### **CHAYAN 2024**

GS TEST -3 19 / MAY/ 2023

**Answers and Explanations** 

Q1. Answer: (b)

**Statement 1 is correct: Justin was a Greek writer** who wrote on the **military conquest of Chandragupta Maurya.** He wrote that Chandragupta overran the whole of India with an army of 600,000.

**Statement 2 is correct: Chandragupta liberated north-western India** from the thraldom of Seleucus who ruled over the area west of the Indus. Chandragupta Maurya's liberation of north-western India from Seleucus. Some scholars overplayed the role of the indigenous ruling dynasties in liberating India from the rule of the Shakas and Kushans, little realizing that Central Asians and others became an intrinsic part of India's life and did not exploit Indian resources for their original homeland.

**Statement 3 is not correct: Chandragupta** built up a vast empire which included not only Bihar and a good portion of Orissa **and Bengal**, but also western and north-western India and the Deccan. **Leaving Kerala**, **Tamil Nadu and parts of north-eastern India**, the Mauryans ruled over the whole of the subcontinent.

#### Q2.Ans: B

**1st statement is wrong**: Whether or not Harappans used a plough has sometimes been controversial. No hoe or ploughshare has been found but the evidence of a furrowed field in Kalibangan indicates that the Harappans used a wooden ploughshare. Who drew the plough – men or oxen or some other animal – is not known **2nd and 3rd statements are correct**. Working in bronze was not very common and bronze smiths, therefore, may have been an important social group. The authors of Harappan culture possessed the knowledge of Gold. Beads, Pendants and other personal ornaments were often made of Gold. Harappans made boats.

#### Q3.Ans: A

Article-319. Prohibition as to the holding of offices by members of Commission on ceasing to be such members. On ceasing to hold office-

- 1. The Chairman of the Union Public Service Commission shall be ineligible for further employment either under the Government of India or under the Government of a State;
- 2. The Chairman of a State Public Service Commission shall be eligible for appointment as the Chairman or any other member of the Union Public Service Commission or as the Chairman of any other State Public Service Commission, but not for any other.

#### Q4. Answer-(a)

**Pair 1 is not correctly matched: Aghanashini Estuary -** The site is an estuary where the Aghanashini River flows into the Arabian Sea in **Karnataka State**. The site supports the livelihoods of more than 6,000 households, who are engaged in activities such as fishing, agriculture, and shrimp aquaculture, bivalve shell mining and salt production. In the estuary, **farmers practice traditional farming to grow a salt-tolerant rice called "kagga"**, which is one of the specialties of the region.

**Pair 2 is not correctly matched: Ankasamudra Bird Conservation Reserve-** The site is a human-made wetland built for storing monsoon run-off water coming from the **Tungabhadra River** and providing irrigation to surrounding drought-risk areas. The Site is widely known for its rich bird diversity and has been declared as a conservation reserve, managed mainly for bird protection. **Located at Karnataka, India.** 

Pair 3 is not correctly matched: Karaivetti Bird Sanctuary - The site is one of the largest inland freshwater lakes in the State of Tamil Nadu. It provides an important stopover and foraging ground for birds migrating along the Central Asian Flyway. During the driest period, between July and October, the water level of the site is maintained with water from the Mettur Dam. The lake water is used to irrigate about 4,000 hectares of surrounding farmland. There are issues related to human - wildlife conflict, in particular concerning the vulnerable bonnet macaque (Macaca radiata).

Pair 4 is correctly matched: Longwood Shola Reserve - The site lies near the town of Kothagiri, adjacent to the eastern slopes of the Nilgiri mountain range in Tamilnadu. It features intermittent freshwater marshes and streams nested within a "shola" (a tropical montane forest of southern India which is usually found in patches separated by grasslands). This Site is the only natural shola forest remaining in the vicinity of Kothagiri and has very high species endemicity. The site is one of the key conservation areas of the endangered black-chinned Nilgiri laughing thrush, the Nilgiri blue robin and the vulnerable Nilgiri woodpigeon.

#### Q5. Ans: c

All statements are true. Article-37: The provisions contained in this Part shall not be enforceable by any court, but the principles therein laid down are nevertheless fundamental in the governance of the country and it shall be the duty of the State to apply these principles in making laws.

#### Q6. B

**Statement 1 is correct:** As an environmental treaty of the United Nations, CMS provides a global platform for the conservation and sustainable use of migratory animals and their habitats. CMS brings together the States through which migratory animals pass, the Range States, and lays the legal foundation for internationally coordinated conservation measures throughout a migratory range.

As the only global convention specializing in the conservation of migratory species, their habitats and migration routes, CMS complements and co-operates with a number of other international organizations, NGOs and partners in the media as well as in the corporate sector.

**Statement 2 is not correct:** The Conference of the Parties (COP) is the decision-making body of the Convention. It meets at **three-yearly intervals.** 

**Statement 3 is correct:** The Convention recognizes that states must be the protectors of migratory species that live within or pass through their national jurisdictions, and aims to conserve terrestrial, marine and avian migratory species throughout their ranges.

#### **Q7.** Ans: B

#### STATEMENT 1 AND 2 ARE CORRECT

The horse latitudes are located at about 30 degrees north and south of the equator. It is common in this region of the subtropics for winds to diverge and either flow toward the poles (known as the prevailing westerlies) or toward the equator (known as the trade winds). These diverging winds are the result of an area of high pressure, which is characterized by calm winds, sunny skies and little or no precipitation.

#### Q8.Ans: C

All the given situations are possible if currency depreciates. Currency depreciation will make our import costlier that why it may result in inflation. It will definitely make our export competitive. Since now our currency's value is lower compare to other currency (hard currency) it will make our debt costlier.

#### Q9. Ans: A

Conservation efforts are having a positive impact on Great Indian Bustard population in India -Initiated by the Ministry of Environment, Forest and Climate Change in 2015, it is a programme for Great Indian Bustard, Lesser Florican and Bengal Florican.

#### It recommends:

- -Linking local livelihoods with bustard conservation -state governments to identify the core breeding areas for bustards and keep them inviolate from human disturbances
- -Restriction on infrastructure development and land use diversion for roads, high tension electric poles, intensive agriculture, wind power generators and construction.
- -Project Great Indian Bustard: It is a Rajasthan government project launched in 2018. It envisages constituting enclosures and securing inviolate areas to ensure successful breeding of birds in the Desert National Park
- -Great Indian Bustard, Lesser Florican and Bengal Florican They are listed in Schedule I of the Indian Wildlife (Protection) Act, 1972.
- -IUCN status of Great Indian Bustard, Lesser Florican and Bengal Florican are Critically Endangered, Endangered, and Critically Endangered respectively.

#### Q10. Ans: C

Hydro chlorofluorocarbon (HCFC)-141 b, which is a chemical used by foam manufacturing enterprises and one of the most potent ozone depleting chemical after Chlorofluorocarbons (CFCs).

- (HCFC)-141 b is used mainly as a blowing agent in the production of rigid polyurethane (PU) foams.
- -India had proactively and successfully taken the challenge of complete phase out of Hydro chlorofluorocarbon (HCFC)-141 b, by 1.1.2020.
- -In 2019 December, Ministry of Environment, Forest and Climate Change (MoEFCC) brought out a notification in the Gazette of India through which the issuance of import license for HCFC
- -141b is prohibited from 1st January, 2020 under Ozone Depleting Substances (Regulation and Control) Amendment Rules, 2019 issued under the Environment (Protection) Act, 1986.
- -HCFC-141b is not produced in the country and all the domestic requirements are met through imports.
- -With this notification, prohibiting the import of HCFC-141 b, the country has completely phased out the important ozone-depleting chemical.
- -Nearly, 50 % of the consumption of ozone depleting chemicals in the country was attributable to HCFC-141 b in the foam sector.
- -The phase out of HCFC-141b from the country has twin environmental benefits viz. assisting the healing of the stratospheric ozone layer, and towards the climate change mitigation due to transitioning of foam manufacturing enterprises at this scale under HPMP to low global warming potential alternative technologies.

