which British rule in India was maintained led to a transfer of wealth and income from India to Britain, imposing a ‘bleeding drain’ on the Indian economy. **Hence statement 3 is not correct.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which of the following arguments do not reflect modern democratic values?**1. Rule of the majority means the rule of ignorant people.
2. Education must be provided only in one language to develop a sense of nationalism.
3. Being incorruptible, the army is better suited than political parties.
4. International borrowings must not be conditioned on a reduction in social expenditure.

**Select the correct answer using the code given below.** |
| Type | multiple\_choice |
| Option | 1, 2 and 3 only |
| Option | 2 and 3 only |
| Option | 4 only |
| Option | 1 and 4 only |
| Answer | 1 |
| Solution | Democracy is the most prevalent form of government in the world today and it is expanding to more countries. Among various principles, some of the common underlying principles of democracy are:* Rulers must be elected by the people who take all the major decisions. There might be situations that a large part of the population is ignorant and uneducated, but it must provide them an opportunity to elect their leader instead of a smaller group hijacking the political power. **Hence, statement 1 is not correct.**
* Despite being seen as more disciplined and less corrupt, rule by army could not be seen promoting democratic values. Since it does not represent the broader will of the people, it is not accountable to the electorate and tends to assert despotic tendencies as seen in various countries like Pakistan, North Korea etc. So, elections should offer a choice and fair opportunity to the people to change the current rulers. **Hence, statement 3 is not correct.**
* Modern nation-states are constituted of diverse cultures and linguistic groups. Moden democratic values promote the equal opportunity to every group to participate in educational institutions by providing education in vernacular languages. So, the choices and opportunities must be available to all the people on an equal basis. **Hence, statement 2 is not correct.**
* Modern economies borrow from international agencies for meeting different needs. Sometimes, such borrowings come with certain binding conditions. A democratic country would tend not to compromise the overall social welfare under normal circumstances. **Hence, statement 4 is correct.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With reference to the Markets in Crypto Assets (MiCA) regulation, consider the following statements:**1. It has been approved by the European Union (EU) to bring largely unregulated cryptocurrency markets under government regulation.
2. It will also regulate central bank digital currencies issued by the European Central Bank.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 only |
| Option | Both 1 and 2 |
| Option | Neither 1 nor 2 |
| Answer | 1 |
| Solution | * **Markets in Crypto Assets (MiCA) forms part of the European Union’s (EU)** broader digital financial package, which includes the Digital Operational Resilience Act and Pilot Regime on Distributed Ledger Technology. It aims to embrace innovation and new financial technologies while ensuring consumer protection and financial stability across the EU. **Hence, statement 1 is correct.**
* The MiCA legislation will **apply to crypto assets** including traditional cryptocurrencies like Bitcoin, Ethereum, and newer ones like **stablecoins.**
* **MiCA will not regulate central bank digital currencies** issued by the European Central Bank, **nonfungible tokens (NFTs)** and **digital assets** issued by national central banks of EU member countries. **Hence, statement 2 is not correct.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **In the context of Artificial Intelligence (AI), consider the following statements:**1. Artificial Neural Networks are algorithms that are based on the biological structure of the brain.2. Turing test is designed to estimate the number of computing systems in a AI network.**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 only |
| Option | Both 1 and 2 |
| Option | Neither 1 nor 2 |
| Answer | 1 |
| Solution | * **Artificial Intelligence** refers to the ability of machines to perform cognitive tasks like thinking, perceiving, learning, problem solving and decision making. Initially conceived as a technology that could mimic human intelligence, AI has evolved in ways that far exceed its original conception. With incredible advances made in data collection, processing and computation power, intelligent systems can now be deployed to take over a variety of tasks, enable connectivity and enhance productivity.
* A subset of artificial intelligence is machine learning, which refers to the concept that computer programs can automatically learn from and adapt to new data without being assisted by humans. Deep learning techniques enable this automatic learning through the absorption of huge amounts of unstructured data such as text, images, or video. **Artificial Neural Networks (ANNs)** are algorithms that are based on the **biological structure of the brain.** In ANNs, there are ‘neurons’ which have discrete layers and connections to other “neurons”. Each layer picks out a specific feature to learn. It’s this layering that gives deep learning its name, depth is created by using multiple layers as opposed to a single layer.” **Hence statement 1 is correct.**
* **A Turing Test** is a method of inquiry in artificial intelligence (AI) for determining **whether or not a computer is capable of thinking like a human being.** It was developed by Alan Turing, a Computer scientist) in 1950. The test involves seeking responses from a computer and a human. If interrogator wouldn’t be able to distinguish the answers provided by both human and computer then the computer passes the test and machine(computer) is considered as intelligent as human. **Hence statement 2 is not correct.**
* **The technological singularity** is a point in time at which **technological growth becomes uncontrollable and irreversible**, resulting in unforeseeable changes to human civilization. It’s hypothesized that the singularity is the point we are imminently going to reach a level of artificial superintelligence and can expect a subsequent explosion in technological and scientific growth at a runaway rate.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements with respect to Aadhaar:**1. Unique Identification Authority of India (UIDAI) follows Open source architecture for Aadhar to preclude dependence on specific computer hardware.
2. An Aadhaar holder temporarily can lock and unlock her biometrics.
3. Aadhaar gives nationwide portability as it can be authenticated anywhere online.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 1 and 2 only |
| Option | 2 and 3 only |
| Option | 1, 2 and 3 |
| Answer | 4 |
| Solution | * **Aadhaar number is a 12-digit random number** issued by the The **Unique Identification Authority of India (UIDAI)** to the residents of India after satisfying the verification process laid down by the Authority. Any individual, irrespective of age and gender, who is a resident of India, may voluntarily enrol to obtain Aadhaar number. Person willing to enrol has to provide minimal demographic and biometric information during the enrolment process which is totally free of cost. An individual needs to enrol for Aadhaar only once and after de-duplication only one Aadhaar shall be generated.
* **Features of Aadhaar:**
	+ **Uniqueness:** This is achieved through the process of demographic and biometric de-duplication. The de-duplication process compares the resident’s demographic and biometric information, collected during the process of enrolment, with the records in the UIDAI database to verify if the resident is already in the database or not.
	+ **Portability:** Aadhaar gives **nationwide portability as it can be authenticated anywhere online.** This is critical as millions of Indians migrate from one state to another or from rural area to urban centres etc. Aadhaar Authentication service is built to handle 100 million authentications a day. **Hence statement 3 is correct.**
	+ **Open source technologies:** The UID architecture is open and scalable. Open source architecture **precludes dependence on specific computer hardware**, specific storage, specific OS, specific database vendor, or any specific vendor technologies to scale. **Hence statement 1 is correct.**
	+ **Biometric Blocking:** Biometric Locking/Unlocking is a service that allows an Aadhaar **holder to lock and temporarily unlock their biometrics.** Any resident with valid Aadhaar should be able to use the service. This facility aims to strengthen privacy and confidentiality of Resident's Biometrics Data. **Hence statement 2 is correct.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following pairs:*****Type of embroidery State***1. Kashidakari : Andhra Pradesh
2. Kantha : West Bengal
3. Chikankari : Uttar Pradesh

**Which of the pairs given above is/are correctly matched?** |
| Type | multiple\_choice |
| Option | 1, 2 and 3 |
| Option | 2 and 3 only |
| Option | 1 only |
| Option | 3 only |
| Answer | 2 |
| Solution | * **Chikankari embroidery is a traditional embroidery style from Lucknow, Uttar Pradesh.** It is a delicate and intricate embroidery style that is believed to have been introduced by Nur Jehan, the wife of Mughal emperor Jahangir. While the art flourished under the patronage of the Mughals, references to the art have been found as early as the 3rd century BC with Megasthenes mentioning the use of flowered muslins by Indians. **A chikan piece is created by block printing patterns on it.** Craftsmen then embroider stitches along with the pattern, and the finished piece is later washed to remove traces of the prints. Traditionally, Chikankari began as a type of white-on-white embroidery, but today the craft uses a variety of fabrics and colours. From white thread embroidered on soothing pastels to coloured silk threads, Chikankari has evolved into art for those with a taste for the finer things. **Hence pair 3 is correctly matched.**
* **One of the traditional embroidery styles practised in Bengal and Odisha, Kantha work is known for its simplicity.** Traditionally practised by rural women, Kantha was done on soft dhotis and sarees, with a simple running stitch along the edges. Interestingly, the thread used to do that was drawn from the border threads of the used cloth. Characterised by motifs of birds, animals, flowers and everyday activities in a running stitch format with short gaps, the Kantha embroidery today adorns sarees, dress materials, bed covers, wall hangings, upholstery and a lot more. **Hence pair 2 is correctly matched.**
* **Kashidakari, more popularly known as Kashmiri embroidery, evolved under the patronage of Persian and Mughal rulers.** While not much is known about the origins of this craft, legend has it that a Persian Sufi saint brought the skill to Kashmir. What started as a skilled craft, soon became a source of domestic employment as farming in the harsh winters was not possible. Inspired by the scenic locales of Kashmir, Kashidakari draws heavily from the flora of the state. However, human and animal figures are not part of this style of embroidery. A unique feature of Kashidakari is the Kashmiri teapot. Known for its simple chain stitches, this embroidery is done mostly on silk and wool is a global rage. **Hence pair 1 is not correctly matched.**