#### Q11. Ans: C

The sculptures of the Mathura school were influenced by all three religions Buddhism, Hinduism, and Jainism. Mathura, Sonkh and Kankalitila were the major centers. This school was patronized by Kushan rulers.

#### Q12. Ans: D

"Some of the features of administration contained in the Sixth Schedule are as follows:

- 1. The tribal areas in the four states of Assam, Meghalaya, Tripura and Mizoram have been constituted as autonomous districts. But, **they do not fall outside** the executive authority of the state concerned.
- 2. **The governor is empowered** to organise and re-organise the autonomous districts. Thus, he can increase or decrease their areas or change their names or define their boundaries and soon.
- 3. If there are different tribes in an autonomous district, the governor can divide the district into several autonomous regions.

#### Q13. Ans: C

Remote Sensing (RS) refers to the branch of science which derives information about objects from measurements made from a distance i.e. without actually coming into contact with them. Conventionally remote sensing deals with the use of light i.e. electromagnetic radiation as the medium of interaction. RS

refers to the identification of earth features by detecting the characteristics electromagnetic radiation that is reflected by the earth surface. Every object reflects a portion of electromagnetic radiation incident on it depending upon its physical properties. In addition, objects also emit electromagnetic radiation depending upon their temperature & emissivity. Reflectance pattern at different wave lengths for each object is different. Such a set of characteristics is known as spectral signature of the object. Visual perception of objects is the best example of remote sensing. Remote Sensing is used in many other fields such as agriculture, forestry, cartography, hydrology, geology and meteorology. For telecommunications, geostationary satellites are used. Hence, you can easily eliminate statements 4 and 5. Under remote sensing, Hyper-spectral imaging produces an image where each pixel has full spectral information with imaging narrow spectral bands over a contiguous spectral range. Hyperspectral imagers are used in various applications including mineralogy, biology, defence, and environmental measurements.

#### Q14. B

**Statement 1 is not correct:** The Amendment Act has made substantial changes to the Competition Act, 2002 (for short, the "Act"). The Amendment Act has amended section 5 of the Act to introduce a new deal value threshold. As per the amendment, transactions involving acquisition, merger, or amalgamation that meet or exceed **INR 2,000 Cr** and involve entities with substantial business operations in India will require approval from CCI. This has expanded the scope of CCI review.

**Statement 2 is correct:** The Amendment Act has **amended** Section 16 of the Act. Now **CCI**, **with prior approval of the Central Government**, is empowered to appoint the Director General for assisting in conducting an investigation/enquiry into contravention of the provisions of the Act. **Earlier**, these powers vested **with the Central Government**.

**Statement 3 is not correct:** The Amendment Act has amended Section 19 of the Act and introduced a **period of limitation of three years** for filing any information/ reference before CCI regarding any contravention under the Act. The CCI is also empowered to condone delay if sufficient cause is shown in filing such information or reference.

**Statement 4 is correct:** The Amendment Act has introduced a **settlement and commitment mechanism (under section 48A & 48B of the Act)** for an enterprise under an inquiry relating to abuse of dominance/anti-competitive agreements. The framework provides an opportunity to such enterprises to seek resolution through mutually agreed commitments/remedies. The procedure for settlements and commitments has to be outlined in **regulations made by CCI under Section 64 of the Act.** 

### Q15.Ans: A

Pair 1 is correctly matched: Article 39A of the Constitution of India provides for free legal aid to the poor and weaker sections of the society and ensures justice for all. Articles 14 and 22(1) of the Constitution also make it obligatory for the State to ensure equality before law and a legal system which promotes justice on the basis of equal opportunity to all.

In the year 1987, the Legal Services Authorities Act was enacted by the Parliament which came into force on 9th November, 1995 to establish a nationwide uniform network for providing free and competent legal services to the weaker sections of the society on the basis of equal opportunity.

Pair 2 is correctly matched: Article 40 Organisation of village panchayats - The State shall take steps to organize village panchayats and endow them with such powers and authority as may be necessary to enable them to function as units of self-government.

Pair 3 is not correctly matched: Article 41 Right to work, to education and to public assistance in certain cases - The State shall, within the limits of its economic capacity and development, make effective provision for securing the right to work, to education and to public assistance in cases of unemployment, old age, sickness and disablement, and in other cases of undeserved want

Pair 4 is not correctly matched: Article 47 Duty of the State to raise the level of nutrition and the standard of living and to improve public health - The State shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties and, in particular, the State shall endeavor to bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health.

#### Q16. Ans: B

GDP measures the **market value** of all final goods and services produced (by both citizens and foreigners) within a country in a given period of time. In other words, GDP is the production within the geographical confines of a nation by all residents in that country (whether citizens or non-citizens) and GNP is the production of the citizens of a country only, wherever they are living.

#### Q17. Ans: C

**Context:** Recently, **Energy Efficiency Services Limited (EESL)** distributed 1 crore efficient fans, 20 lakh cook stoves nationwide.

Statement 1 is correct: Energy Efficiency Services Limited (EESL), a joint venture of Public Sector Undertakings under the Ministry of Power, launched its groundbreaking National Efficient Cooking Programme (NECP) and Energy Efficient Fans Programme (EEFP).

Statement 2 is correct: The National Efficient Cooking Programme (NECP) introduces induction-based cook-stoves, offering a cost advantage of 25-30% over traditional cooking methods, promising both energy savings and cost-effective cooking solutions. By deploying 20 Lakh Induction cook-stoves across India, EESL seeks to reduce the environmental impact of cooking methods, ensuring cleaner air and improved health for citizens. EESL has also partnered with Modern Energy Cooking Services (MECS) for the large-scale deployment of induction cooktops. The deployment is expected to accelerate the acceptance and large-scale adoption of modern electric cooking devices in Indian kitchens.

#### Q18. Ans: C

Writ jurisdiction of High Court V/s Supreme court:

- **Concurrent:** When the fundamental right of a citizen is violated, the aggrieved party has the option of moving either the High court or Supreme Court directly
- Supreme Court can issue writs only for the enforcement of fundamental rights and not for enforcement of ordinary legal right but High court can issue writs to enforce both Fundamental rights and Ordinary legal rights. But Parliament can confer on the Supreme Court to issue writs for other purposes apart from fundamental rights also
- Writ jurisdiction of High court can be issued to any person, authority and government outside of its territorial jurisdiction also.

### Q19. Ans: D

Balance of Payments The balance of payments, (or BOP) measures the payments that flow between any individual country and all other countries. It is used to summarize all international economic transactions for that country during a specific time period, usually a year. The BOP is determined by the country's exports and imports of goods, services, and financial capital, as well as financial transfers. It reflects all payments and liabilities to foreigners (debits) and all payments and obligations received from foreigners (credits). The components of balance of payments are:

- 1. Current Account
- 2. Capital Account
- 3. Financial Account
- 4. Net Errors and Omissions
- 5. Official reserves.

#### 020. Ans: A

Allauddin **did not** established direct control over Deccan. His policy was only to reduce them to the vassalage, on the condition of getting kings acknowledge the sovereignty of Delhi and Paying annual tributes.

#### Q21. Answer- (c)

Gross national product (GNP) is an estimate of the total value of all final products and services produced in a given period using the means of production held by a country's citizens. **GNP is generally measured by adding up personal consumption expenditures, private domestic investment, government spending, net exports, and any income made by residents from abroad investments,** then subtracting income earned by foreign residents. Net exports are the difference between what a country exports minus its imports of products and services.

GNP is the total monetary worth of output produced by a country's population. As a result, any output produced by foreign residents within the country's borders must be omitted from GNP estimates, however any output produced by the country's resident outside of the country's borders must be included.

To avoid double counting, GNP excludes intermediate goods and services, which are already included in the value of final goods and services.

Gross national product includes both domestic and international production by its citizens. This amount then subtracts income received by foreign residents in the country. Gross domestic product, on the other hand, counts the total amount of goods and services produced within a country's boundaries by both citizens and foreign residents.