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| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Recently, which of the following organisations has launched 'The Preparedness and Resilience for Emerging Threats' (PRET) Initiative?** |
| Type | multiple\_choice |
| Option | World Health Organisation |
| Option | United Nations Framework Convention on Climate Change |
| Option | World Bank |
| Option | Food and Agriculture Organization |
| Answer | 1 |
| Solution | * **The World Health Organization (WHO)** has launched the '**Preparedness and Resilience for Emerging Threats' (PRET)** to better prepare for future outbreaks of a similar scale and devastation as the COVID-19 pandemic.
* It aims to provide “guidance on integrated planning for responding to any respiratory pathogen such as influenza or coronaviruses”.
* The initiative was **announced at the Global Meeting for Future Respiratory Pathogen Pandemics** held on **24-26 April 2023 in Geneva, Switzerland.**
* **Hence, option (a) is the correct answer.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements:**1. India has more than half of the world's thorium reserves.
2. Unlike Uranium, Thorium alone cannot be directly used as nuclear fuel in a reactor.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 only |
| Option | Both 1 and 2 |
| Option | Neither 1 and 2 |
| Answer | 2 |
| Solution | * Of the currently known world thorium reserves, India has a mammoth share - **ranging from 25-30% of the total global thorium deposits.** This coupled with the growing need for energy and restrictions on Uranium trade had made India's inclination towards Thorium reactors obvious. Its main source is the **Monazite deposits**, which occur essentially in the entire peninsula. There are also inland resources in the Ranchi plateau. Apart from there are scattered deposits in the Gujrat region, Bihar and inner Tamil Nadu. **Hence statement 1 is not correct.**
* It is **not possible** to build a nuclear reactor **using Thorium (Thorium-232) alone** due to its physics characteristics. **Thorium has to be converted to Uranium-233** in a reactor before it can be used as fuel. **Hence statement 2 is correct.**
* Department of Atomic Energy (**DAE**) has planned the use of large deposits of Thorium available in the country as a long-term option. The three stage nuclear power programme aims to multiply the domestically available fissile resource through the use of natural **Uranium in Pressurised Heavy Water Reactors**, followed by use of **Plutonium** obtained from the spent fuel of Pressurised Heavy Water Reactors in **Fast Breeder Reactors.** Large scale use of Thorium will subsequently follow making use of the Uranium-233 that will be bred in Reactors. The utilisation of Thorium, as a practically inexhaustible energy source, has been contemplated during the **third stage of the Indian Nuclear Programme.** As is the case with generation of electricity from Uranium, there will be no emission of green house gases from Thorium also and therefore, it will be a clean source of energy.

**Hence option (b) is the correct answer.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Rashikapriya a series of paintings, characterised by rich and glowing colours, the rising sun in golden colour, crimson-red horizon and depicting Krishna and his stories belong to which of the following school of painting?** |
| Type | multiple\_choice |
| Option | Kota |
| Option | Mewar |
| Option | Bundi |
| Option | Kishangarh |
| Answer | 3 |
| Solution | * The peculiar characteristics of the Bundi painting, as evident in this miniature, are the rich and glowing colours, the rising sun in golden colour, crimson-red horizon, overlapping and semi-naturalistic trees.
* The Mughal influence is visible in the refined drawing of the faces and an element of naturalism in the treatment of the trees. The text is written in black against the yellow background on the top.
* **Example of Bundi school:** A series of the **Rasikapriya** of the late 17th century has a scene which represents Krishna trying to collect butter from a Gopi, but finding that the pot contains a piece of cloth and some other objects and no butter he realised that he has been duped by the Gopi. **Hence option (c) is correct.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Consider the following statements:**1. A thick cuticle on leaves surface
2. Stomata remain closed during day time.
3. The photosynthetic function is performed by the flattened stem.

**The above adaptations can be seen in plants belonging to which of the following ecosystems?** |
| Type | multiple\_choice |
| Option | Desert |
| Option | Tropical rain forest |
| Option | Deciduous forest |
| Option | Coastal regions |
| Answer | 1 |
| Solution | * **Adaptation is an attribute of the organism (morphological, physiological, behavioral) that enables the organism to survive and reproduce in its habitat.**
* Many adaptations have evolved over a long evolutionary time and are genetically fixed.
* **Examples:**
	+ In the absence of an external source of water, the kangaroo rat in North American deserts is capable of meeting all its water requirements through its internal fat oxidation (in which water is a by-product).
	+ **Many desert plants have a thick cuticle on their leaf surfaces and have their stomata arranged in deep pits (sunken) to minimize water loss through transpiration. They also have a special photosynthetic pathway (CAM) that enables their stomata to remain closed during day time.**

**Some desert plants like Opuntia, have no leaves – they are reduced to spines– and the photosynthetic function is taken over by the flattened stems. Hence the correct answer is option (a).*** + Mammals from colder climates generally have shorter ears and limbs to minimize heat loss. (This is called the Allen’s Rule.) In the polar seas aquatic mammals like seals have a thick layer of fat (blubber) below their skin that acts as an insulator and reduces the loss of body heat.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **"It is found at an altitude of 12000 feet onwards in parts of Pithoragarh, Bageshwar and Chamoli districts in Uttarakhand. Ophiocordyceps sinensis, locally known as Keeda Jadi or Yartsa gunbu, is also popularly known as Himalayan Viagra. It is extremely valuable and can be sold commercially at a value to Rs 20 lakh per kilograms." To which of the following kingdoms does the above mentioned species belong?** |
| Type | multiple\_choice |
| Option | Monera |
| Option | Fungi |
| Option | Protista |
| Option | Plantae |
| Answer | 2 |
| Solution | * The **world’s costliest fungus** — Ophiocordyceps sinensis — also known as Himalayan Viagra, which sells in international markets for upwards of Rs 20 lakh per kg, has entered the International Union for Conservation of Nature’s **(IUCN) Red List of Threatened Species.**
* **The fungus** is also known as **keeda jadi in Uttarakhand** because of its caterpillar-like appearance.
* Ophiocordyceps sinensis, a genus of ascomycete fungi, which parasitize mainly on insects and other arthropods, has been intensively studied in various disease models. This fungus is found naturally in the Tibetan Plateau and neighboring regions, including China, Nepal, Tibet, and India. **Hence option (b) is the correct answer.**
* It is **endemic to the Himalayan and Tibetan plateau** and is found in China, Bhutan, Nepal and India. In India, it is primarily found in **Uttarakhand** in the higher reaches of districts like Pithoragarh, Bageshwar and Chamoli.
* Recently in a list released by International Union for Conservation of Nature’s (IUCN) Red List of Threatened Species placed the fungal herb in the ‘vulnerable’ category. Believed to be a remedy for sexual impotency, according to traditional Chinese medicine (TCM), the fungus when boiled and added to tea or soup can act as an aphrodisiac, cure cancer and fight fatigue.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Which of the following indices are published by the World Bank?**1. World Economic Outlook
2. Global Economic Prospect (GEP) Report
3. World Development Report
4. Global Financial Stability Report

**Select the correct answer using the code given below.** |
| Type | multiple\_choice |
| Option | 1, 2 and 4 only |
| Option | 1, 3 and 4 only |
| Option | 3 and 4 only |
| Option | 2 and 3 only |
| Answer | 4 |
| Solution | Ease of doing business is an index published by the World Bank. It is an aggregate figure that includes different parameters which define the ease of doing business in a country.**World Economic Outlook -** A Survey by the IMF staff usually published twice a year. It presents IMF staff economists' analyses of global economic developments during the near and medium term. It gives an overview as well as a more detailed analysis of the world economy; considers issues affecting industrial countries, developing countries, and economies in transition to market; and addresses topics of pressing current interest. **Hence, option 1 is not correct.****Global Economic Prospects (GEP) is a flagship report of the World Bank Group**, which examines global economic developments and prospects, with a special focus on emerging markets and developing economies, on a semi-annual basis (in January and June).Each edition includes analytical pieces on topical policy challenges faced by these economies. **Hence, option 2 is correct.****The World Development Report (WDR) is an annual report published since 1978 by the International Bank for Reconstruction and Development (IBRD) or World Bank.** Each WDR provides an in-depth analysis of a specific aspect of economic development. Past reports have considered such topics as agriculture, youth, equity, public services delivery, the role of the state, transition economies, labour, infrastructure, health, the environment, risk management, and poverty. The reports are the Bank's best-known contribution to thinking about development. **Hence, option 3 is correct.**The **Global Financial Stability Report by IMF** provides an assessment of the global financial system and markets and addresses emerging market financing in a global context. It focuses on current market conditions, highlighting systemic issues that could pose a risk to financial stability and sustained market access by emerging market borrowers. **Hence, option 4 is not correct.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With respect to the absence of a member of a House, consider the following statements:**1. The seat of a member is declared vacant if she/he is absent from all its meetings for a period of sixty days without its permission.
2. Rajya Sabha being a permanent house, no action is taken against its members for being absent from its sessions.