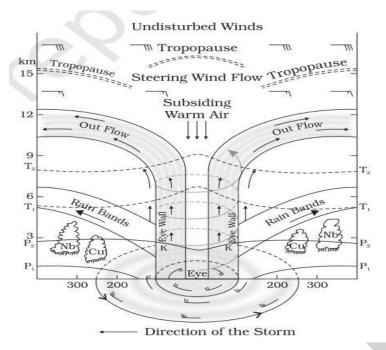
#### Q22. Answer-(a)

#### **Explanation:**

A tropical cyclone is a warm-core low pressure system, without any front attached, that develops over the tropical or subtropical waters and has an organized circulation. These include hurricanes and typhoons.

The conditions favourable for the formation and intensification of tropical storms are: (i) Large sea surface with temperature higher than 27° C;

- (ii) Presence of the Coriolis force;
- (iii) Small variations in the vertical wind speed- Hence statement 3 is correct;
- (iv) A pre-existing weak low-pressure area or low level cyclonic circulation;
- (v) Upper divergence above the sea level system. Hence Statements 1 is not correct.



Statement 2 is correct: The eye is a region of calm with subsiding warm air. As the air subsides, it compresses slightly and warms, so that temperatures at the center of a tropical cyclone are some  $5.5\,^{\circ}$ C ( $10\,^{\circ}$ F) higher than in other regions. Since warmer air is able to hold more moisture before condensation hence the eye of the cyclone is generally free from clouds.

#### Q23. Answer- a

Both statement I and statement II are correct and statement II is the correct explanation for statement I.

Laterite soils are highly acidic, rich in iron oxide and aluminium compounds, with high clay content and kaolinite forming dominant clay Mineral. **Hence Statement I is correct.** 

Laterite soils develop in areas with high temperature and high rainfall. These are the result of intense leaching. Due to tropical rains with rain, lime and silica are leashed away and soil rich in iron oxide and aluminium compound are left behind. These soils lose bases and silica due to pronounced leaching with accumulation of sesquioxides and the soils are rendered acidic. Hence Statement II is correct and is the correct explanation for Statement I.

#### Q24. Ans: D

• Road Electric Vehicles (EVs) include a large range of vehicles from electric two - wheelers, three - wheelers (rickshaws), cars and electric buses.

- In addition, plug in electric vehicles can be classified into two types: battery electric vehicles (BEVs), and plug in hybrid electric vehicles (PHEVs).
- BEVs have an electric motor in place of combustion engine and use electricity from the grid stored in batteries. Plug - in hybrid electric vehicles (PHEV) use batteries to power an electric motor and liquid fuel such as gasoline or diesel to power an internal combustion engine or other propulsion source.
- Battery in EV The choice of batteries depends on the energy density, weight and costs. Electric cycles
  and low range mopeds have simple battery units while electric cars deploy a large number of
  batteries.
- Traditionally, most electric vehicles have used lead acid batteries due to their mature technology, easy availability and low cost. However, since the 1990s battery technologies have evolved significantly and several new types of batteries have been developed.
- More recently, batteries using combinations of lithium ion and its variations are gaining widespread acceptance due to better efficiency, reduced weight, lower charging time, better power output, longer lifetime, and reduced environmental implications from battery disposal.
- The following four types of batteries are commonly used today in EVs: **Lead Acid, Nickel Cadmium** (NiCd), Nickel Metal Hydride (NiMH), Lithium ion (Li- ion) Lithium ion batteries have higher specific energy relative to the other battery types.
- In the future, technology innovations with Li ion and other battery technologies are expected to result in batteries with much higher specific energy and lower costs.

Q25. Ans: D

Statement 1 is not correct: Shyamji Krishnavarma (1857–1930), a nationalist journalist and lawyer, founded India House and The Indian Sociologist in London as well as the Indian Home Rule Society. Thus, he established the necessary backing for the Indian independence movement in England. Krishnavarma decided to work for India's liberation from British oppression and chose London as the center of his activities. He published a monthly journal called *The Indian Sociologist* to espouse the Indian cause.

**Statement 2 is not correct: Mitra Mela** was set up by **V. D. Savarkar** which in **1904** had been merged into the secret society called **Abhinav Bharata** after Mazzini's young Italy.

Statement 3 is not correct: Pramathanath Mitra launched an organization in 1901, called Anushilan Samiti, a name taken from Bankim's writings. It was joined by Aurobindo Ghosh, C.R. Das, Barindra Ghosh and Jatin Bannerjee.

Q26. Ans.: A

**Statement 1 is incorrect:** Cyber Safe Women is an initiative of Maharashtra Government.

Statement 3 is incorrect: Cyber Dost twitter handle was launched by Ministry of Home Affairs.

Cyber Safe Women Initiative Maharashtra Government has launched a 'Cyber Safe Women' initiative to educate women about how the web is used by anti-social elements and child predators to commit various types of crimes. It aims to create awareness on the cyberspace in light of the increasing number of cases where women and children are targeted. This initiative was launched in 34 districts and 90 places across the state, all at once. It will help in educating women about how the web is used by anti-social elements and child predators to commit various types of crimes. Cyber Crime Prevention against Women and Children Scheme (CCPWC) The main objective of Cyber Crime Prevention against Women and Children (CCPWC) Scheme is to have an effective mechanism to handle cybercrimes against women and children in the country. The scheme was launched by Ministry of Home Affairs in 2019.

The main features of the scheme are: Online cybercrime reporting platform One national level cyber forensic laboratory Training of Police officers, judges & prosecutors Cybercrime awareness activities Research & Development Other Initiatives Dealing with Cyber Crimes Central Cybercrime Reporting Portal (www.cybercrime.gov.in) launched on 20th September 2018 to report complaints pertaining to Child Pornography (CP)/Child Sexual Abuse Material (CSAM) or sexually explicit content. Union Ministry of Home Affairs (MHA) has launched Twitter account named @Cyber Dost. It aims to spread awareness about cybercrimes and normal precautions to be taken for prevention.

#### Q27. Ans. B

**Statement 1:** Potuguese had helped to transmit a no. of agricultural products from Central America, such as potato, tobacco, etc. But these became widespread only after the rise to power of the Mughals.

**Statement 2:** The Portuguese **could not** act as bridge for transmitting to India the science and technology which had grown in Europe since the Renaissance. This was partly because the Portuguese were themselves not as deeply affected by the renaissance as Italy and North Europe. Later, with the growth of a Catholic religious' reaction led by the Jesuits, they even set their face against it.

**Statement 3:** The Portuguese did, however open up India's trade with Japan from which copper and silver were obtained. They also demonstrated how naval power could be used to harass and hamper trade even of such a well-developed country as India.

#### Q28. Ans. (b)

**Context:** The UN International Organization of Migration (IOM) reported that the number of people who have been internally displaced in the Democratic Republic of Congo (DRC) has risen to 6.9 million as a result of the ongoing conflict involving the M23 rebel group.

The Mouvement Du 23 Mars (M23) is an armed faction currently active within the Democratic Republic of the Congo (DRC). Other notable rebel factions in the DRC include the Allied Democratic Forces (ADF) and the Cooperative for Development of the Congo (CODECO). As per recent findings from the UN International Organization of Migration (IOM), the number of internally displaced persons in the Democratic Republic

of Congo (DRC) has reached 6.9 million. In North Kivu, a province in the eastern region, nearly one million individuals have been displaced as a result of the ongoing conflict involving the M23 rebel group.

#### Q29. B

**Statement 1 is correct:** The 50th GST Council Meeting held in 2023 decided to impose a goods and services tax of 28% on casinos, horse racing, and online gaming, thus, ending the debate on 'game of skills'. Therefore, both the game of chance and the game of skills came under the ambit of goods and services tax (GST).

**Statement 2 is correct:** The Central Board of Direct Taxes (CBDT) has issued guidelines for **online gaming companies to deduct tax from winnings,** following the removal of the threshold in the Budget 2023. The rule would be applicable from FY 2023-24.

Statement 3 is not correct: Indian law generally allows games of skill to be played, while games of chance are generally considered illegal. The legal distinction between games of skill and games of chance is based on the degree of skill and chance in determining the outcome, with a game of skill being legal and a game of chance being illegal.