**Which of the statements given above is/are correct?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 only |
| Option | Both 1 and 2 |
| Option | Neither 1 nor 2 |
| Answer | 1 |
| Solution | * The Constitution (Article 101(4)) provides that **if for a period of sixty days a member of either House of Parliament** is **without permission of the House absent from all meetings thereof, the House may declare his seat vacant. Hence statement 1 is correct and statement 2 is not correct.**
* In computing the said period of sixty days, however, no account is taken of any period during which the House is prorogued or is adjourned for more than four consecutive days.
* The period of sixty days referred to in the Constitution means a single unbroken period of sixty days and for invoking the provision of the Constitution, the absence has to be continuous.
* The period of absence is calculated from the day a member is absent from the sitting of the House till the day he next attends, whether in the same or subsequent session(s). The intervening days in session on which the House does not sit are counted but any period of prorogation or adjournment of the House for more than four consecutive days is excluded.
* **The constitutional provision is only directory and not mandatory; being an enabling power, it is within the competence of the House to condone the absence of a member exceeding sixty days.**
* A member wishing to obtain permission of the House for remaining absent from meetings thereof under **clause (4) of article 101 of the Constitution** is required to make an application stating the period for which he may be permitted to be absent from the meetings of the House.
* The member is required specifically to ask for leave. No action is taken on a communication of a member which merely intimates that he will not attend the session but does not ask for leave.
* **The current practice is that generally leave is granted for the entire session**. Only in case where leave asked for is for a period exceeding ten days in a session, the leave application is placed before the House.
* In case a member asks for leave of absence for a part of the session, it is not put to the House if the member has already attended the session for a day or days or his absence is not going to reach the total of sixty or more days.
* In case the leave of absence is asked for a part of the session, sometimes the application is kept pending and put to the House only when the member does not attend after the specified period.
* If a member asks for conditional leave i.e. leave in case he is not able to attend by a particular date during the session, the application is kept pending until he attends by the date specified or a further communication is received from him and if he fails to attend, his leave application is placed before the House towards the end of the session for grant of leave.
* **In the Lok Sabha, procedure for granting leave:**
	+ A member desiring permission of the House to remain absent from the sittings thereof under clause (4) of article 101 of the Constitution shall make an application **in writing to the Speaker.**
	+ An application shall specify the period for which leave of absence is required, indicating also the date of commencement and of termination of such leave of absence and the grounds for it: Provided that leave of absence applied for at any one time shall not exceed a period of sixty days.
	+ All applications for the said purpose shall stand referred to the Committee on Absence of Members from the Sittings of the House.
	+ The Secretary-General shall, as soon as may be, after a decision has been signified by the House on the recommendations of the Committee in respect of an application for leave of absence, communicate it to the member.
	+ If a member who has been granted leave of absence under these rules attends the session of the House during the period for which the leave of absence has been granted to such member, the unexpired portion of the leave from the date on which the member resumed attendance shall lapse.
* **In the Rajya Sabha, procedure for granting leave:**
	+ An application for leave of absence is required to be made **in writing addressed to the Chairman of the Rajya Sabha.** It is necessary that the application should be made and signed by the member himself and it should be addressed to the Chairman.
	+ **Sometimes the leave application has also been entertained when the member has addressed it to the Secretary-General instead of the Chairman.**
	+ If a member is unable to apply himself in writing for reasons of health and another member has applied on his behalf, such an application has also been entertained and leave granted to the member on that basis.
	+ In a case, however, where an adviser of a member who was unwell requested for leave of absence on behalf of the member, the adviser concerned was informed that the leave application should be sent under the member's own signature.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **"It is a genus of flowering plants and is indigenous to South America. It produces a number of alkaloids and bark contains quinine, which is a medicine used to treat malaria. It also contains quinidine which is a medicine used to treat heart palpitations."****Which of the following plants has been described in the above passage?** |
| Type | multiple\_choice |
| Option | Raspberry |
| Option | Oak |
| Option | Willow tree |
| Option | Cinchona |
| Answer | 4 |
| Solution | * **Cinchona** is a genus of flowering plants .The cinchona - a large shrub or small tree - is **indigenous to outh America**. In the 19th century it could be found along the west coast from Venezuela in the north to Bolivia in the south. Its bark, also known as Peruvian Bark or Jesuit’s Bark, is renowned for its medicinal properties.
* Cinchona is used for **increasing appetite**; promoting the release of **digestive juices**; and **treating bloating**, fullness, and other stomach problems. It is also **used for blood vessel disorders** including hemorrhoids, varicose veins, and leg cramps. Some people use cinchona for mild influenza, swine flu, the common cold, malaria, and fever. Other uses are for cancer, mouth and throat diseases, enlarged spleen, and muscle cramps.
* Cinchona is used in eye lotions to numb pain, kill germs, and as an astringent. Cinchona extract is also applied to the skin for hemorrhoids, ulcers, stimulating hair growth, and managing varicose veins.
* In foods, cinchona is used as a bitter flavoring in tonic water and alcoholic beverages.
* Cinchona **produces a number of alkaloids**, namely **cinchonine, cinchonidine, quinine, quinidine and quinamine**. By far the most valuable of these is **quinine, a drug used to treat malaria**. All the alkaloids, with the exception of sulphate of cinchonine, are known for their febrifugal properties. **Cinchona bark contains quinine**, which is a medicine used to treat malaria. It also contains **quinidine** which is a medicine used **to treat heart palpitations** (arrhythmias). **Hence option (d) is the correct answer.**
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **While calculating Gross Value Addition (GVA), which of the following is/are categorized as production tax or a subsidy?**1. Land revenue
2. Export duties
3. Fertilizer subsidies

**Select the correct answer using the code given below.** |
| Type | multiple\_choice |
| Option | 1 and 2 only |
| Option | 2 and 3 only |
| Option | 1 only |
| Option | 1, 2 and 3 |
| Answer | 3 |
| Solution | * Gross value added (GVA) is defined as the value of output less the value of intermediate consumption. Value added represents the contribution of labour and capital to the production process. When the value of taxes on products (less subsidies on products) is added, the sum of value added for all resident units gives the value of gross domestic product (GDP). Thus, Gross Domestic Product (GDP) of any nation represents the sum total of gross value added (GVA) (i.e, without discounting for capital consumption or depreciation) in all the sectors of that economy during the said year after adjusting for taxes and subsidies.
	+ GVA at factor cost + (Production taxes less Production subsidies) = GVA at basic prices
	+ GDP at market prices = GVA at basic prices + Product taxes- Product subsidies
* GVA at basic prices will include production taxes and exclude production subsidies available on the commodity. On the other hand, GVA at factor cost includes no taxes and excludes no subsidies and GDP at market prices include both production and product taxes and excludes both production and product subsidies.
* **Production taxes or production subsidies** are paid or received with relation to production and are independent of the volume of actual production. Some examples of production taxes are **land revenues**, stamps and registration fees and tax on profession. Some production subsidies include subsidies to Railways, input subsidies to farmers, subsidies to village and small industries, administrative subsidies to corporations or cooperatives, etc.
* **Product taxes or subsidies** are paid or received on per unit of product. Some examples of product taxes are excise tax, sales tax, service tax and import and **export duties**. Product subsidies include food, petroleum and **fertilizer subsidies**, interest subsidies given to farmers, households, etc. through banks.

**Hence, option (c) is the correct answer.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **The Finance Commission is constituted by the President under Article 280 of the Constitution. It is required to make recommendations regarding which of the following aspects?**1. Distribution of net proceeds of taxes between the Centre and the States.
2. Principles governing the grants-in-aid to the States from the Consolidated Fund of India.
3. Measures to augment the Consolidated Fund of a State to supplement resources.
4. Principles determining the grants for the local bodies.

**How many of the above statements is/are correct?** |
| Type | multiple\_choice |
| Option | Only one |
| Option | Only two |
| Option | Only three |
| Option | All four |
| Answer | 4 |
| Solution | * **Distribution of net proceeds of taxes between the Centre and the States** - The Finance Commission recommends the share or distribution of net proceeds of certain taxes between the Central and the State Governments. These include taxes, like income tax, central excise, etc.
* **The principles governing the grants-in-aid to the States from the Consolidated Fund of India** – The Finance Commission recommends the principles for providing the grants and financial assistance to the States out of the Consolidated Fund of India. This helps ensure equitable distribution.
* **Measures to augment the Consolidated Fund of a State to supplement resources** - The Finance Commission recommends ways for the States to augment their resources in the Consolidated Fund of the State. This supplements the resources of the States and strengthens their financial capacity.
* **Allocation between the States of respective shares of such proceeds** - The Finance Commission recommends the allocation or share of each State in the proceeds of certain taxes to be divided between them. This ensures equitable distribution among the States. **The principles determining the grants for the local bodies** - The Finance Commission recommends the principles for providing the grants to the local bodies, like the Panchayats and the Municipalities from the Consolidated Fund of the States. This strengthens decentralized governance.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With reference to the compulsory licensing, consider the following statements:**1. It is granted to a third-party to make or sell a particular product by use of the patented technology without permission of the patent owner.
2. The TRIPS Agreement allows the use of compulsory licenses.