#### Q30. Answer-(b)

Statement 1 is not correct: Buddhism laid great emphasis on the law of 'karma'. According to this law, the present is determined by the past actions. The condition of a man in this life and the next depends upon his own actions. Every individual is the maker of his own destiny. We are born again and again to reap the fruits of our 'karma'. If an individual has no sins, he is not born again. Thus the doctrine of karma is the essential part of the teachings of Buddha.

Statement 2 is correct: Buddha preached 'nirvana', the ultimate goal in the life of a man. It means the shedding of all desires, and ending of sufferings, which finally leads to freedom from rebirth. By a process of elimination of desire, one can attain 'nirvana'.

Statement 3 is not correct: Buddha rejected the authority of the Vedas and condemned animal sacrifices. He protested against the complicated and meaningless rituals. He said that neither a sacrifice to gods can wash away sin, nor any prayer ol any priest do any good to a sinner.

#### Q31. B

Gross Domestic Product is the reducing subsidies from the sum of the Gross Value Added and product taxes (*not* production taxes). GDP is GVA plus product taxes minus subsidies.

Therefore, if there is a gap between the gross domestic product and gross value addition, two major attributes that are driving the difference in these two parameters are the subsidies and product taxes. Hence, if there is a reduction in subsidies and an increase in product taxes, there is a widening of gross domestic product and gross value added.

#### Q32. Ans: B 1 AND 2 ARE CORRECT

1858 Act also called act of good government of India provided for liquidation of East India Company and transferred the powers of Government, territories and revenues to British crown. It provided office of secretary of state for Indian in London. **The Court of Directors and the Board of Control were scrapped and their powers were transferred to the Secretary of State.** The Governor General of India was given the title of Viceroy.

#### Q33. A (ONLY 2 IS CORRECT)

MSP is declared by the **Government every year** before the sowing season to provide incentives to the farmers for raising the production of crops. It will reduce farmer's debt and suicide.

#### Q34. Answer-(b)

Statement 1 is correct: The Montreal Protocol on Substances that Deplete the Ozone Layer is the landmark multilateral environmental agreement that regulates the production and consumption of nearly 100 manmade chemicals referred to as ozone depleting substances (ODS). When released into the atmosphere, those chemicals damage the stratospheric ozone layer, Earth's protective shield that protects humans and the environment from harmful levels of ultraviolet radiation from the sun. Adopted on 16 September 1987.

Statement 2 is not correct: Developing and developed countries have equal but differentiated responsibilities, but most importantly, both groups of countries have binding, time-targeted, and measurable commitments.

Statement 3 is correct: The Protocol is to date one of the rare treaties to achieve universal ratification. The Montreal Protocol phases down the consumption and production of the different ODS in a stepwise manner, with different timetables for developed and developing countries (referred to as "Article 5 countries"). Under this treaty, all parties have specific responsibilities related to the phase out of the different groups of ODS, control of ODS trade, annual reporting of data, national licensing systems to control ODS imports and exports, and other matters. Developing and developed countries have equal but differentiated responsibilities.

#### Q35. Ans: C

There are 6 aboriginal tribes in Andaman & Nicobar Islands. On the basis of features, they can be divided into **Negrito and Mongoloid**. Great Andamanese, **Onge, Jarawa** and Sentinelese are negrito while 13

Nicobarese and **Shompen** are mongoloid. Shompens and Nicobarese seem to be descendents of primitive Malayans. These tribes still keep a separate entity and don't cover their bodies. The tribal groups in the two respective regions have very little in common in the ethnic, linguistic or cultural sense.

#### Q36. Ans: B

Congress-Khilafat Swaraj Party was formed in 1922-23 with C.R. Das as the president and M.L. Nehru as one of the secretaries.

#### Q37. Ans: D

Rainbow revolution encompasses an all-round growth in the production of food grains, edible oils, fruits, vegetables and animal and fish products and evergreen revolution in agriculture through diversified agriculture, precision farming, resource conservation and value addition to provide in real sense, the required food, nutrition and environmental security are the hopes of the future.

#### Q38. Ans: D

Photochemical smog is the chemical reaction of sunlight, nitrogen oxides and volatile organic compounds in the atmosphere, which leaves airborne particles and ground-level ozone. This noxious mixture of air pollutants may include the following:

- Aldehydes
- Nitrogen oxides, particularly nitric oxide and nitrogen dioxide
- Peroxyacyl nitrates
- Tropospheric ozone
- Volatile organic compounds, Photochemical smog is a secondary pollutant and hence are not emitted directly.

#### Q39. Answer: c

Points 1, 3 and 4 are correct: The general electronic configuration of s-block elements in the periodic table is [noble gas]ns1 for alkali metals and [noble gas] ns 2 for alkaline earth metals. All the alkali metals have one valence electron, ns1 outside the noble gas core. The loosely held s-electron in the outermost valence shell of these elements makes them the most electropositive metals. They readily lose electrons to give monovalent M+ ions. Hence they are never found in a free state in nature. The alkali metals show regular trends in their physical and chemical properties with the increasing atomic number. Sodium, Potassium, Lithium, Rubidium, Caesium, and Francium are the alkali metals.

Point 2 is not correct: Group 2A (or IIA) of the periodic table are the alkaline earth metals: beryllium (Be), magnesium (Mg), calcium (Ca), strontium (Sr), barium (Ba), and radium (Ra). They are harder and less reactive than the alkali metals of Group 1A. The name comes from the fact that the oxides of these metals

produced basic solutions when dissolved in water, and they remained solids at the temperatures available to the ancient alchemists.

#### Q40. A

The United Nations Convention against Transnational Organized Crime and the Protocols Thereto is the main international legal instrument in the fight against transnational organized crime, including human trafficking. **The Convention was signed by Member States including the United Kingdom in December 2000 in Palermo**, Italy, and came into force on the 29th September 2003. The United Kingdom ratified the Convention on the 9th February 2006.

The Convention's **Protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children** (the Palermo Protocol) came into force on the 25th December 2003 and contains the internationally accepted definition of human trafficking which has been adopted by the majority of countries around the world. The protocol provides a shared legal basis for laws investigating and prosecuting trafficking offences in different countries.

#### Q41. Ans: c

Gastrin is a peptide hormone that stimulates secretion of gastric acid (HCl) by the parietal cells of the stomach and aids in gastric motility.

#### Q42. Answer: d

#### **Explanation:**

**Intellectual property (IP)** refers to creations of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce. Some of the types of intellectual property are as follows:

Statement 1 is not correct: Copyright is a legal term used to describe the rights that creators have over their literary and artistic works. Works covered by copyright range from books, music, paintings, sculpture and films, to computer programs, databases, advertisements, maps and technical drawings.

**Patent** is an exclusive **right granted for an invention.** Generally speaking, a patent provides the patent owner with the right to decide how - or whether - the invention can be used by others.

Statement 2 is not correct: Trademark is a sign capable of distinguishing the goods or services of one enterprise from those of other enterprises. Trademarks date back to ancient times when artisans used to put their signature or "mark" on their products.

**Geographical indication** is a sign used on **goods that have a specific geographical origin** and possess qualities, a reputation or characteristics that are essentially attributable to that place of origin. Most commonly, a geographical indication includes the name of the place of origin of the goods.

#### **Q43.** B

Statement 1 is correct: Startup India Seed Fund Scheme (SISFS) aims to provide financial assistance to startups for proof of concept, prototype development, product trials, market entry and commercialization. This would enable these startups to graduate to a level where they will be able to raise investments from angel investors or venture capitalists or seek loans from commercial banks or financial institutions.

**Statement 2 is not correct**: As an eligibility criteria, a startup, recognized by **Department of Promotion of Industry and Internal Trade** (DPIIT), **incorporated not more than 2 years ago** at the **time of application**.

Statement 3 is correct: Preference would be given to startups creating innovative solutions in sectors such as social impact, waste management, water management, financial inclusion, education, agriculture, food processing, biotechnology, healthcare, energy, mobility, defence, space, railways, oil and gas, textiles, etc.