**Which of the pairs given above is/are correctly matched?** |
| Type | multiple\_choice |
| Option | 1 only |
| Option | 2 only |
| Option | Both 1 and 2 |
| Option | Neither 1 and 2 |
| Answer | 3 |
| Solution | * Compulsory licensing means when a government authorises a party other than the patent owner to make or sell a particular product by use of the patented technology without the patent owner's consent. **Hence statement 1 is correct.**
* The TRIPS Agreement allows the use of compulsory licences. Article 31 of the Agreement sets forth a number of conditions for the granting of compulsory licences. These include a case-by-case determination of compulsory licence applications, the need to demonstrate prior (unsuccessful) negotiations with the patent owner for a voluntary licence and the payment of adequate remuneration to the patent holder. Even the Indian Patent Act, 1970 has laid down certain condition for granting compulsory licensing (CL). **Hence statement 2 is correct.**
* Section 84 of the IP Act allows compulsory licensing in following conditions:
	+ Reasonable requirements of the public with respect to the patented invention have not been satisfied, or
	+ Patented invention is not available to the public at a reasonably affordable price or
	+ The patented invention is not worked in the territory of India.
	+ Demand for the patented article has not been met to an adequate extent or on reasonable terms
	+ A market for export of the patented article manufactured in India is not being supplied or developed
* According to the Section 90 of the Act, Compulsory licensing can be granted in following condition (i) a circumstance of national emergency; or (ii) a circumstance of extreme urgency; or (iii) a case of public non-commercial use.