**Statement 4 is not correct**: The nodal department for the scheme is the **Department of Promotion of Industry and Internal Trade** (DPIIT), working under the **Ministry of Commerce and Industry**.

#### 44.B

**Statement 1 is correct: As per Article 83(2),** normal term is five years from the date of its first meeting after the general elections, after which it automatically dissolves. However, the President is authorized to dissolve the Lok Sabha at any time even before the completion of five years and this cannot be challenged in a court of law.

**Statement 2 is not correct:** Terms of the Lok Sabha can be extended during the period of national emergency be a law of Parliament for one year at a time for any length of time. However, this extension cannot continue beyond a period of six months after the emergency has ceased to operate.

**Statement 3 is correct:** The Speaker holds office from the date of his election till immediately before the first meeting of the Lok Sabha after the dissolution of the one to which he was elected. He is eligible for reelection. **On the dissolution of the Lok Sabha, although the Speaker ceases to be a member of the House, he does not vacate his office.** 

Q45. Answer- (b)

**Pair 1 is not matched correctly: Central Ground Water Authority** has been constituted under the Environment (Protection) Act, 1986 to regulate and control development and management of groundwater resources in the country.

**Pair 2 is matched correctly:** To achieve the target of one of the goals of National Water Mission, i.e., improvement in Water Use Efficiency by 20%, a dedicated organization has been set up as **Bureau of Water use Efficiency (BWUE) under National Water Mission**. BWUE will act as a facilitator for promotion of improving water use efficiency across various sectors namely irrigation, drinking water supply, power generation, industries, etc. in the country, for promotion, regulation and control of efficient use of water in irrigation, industrial and domestic sectors.

Pair 3 is matched correctly: Central Water Commission is a Technical Organisation in India under the Ministry of Jal Shakti. It is charged with the general responsibilities of initiating, coordinating and furthering, in consultation with the State Governments concerned, schemes for control, conservation and utilization of water resources throughout the country, for the purpose of Flood Control, Irrigation, Navigation, Drinking Water Supply and Water Power Development.

#### Q46. Ans: A ONLY STATEMENT 2 IS CORRECT

NABARD was established in 1982 with it's headquarter in **Mumbai**. It is the apex body for coordination of all institution involved in rural financing process. NABARD is not the only agency responsible for rural financing.

#### Q47. Ans: C

More autonomy to PSUs in taking managerial decision will reduce red-tapism, thereby increasing efficiency. Shedding of ownership by the government may or may not in increase efficiency of any PSUs. Selling off part of equity of PSUs by the government will improve financial discipline and facilitate efficiency.

#### Q48. Ans: C

Warren Hastings made first attempt to reorganize the judicial system. He created Sadar Diwani Adalat (Civil Court) and Sadar Nizamat Adalat (Criminal Court) at Calcutta, as the Highest Court of Appeal. He attempted at codifying both Hindu and Muslim laws. The Indian High Court Act was passed in 1861. High Courts were established at Calcutta, Bombay and Madras by 1865. The first Indian Chief Justice was Ramesh Chandra Mitra. The GOI Act 1935 established the Federal Court at Calcutta in 1937.

#### Q49.Ans: B ONLY ST 1 AND 3 ARE CORRECT

Moderates were of the view that were of the view that anarchy and lawlessness would return if British were forced to leave India.

#### Q50. Ans: b (ONLY ST 1 AND 2 ARE CORRECT)

RBI formulates and administers monetary policy. Borrowing programme of government of India is carried by Department of Economic Affairs, Ministry of Finance. Reserve Bank of India (RBI) is India's central bank. Central bank of a country execute multiple functions such as overseeing monetary policy, issuing currency, managing foreign exchange, working as a bank of government and as banker of scheduled commercial banks, etc. It also works for overall economic growth of the country. The Reserve Bank of India was established in 1935 with the provision of Reserve Bank of India Act, 1934. Though privately owned initially, in 1949 it was nationalized and since then fully owned by Government of India (GoI). The preamble of the Reserve Bank of India describes it main functions as: "to regulate the issue of Bank Notes and keeping of reserves with a view to securing monetary stability in India and generally to operate the currency and credit system of the country to its advantage."

#### Q51. Answer-d

#### **Explanation**

The Warm Temperate Western Margin Climate is found in relatjively few areas in the world. They are entirely confined to the western portion of continental masses, between 30° and 45° north and south of the equator Though the area around the Mediterranean Sea has the greatest extent of this type of 'winter rain climate', and gives rise to the more popular name Mediterranean Climate, the best developed form of this peculiar climatic type is, in fact, found in central Chile. Other Mediterranean regions include California (around San Francisco), the south-western tip of Africa (around Cape Town) and southern Australia.

Statement 1 is not correct: In summer when the sun is overhead at the Tropic of Cancer, the belt of influence of the Westerlies is shifted a little polewards. Rain bearing winds are therefore not likely to reach the Mediterranean lands. The prevailing Trade Winds are off-shore and there is practically no rain. The air is dry, the heat is intense and the relative humidity is low. The Mediterranean lands receive most of their precipitation in winter when the Westerlies shift equatorwards. In the northern hemisphere, the prevailing on-shore Westerlies bring much cyclonic rain from the Atlantic to the countries bordering the Mediterranean Sea.

**Statement 2 is not correct**: **Mediterranean region is laden with local winds**. The topography of the region with the high Alps in the north, the Sahara desert in the south, continental interiors in the east and the open Atlantic on the west give rise to **great differences in temperature**, **pressure and precipitation**. The passing cyclones from the Atlantic, the anticyclones from the north, and the cold air masses from the continental interiors are often interrupted or channelled by relief features, resulting in the birth of local winds around the Mediterranean. **Examples include Sirocco**, **Mistral**, **Bora etc.** 

**Statement 3 is not correct:** Growth of natural vegetation in this climate zone is slow in the cooler and wetter season, even though more rain comes in winter. Growth is thus almost restricted to autumn and spring when the temperature is higher and moisture is just sufficient. The long summer drought checks the growth. Plants whether trees or shrubs, evergreen or deciduous, have to devise ways of adapting themselves to a climatic environment with such a marked rhythmic recurrence of rain and drought. **Hence the region is favourable for Xerophytic plants - drought resistant plants in an environment deficient in moisture**.

Q52. Ans: B

#### Q53. Ans: B ST 1 AND 2 ARE CORRECT

Kharai camels found in the Kutch region are very unique. They can swim through deep sea waters and it feeds on mangroves and other saline plants. The breeders have meticulously followed the traditional grazing pattern in the coastal districts. They do not provide special housing or shelter to the camels. Given the breed's ability to survive both on land and sea, the Kharai camel is one of the most preferred choices of graziers in the arid coastal region of Kachchh. People consume its milk, while male calves are sold for economic returns (females are not sold because they are considered sacred). A male calf fetches anywhere between Rs.6,000 and Rs.14,000, says Ramesh Bhatti of Sahjeevan, an NGO working on livelihood issues of graziers in Kachchh. It can be domesticated also – so its not wild.

#### Q54. Answer-(c)

Context: Ayodhya Ram Mandir in Uttar Pradesh has been inaugurated recently. It is built in the "nagara" style of temple architecture.

In north and eastern India magnificent temples were constructed and the style followed by them is referred to as the Nagara style. Most of them consisted of the shikaras (spiral roofs), the garbhagriha (sanctum) and the mandap (pillared hall).

Statement 1 is correct: In the late Gupta era, around the 5th century CE, a new form of temple design called Nagara appeared in northern India. It contrasted with the Dravida style that also developed at the same time in southern India.

Statement 2 is correct: The Nagara style temples have a high platform where the garbha griha (the holy chamber) is located. Inside the garbha griha, there is an image of the god. The shikhara (meaning 'mountain top') is a tall structure that rises above the garbha griha and makes the Nagara temples easy to recognize.

**Statement 3 is correct:** The entrance to the temple which may be a portico or **colonnaded hall that incorporates space for a large number of worshippers** and is known **as a mandapa.** 

#### Q55. Answer- (c)

**Context:** Recently, **The Incremental Cash Reserve Ratio (I-CRR)** would no longer be implemented, as decided by the Reserve Bank of India (RBI).