Till now, India has issued compulsory license only once in 2014 to NATCO for a cancer drug, ending the monopoly of German pharmaceutical company Bayer AG over the drug. |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Dakar Declaration, recently seen in the news, is related to:** |
| Type | multiple\_choice |
| Option | Global elimination of Tuberculosis |
| Option | Cyber security |
| Option | Global elimination of AIDS |
| Option | Road safety |
| Answer | 4 |
| Solution | * ‘Dakar Declaration’ was adopted by 21 African countries committing to strengthening reporting on road crash fatalities, enhancing data capture, analysis, sharing, and coordination to shape better road safety policies. Hence option (d) is the correct answer.
* It is being conducted at the first African sub-regional conference on implementing the Global Plan for Road Safety in Dakar, Senegal.
* Other treaties on road safety:
	+ The decade of Action for road safety 2021–2030 (target of preventing at least 50% of road traffic deaths and injuries by 2030);
	+ Stockholm Declaration on Road Safety 2020;
	+ National Road Safety Policy 2010;
	+ Delhi Declaration on Road Safety 2021
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question |  |
| Type | multiple\_choice |
| Option | **Which of the following statements is correct about the Balance of Payments?** |
| Option | It is a record of only goods and services exchanged between the residents of a country with the rest of the world. |
| Option | It is a systematic record of all economic transactions between the residents of one country and the rest of the world. |
| Option | It includes transactions consisting of imports and exports of goods, services, and capital but excludes foreign aid and remittances. |
| Answer | It includes all the domestic assets and liabilities of the government of India, kept by RBI. |
| Solution | **Balance of Payments (BoP) of a country is a systematic record of all economic transactions between the residents of one country and the rest of the world during a given period of time.** It summarizes all transactions that a country's individuals, companies and government bodies complete with individuals, companies and government bodies outside the country. These transactions consist of imports and exports of goods, services and capital, as well as transfer payments such as foreign aid and remittances. **Hence, option (b) is the correct answer.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **With reference to India's biodiversity, "Mangrove pitta" seen in eastern India is a** |
| Type | multiple\_choice |
| Option | Tree |
| Option | Bird |
| Option | Snake |
| Option | Butterfly |
| Answer | 2 |
| Solution | * In a first-ever census of mangrove pitta birds carried out in two coastal districts of Odisha, 179 such birds were sighted. **Mangrove pitta is a resident non-migratory bird that generally feeds on crustaceans, mollusks and insects. Hence, option (b) is the correct answer.**
* Mangrove pitta birds are a **nearly threatened species** found in a few pockets of eastern India, including Odisha’s Bhitarkanika and West Bengal’s Sundarbans.
* The first census of mangrove pitta (Pitta megharencha) birds were mainly focused on the mangrove patches all along the coasts of the Kendrapara and Jagatsingpur districts. “The mangrove pitta is found in coastal mangrove forests of India, foraging on the ground and resting on the trees,”
* The census was carried out by point count method, either by walking in the forest or using country boats in the creeks. In this census, a total of 179 individual mangrove pitta birds were counted. **The highest concentration of the birds has been found in the mangroves near the Mahipura river mouth inside the Bhitarkanika National Park.**
* The first-ever population census of the mangrove pitta bird (Pitta megarhyncha) in Bhitarkanika national park revealed that the Ramsar site is home to around 179 of the avian species. “Reports indicate a population of the bird in the core areas is good. The present report reflects results from the direct count method during which all water bodies and mangrove forest areas of the park were monitored and a survey was carried out accordingly.
* The breeding season of this species ranges from April to August in Bhitarkanika. Abundant fish in the river and creeks and distance from human habitation has made Bhitarkanika a suitable congenial breeding place for this bird species.
* The Bhitarkanika National Park witnessed the arrival of 1,39,959 birds of 140 species in January this year. The birds were counted by direct sighting and from their chirping.
 |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **The four schools (vanis) namely Gauhar vani, Dagar vani, Khandar vani and Nauhar vani are associated with which of the following genres of music?** |
| Type | multiple\_choice |
| Option | Ghazal |
| Option | Dhrupad |
| Option | Thumri |
| Option | Khayal |
| Answer | 2 |
| Solution | * While Dhrupad might have had an impetus for popularity even by the 14th century, it finds a blossoming period from 15th century onwards to about the 18th century. It is a prominent form of Hindustani music that developed in northern India. During these centuries we find the most respected and renowned singers and patrons of this form. There was Man Singh Tomar, the Maharaja of Gwalior. It was he who was mainly responsible for the enormous vogue of dhrupad. There were Baiju, Bakshu and others. Swami Haridasa a hermit of Brindavan was not only a dhrupad singer but one of the most central figures in the Bhakti cult in the Northern areas of India.
* By tradition, he was the guru of Tansen, one of the best-known dhrupad singers and one of the nine jewels of Emperor Akbar's court. In structure, dhrupad has two parts, the anibaddha section and the sanchari dhrupad proper. The first is free alap. The dhrupad proper is a song in four parts: the asthayee, the antara, the Sanchari and the abhoga. The essential quality of the dhrupad approach is its sombre atmosphere and emphasis on rhythm.
* **There were four schools or vanis of singing the dhrupad.**
* The Gauhar Vani developed the raga or unadorned melodic figures.
* The Dagarvani emphasized melodic curves and graces.
* The Khandar Vani specialised in quick ornamentation of the notes.
* Nauhar Vani was known for its broad musical leaps and jumps.
* The instruments Been and Pakhawaj are closely associated with the dhrupad.

**Hence option (b) is the correct answer.** |
| Positive Marks | 2 |
| Negative Marks | 0.67 |

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| Question | **Recently, which of the following villages has been selected as Best Tourism Village by the United Nations World Tourism Organization (UNWTO)?** |
| Type | multiple\_choice |
| Option | Dhordo |
| Option | Mawlynnong |
| Option | Malana |
| Option | Odanthurai |
| Answer | 1 |
| Solution | * **Recently, in 2023 the Dhordo village in the Kutch district of Gujarat was awarded as the Best Tourism Village by the United Nations World Tourism Organization (UNWTO).**
* From Salty marshland to an Iconic destination of the Western Indian Subcontinent – Dhordo, in the Rann of Kutch, has become the face of Gujarat’s development.
* **Tourism was launched through Rann Utsav, a four-month festival whereby a special tent city was created in the desertic land with all the necessary amenities made available to tourists.**
* It is during these four months that the village comes to life displaying all the natural and cultural resources/products to its consumers.
* **Mawlynnong** is a village in the East Khasi Hills district of the Meghalaya state in North East India. It is notable for its cleanliness and also was chosen by Discover India magazine as Asia's cleanest village.
* **The remote village of Malana** is nestled in the pristine Parvati Valley of Himachal Pradesh, and stands as a mysterious and enchanting destination. Known for its unique customs, centuries-old traditions, and breathtaking natural beauty, Malana is a place that has captured the imaginations of travelers for years.
* **Odanthurai** of Tamil Nadu has taken energy generation to another level. The village not only produces its own electricity but also sells it to the state’s government. The village has come up with self-help ventures Wind-power generation.

They have replaced the grid electricity with a 9kW biomass gasifier power generation system for the means of pumping water to the houses. |
| Positive Marks | 2 |
| Negative Marks | 0.67 |