**Statement 1 is correct:** Under Section 42(1A) of the Reserve Bank of India Act, 1934 requiring all Scheduled Commercial Banks / Regional Rural Banks / all Scheduled Primary (Urban) Co-operative Banks / all Scheduled State Co-operative Banks to maintain with the Reserve Bank of India

**Statement 2 is correct:** Similar to the CRR, the I-CRR require banks to deposit a specific amount of their funds with the RBI. On this, they don't receive any interest. In addition to the CRR, RBI may also impose an I-CRR.

Statement 3 is correct: It can be used by RBI for managing liquidity and inflation control.

#### Q56. Answer-(a)

**Statement 1 is not correct:** The State of the Rhino, 2023 report, released by the **International Rhino Foundation (IRF)**, details the population estimates and trends for the five rhino species that are still alive in Africa and Asia.

The 22nd of September is designated as World Rhino Day each year to raise awareness of the five rhino species and the efforts being made to protect them.

In 2010, the World Wildlife Fund (WWF) - South Africa made the initial announcement.

Statement 2 is not correct: As given in infographic.













CRITICALLY

ENDANGERED

rhinos.org

KEY TAKEAWAYS | STATE OF THE RHINO 2023

Statement 3 is correct: BLACK RHINO IUCN Estimated Population: 6,195 IUCN Trend: Increasing Black rhinos (Diceros bicornis) can currently be found in 12 countries in Africa, totalling an estimated 6,195 individuals. At one time, black rhinos were the most common of the world's rhino species and records indicate there could have been as many as 100,000 throughout Africa in 1960. By 1970, poaching had reduced the population to approximately 65,000 and black rhinos continued to decline precipitously until a low of about 2,300 individuals in the mid 1990s. Thanks to intense protection and management efforts, black rhino populations stabilized and despite ongoing poaching pressure, have increased by approximately 28% over the last decade.

#### Q57. Ans: A

WPI has some inbuilt disadvantages like exclusion of service sector. So it is not a good indicator of inflation. Increasing taxes comes under fiscal policy and it is outside the domain of RBI. OMO and increase in CRR as well as Repo rate will suck liquidity of the economy, thus soothing inflation.

#### Q58. Answer-(c)

**Statement 1 is correct:** India has 15,106.7 Km of land border and a coastline of 7,516.6 Km including island territories. **The length of our land borders with neighbouring countries is as under: Bangladesh 4,096.7; China 3,488; Pakistan 3,323; Nepal 1,751; Myanmar 1,643; Bhutan 699; Afghanistan 106;** Total 15,106.7.

**Statement 2 is correct:** Both Prime Ministers jointly inaugurated three Indian assisted development cooperation projects in Bangladesh on 1 November 2023 virtually. **The projects are Akhaura-Agartala cross border rail link, Khulna-Mongla Port rail line and Unit II of Maitree Super Thermal Power Plant.** 

**Statement 3 is correct:** Bangladesh is India's biggest trade partner in South Asia and India is the second biggest trade partner of Bangladesh in Asia. **India is Bangladesh's largest export destination in Asia, with approx USD 2 billion of Bangladeshi exports to India in FY 2022-23. In FY 2022-23, the total bilateral trade has been reported as USD 15.9 billion.** 

Q59. Answer: (a)

**Statement 1 is not correct:** The extent of success of the non-cooperation movement would not definitely give Gandhi total satisfaction. **Middle-class participation was not spectacular,** as revealed in the figures for school, colleges and court boycotts, while peasant and working class participation was more impressive.

Statement 2 is not correct: Except in Madras, council election boycotts were more or less successful, with the polling average being 5-8 per cent.

**Statement 3 is correct: Economic boycott was more intense and successful,** as the value of imports of foreign cloth dropped from Rs. 1,020 million in 1920-21 to Rs. 570 million in 1921-22. The import of British cotton piece goods also declined from 1,292 million to 955 million yards during the same period.

Q60. Answer: (b)

Statement 2 is not correct: In upland coastal regions where the mountains run at right angles to the sea, that is transverse or discordant to the coast, a rise in the sea level submerges or drowns the lower parts of the valleys to form long, narrow branching inlets separated by narrow headlands leading to formation of Ria coasts. Fjords are also associated with transverse or discordant mountains. These are submerged U-shaped glacial troughs. They mark the paths of glaciers that plunged down from the highlands.

**Statement 1 is correct: Ria coasts** differ from fjords in two important respects, i.e. they are not glaciated, and their **depth increases seawards**. Due to the greater intensity of ice erosion **fjords are deep for great distances inland** but there is a **shallow section at the seaward end**.

**Statement 3 is correct:** Off the **fjord coast are numerous islands or skerries** which, with the shallow thresholds, sometimes only 200 feet deep, **complicate coastal navigation**. Despite their deep and sheltered water, **few large** 

**ports are located in fjords.** In submerged lowlands, the mouths of rivers are drowned so that funnel-shaped **estuaries** are formed. If their entrances are not silted by moving sand-banks, **they make excellent sites for** 

**ports**, e.g. the estuaries of the Thames, Elbe and Plate are the sites of such great seaports as London, Hamburg and Buenos Aires.

#### Q61. Ans: B

Rajasthan has 87% of country's silver reserve, followed by Jharkhand (5%), Andhra Pradesh (4%), and Karnataka (2%) Andhra Pradesh has gold deposit in Ramgiri Gold Field. India is the largest producer of mica in the world. Jharkhand produces about 50% of the country's mica.

#### Q62. Ans: C

H-CNG Union Minister of Petroleum & Natural Gas inaugurated Indian Oil's compact reformer plant and launched the trial run of Delhi's buses on Hydrogen-blended CNG (HCNG). In Delhi, instead of physically blending hydrogen with CNG, hydrogen spiked CNG will be produced using compact reforming process patented by Indian Oil Corporation.

Benefits of this method are: H-CNG blends can be produced directly from CNG, bypassing the energy-intensive electrolysis process and high- pressure blending costs. The flexible and robust process allows the production of H-CNG on-site, in less severe conditions, and under low pressure. It provides a higher yield H-CNG mixture by up to 4% to 5% compared to CNG's input quantity. The cost of H-CNG production by the above process is about 22% cheaper than conventional physical blending. H-CNG is a blend of hydrogen and CNG, the ideal hydrogen concentration being 18%. Compared to conventional CNG, use of H-CNG can reduce emission of carbon monoxide up to 70%, besides enabling up to 5% savings in fuel, tests by the Automotive Research Association of India and Indian Oil Corporation Ltd (IOCL) have found. The most promising aspect of this technology is that it will allow for the utilisation of the existing infrastructure of CNG — buses as well as the piping network and dispensing station. The engines of CNG-fuelled buses "will be able to process hythane or H-CNG considering the ratio at which hydrogen is being mixed.

#### Q63. A

#### **Explanation:**

**Statement 1 is not correct:** In parliamentary parlance, a whip may refer to both a written order to members of a party in the House to abide by a certain direction, and to a designated official of the party who is authorized to issue such a direction. The term is derived from the old British practice of "whipping in" lawmakers to follow the party line. It is not mentioned under Indian statutes.

**Statement 2 is correct:** As per the Rajya Sabha secretariat **quorum is essential only when the committees are taking decisions** or adopting reports and not during routine deliberations.

**Statement 3 is not correct**: A member has to give a minimum **of 15 clear days' notice of a question.** According to rules of the house, and not per constitution, any of the House Secretariat must give at least 15 days' notice to the Minister concerned to answer any type of question.

#### Q64. A

**Statement 1 is correct:** Representation of the People Act, 1951 provides for:

- the conduct of the election of the Houses of Parliament and to the House or Houses of the Legislature of each State
- the qualifications and disqualifications for membership of those Houses
- the corrupt practices and other offenses at or in connection with such elections and the decision of doubts and disputes arising out of or in connection with such elections

**Statement 2 is not correct:** Qualifications of voters in India is prescribed under **Article 326 of the Indian Constitution.** 

The elections to the House of the People and to the Legislative Assembly of every State shall be on the basis of adult suffrage; that is to say, every person who is a citizen of India and who is not less than eighteen years of age on such date as may be fixed in that behalf by or under any law made by the appropriate Legislature and is not otherwise disqualified under this Constitution or any law made by the appropriate Legislature on the ground of non-residence, unsoundness of mind, crime or corrupt or illegal practice, shall be entitled to be registered as a voter at any such election.

**Statement 3 is not correct:** The delimitation of Parliamentary and Assembly constituencies is done according to the procedure laid down in the Delimitation Act, 2002.

### Q65. Answer: (d)

The Union Cabinet, approved the National Quantum Mission (NQM) on 19<sup>th</sup> April 2023 at a total cost of Rs.6003.65 crore from 2023-24 to 2030-31, aiming to seed, nurture and scale up scientific and industrial R&D and create a vibrant & innovative ecosystem in Quantum Technology (QT).

The Mission objectives include **developing intermediate-scale quantum computers** with 50-1000 physical qubits in 8 years in various platforms like superconducting and photonic technology. **Satellite-based secure quantum communications** between ground stations over a range of 2000 kilometres within India, **long-distance secure quantum communications with other countries, inter-city quantum key distribution** over 2000 km as well as multi-node Quantum networks with quantum memories are also some of the deliverables of the Mission.

This Mission will also focus on developing magnetometers with high sensitivity in atomic systems and **Atomic Clocks for precision timing**, communications, and navigation.

Q66. Answer: (d)

Statement 1 is not correct: Under the Foreign Direct Investments (FDI) Scheme, investments can be made in shares, mandatorily and fully convertible debentures and mandatorily and fully convertible preference shares of an Indian company by non-residents through two routes:

- Automatic Route: Under the Automatic Route, the foreign investor or the Indian company does not require any approval from the Reserve Bank or Government of India for the investment.
- Government Route: Under the Government Route, the foreign investor or the Indian company should obtain prior approval of the Government of India (Foreign Investment Promotion Board (FIPB), Department of Economic Affairs (DEA), Ministry of Finance or Department of Industrial Policy & Promotion, as the case may be) for the investment.

Statement 2 is not correct: Overseas Corporate Body (OCB) means a company, partnership firm, society and other corporate body owned directly or indirectly to the extent of at least sixty per cent by Non-Resident Indians and includes overseas trust in which not less than sixty percent beneficial interest is held by Non-resident Indians directly or indirectly but irrevocably, which was in existence as on September 16, 2003 and was eligible to undertake transactions pursuant to the general permission granted under Foreign Exchange Management Regulations. Overseas Corporate Bodies (OCBs) have been **de-recognised as a class of investor in India** with effect from September 16, 2003.

### Q67. Answer-(c)

**Pair 1 is not correctly matched: Dodo,** This species was found in Mauritius, but is **now Extinct** as a result of hunting by settlers and nest predation by introduced pigs. Birds thought to represent the last individuals were killed on the offshore islet Ile d'Ambre in 1662.

Family: Columbidae (Pigeons, Doves)
Authority: (Linnaeus, 1758)
Red List Category



Click here for more information about the Red List categories and criteria

#### Justification of Red List category

This species was found in Mauritius, but is now Extinct as a result of hunting by settlers and nest predation by introduced pigs. Birds thought to represent the last individuals were killed on the offshore islet Ile d'Ambre in 1662.

Population size: unknown

Population trend:

Country endemic: no

#### Attributes

Land-mass type - oceanic island Realm - Afrotropical IUCN Ecosystem -- Terrestrial biome



Pair 2 is correctly matched: Nilgiri Tahr is an endemic species of the Western Ghats is listed as Endangered in the IUCN Red List of Threatened Species and is protected under Schedule I of the Wildlife (Protection) Act of India, 1972. The Nilgiri tahr is the only mountain ungulate in southern India amongst the 12 species present in India. It is also the state animal of Tamil Nadu.

Pair 3 is correctly matched: At the backdrop of a sleepy village lay sprawled across the marshy floating meadows, small hillocks and water of Keibul Lamjao National Park (KLNP), Manipur – the last natural home of Manipur's Brow-antlered deer or Sangai. The Sangai is one of the most threatened cervids of India found in one, single, isolated population. It is listed as 'Endangered' in IUCN Red List and Schedule I of the Indian Wild Life (Protection) Act, 1972. Sangai is one of the three sub-species of Eld's deer found in South and South East Asia. It has adapted itself to a unique habitat of the floating meadows or *phumdi* at KLNP, a mark difference from the other two. Once distributed throughout the Manipur State.

**Pair 4 is correctly matched: Western Tragopan:** This species is classified as **Vulnerable** because its small and sparsely distributed population is declining and becoming increasingly fragmented in the face of continuing forest loss and degradation throughout its restricted range. Larger recent population estimates and its discovery at several new locations suggest the global population size may prove to be larger than previously thought.

#### Q68. Ans: C

**Statement 1 is correct:** Cyclical unemployment exists when individuals lose their jobs as a result of a downturn in aggregate demand (AD). If the decline in aggregate demand is persistent, and the unemployment long-term, it is called either demand deficient, general, or Keynesian unemployment.

**Statement 2 is correct:** Frictional unemployment, also called search unemployment, occurs when workers lose their current job and are in the process of finding another one. There may be little that can be done to reduce this type of unemployment, other than provide better information to reduce the search time. Thus, it can even happen in the case of full employment.

Q69. B

Statement 1 is not correct: The Offset Policy was formally announced for the first time in 2005 and has been revised several times.

Statement 2 is correct: To leverage its huge arm-imports in order to develop a strong indigenous industry, a flow-back arrangement is made in the defence contracts, which is widely known as offsets, and constitutes a certain percentage of the contract value. The key objectives of the Defence Offset Policy is to leverage the capital acquisitions to develop the Indian defence industry by fostering development of internationally competitive enterprises; augmenting capacity for research and development in defence sector and to encourage development of synergistic sectors like civil aerospace and internal security.

Statement 3 is not correct: As per Defence Offset Guidelines, the foreign Original Equipment Manufacturer (OEM) is free to select any Indian company as its offset partner.

**Statement 4 is correct**: The **offset** can be discharged by many means such as **direct purchase of eligible products/services**, **FDI in joint ventures** and **investment towards equipment** and **transfer of technology**.

Q70. Answer: d

**Statement 1 is not correct:** Gaganyaan is the first human spaceflight mission of the Indian Space Research Organisation (ISRO) to be launched in 2025. Gaganyaan project **envisages demonstration of human spaceflight capability by launching a group of crew members to low earth orbit (400 km) for a 3 days <b>mission** and bringing them back safely to earth, by landing in Indian sea waters.

**Statement 2 is not correct:** The four astronauts selected for this mission underwent training at the Institute of Aerospace Medicine (IAM) in Bengaluru, India; the Gagarin Cosmonaut Training Centre (GCTC) in Russia; and the Astronaut Training Facility, Bengaluru, India. These astronauts are **not trained by the Astronaut Training Facility at NASA Johnson Space Center.** 

Q71. C

**Statement 1 is correct: Pradhan Mantri Kisan Samruddhi Kendras** were established to act as **one-stop shops for the procurement and knowledge of fertilizers** and to give **agri-inputs**.

Statement 2 is correct: Pradhan Mantri Kisan Samruddhi Kendras also render testing facilities for soil, seeds, and fertilizers, thus, giving assistance on information on application of nutrients based on soil test by ensuring balanced and integrated use of nutrients.

**Statement 3 is not correct**: Under the programme, there is a provision for "**Kisan Ki Baat**" which is **monthly interactions are conducted with farmers**, generally happening on **second Sundays of every month**.

**Statement 4 is correct**: **Department of Fertilizers** is the nodal agency of the Pradhan Mantri Kisan Samruddhi Kendras initiative.

#### Q72. Ans: B ONLY ST 1 AND 3 ARE CORRECT

Indian History Congress Recently, the 80th session of the Indian History Congress (IHC) was held at Kannur, Kerala. It called upon political and administrative authorities to pursue the constitutional duty of promoting composite culture, which is vital to promoting the territorial unity of India. The inception of the Indian History Congress (IHC) can be traced to the efforts of scholars working on India's ancient past as well as modern history, in a bid to counter the colonial claims, while also drawing from Western analytical methods. The Bharata Itihasa Samshodhaka Mandala (BISM) was one such effort that owed its origins to the stalwart Vishwanath Kashinath Rajwade. He founded this institution in 1910 in Pune with the support of K C Mehendale. The BISM organized an All India Congress in 1935 to celebrate its silver jubilee. The Indian History Congress (IHC) was thus born with about 50 delegates. **Indian History Congress** (IHC) is the largest association of professional historians in South Asia. It has about 35000 members of which over 2000 delegates participate in its session every year. It has been holding its sessions very regularly from its inception and publishing its proceedings every year since 1935. Its main objective is to promote secular and scientific writing of history.

#### Q73. Ans: C

Statement 1 is correct: Global Environment Facility was established on the eve of the 1992 Rio Earth Summit to help tackle our planet's most pressing environmental problems. Since then, the GEF has provided over \$17.9 billion in grants and mobilized an additional \$93.2 billion in co-financing for more than 4500 projects in 170 countries. Today, the GEF is an international partnership of 183 countries, international institutions, civil society organizations and the private sector that addresses global environmental issues. GEF funds are available to developing countries and countries with economies in transition to meet the objectives of the international environmental conventions and agreements. GEF support is provided to government agencies, civil society organizations, private sector companies, research institutions, among the broad diversity of potential partners, to implement projects and programs in recipient countries.

**Statement 2 is correct:** India is a founder member of GEF. It is both a donor and recipient of GEF funds.

#### Q74. Ans: C

**Statement 1 is correct:** The biggest religious congregation of the world. Kumbh Mela 2019 has also been named in the Guinness Book of World Records for the largest crowd management, sanitation drive and painting exercise on public sites.

**Statement 2 is correct:** Kumbh mela was inscribed on the UNESCO's Representative List of Intangible Cultural Heritage of Humanity in the year 2017. This is the latest entrant from India on UNESCO's Representative List of Intangible Cultural Heritage of Humanity taking the total list from India to 17.

**Statement 3 is correct:** Kumbh Mela, also called Kumbha Mela, in Hinduism, religious festival that is celebrated four times over the course of 12 years, the site of the observance rotating between four pilgrimage places on four sacred rivers—at Haridwar on the Ganges River, at Ujjain on the Shipra, at Nashik on the Godavari, and at Prayag (modern Allahabad) at the confluence of the Ganges, the Jamuna, and the mythical Sarasvati.

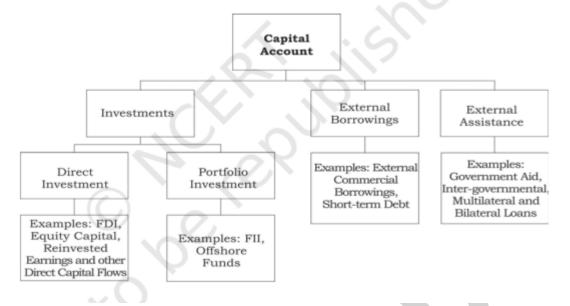
#### Q75. Answer- (d)

The balance of payments (BoP) records the transactions in goods, services and assets between residents of a country with the rest of the world for a specified time period typically a year.

There are **two main accounts** in the BoP — the **current account** and the **capital account**.

**Capital Account records** all international transactions of assets. An asset is any one of the forms in which wealth can be held, for example: money, stocks, bonds, Government debt, etc. Purchase of assets is a debit item on the capital account.

Fig. 6.2: Components of Capital Account



#### Q76. Ans: A

**Statement 1 is correct:** Fruit bats of the family Pteropodidae- particularly species belonging to Pteropus genus are natural host for Nipah virus. Nipah is believed to be transmitted from what are called flying foxes or mega bats so called because they are the largest bat species. They eat fruits and live in trees. Bats often end up being reservoirs for a number of severe infectious diseases, including Ebola, SARS coronavirus, Nipah and Hendra.

**Statement 2 is incorrect:** Human to human transmission occurs due to direct contact that is why many health care providers who change sheets, clean bedpans and tend to patients end up being affected.

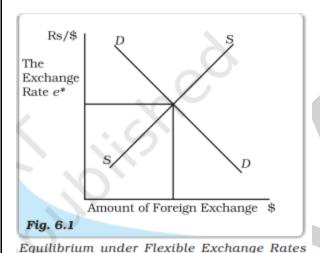
### Q77. Answer- (d)

Statement 1 is not correct: The Liberalised Exchange Rate Management System (LERMS) was put in place in March 1992 involving the dual exchange rate system in the interim period. The dual exchange rate system was replaced by a unified exchange rate system in March 1993.

Statement 2 is not correct: A fixed exchange rate is a system in which the Government fixes the exchange rate at a particular level. The market determined exchange rate is e. However, let us suppose that for some reason the Indian Government wants to encourage exports for which it needs to make rupee cheaper for foreigners. It would do so by fixing a higher exchange rate, say Rs 70 per dollar from the current exchange rate of Rs 50 per dollar.

Statement 3 is not correct: Flexible exchange rate is determined by the market forces of demand and supply. It is also known as Floating Exchange Rate. As depicted in Fig. 6.1, the exchange rate is determined where the demand curve intersects with the supply curve, i.e., at point e on the Y – axis. Point q on the x – axis determines the quantity of US Dollars that have been demanded and supplied on e exchange rate. In a completely flexible system, the Central banks do not intervene in the foreign exchange market.

In a flexible exchange rate regime, when the price of domestic currency (rupees) in terms of foreign currency (dollars) increases, it is called Appreciation of the domestic currency (rupees) in terms of foreign currency (dollars).



Q78. Answer- (b)

**Statement 1 is correct:** The **National Sample Survey Office (NSSO) has been conducting household surveys on consumption/consumer expenditure** at regular intervals as part of its rounds, normally of one-year duration. The survey has covered the whole of the Indian Union except a few inaccessible villages in the Andaman and Nicobar Islands. Information in the survey has been collected from 8,723 villages and 6,115 urban blocks spread over the entire country covering 2,61,746 households (1,55,014 in rural areas and 1,06,732 in urban areas).

**Statement 2 is not correct:** The consumption basket of items has been divided into three broad categories, namely, (i) Food items, (ii) Consumables and Services items, and (iii) Durable goods in HCES: 2022-23.

It is the Wholesale Price Index (WPI) that measures the average change in the prices of commodities for bulk sale throughout the early stages of transactions. The WPI index basket includes commodities classified into three broad groups: primary articles, fuel and power, and manufactured products.

Statement 3 is correct: Among the states, MPCE is the highest in Sikkim for both rural and urban areas (Rural – Rs. 7,731 and Urban – Rs. 12,105). It is the **lowest in Chhattisgarh** (Rural – Rs. 2,466 and Urban – Rs. 4,483).

The rural-urban difference in average MPCE, among the states is the highest in Meghalaya (83%) followed by Chhattisgarh (82%). Among the UTs, MPCE is the highest in Chandigarh (Rural – Rs. 7,467 and Urban – Rs. 12,575), whereas, it is the lowest in Ladakh (Rs. 4,035) and Lakshadweep (Rs. 5,475) for rural and urban areas respectively.

#### Q79. Answer- (d)

**Statement 1 is not correct:** Qualified Foreign Investors (QFIs) shall **include** individuals, groups or associations, Resident in a country that is **a member of Financial Action Task Force (FATF**) or a country that is a member of a group which is a member of FATF and resident in a country that is a signatory to IOSCO's (**INTERNATIONAL ORGANIZATION OF SECURITIES COMMISSIONS**) **Multilateral Memorandum of Understanding (MMoU)** (Appendix A Signatories) or a signatory of a bilateral MOU with Securities and Exchange Board of India (SEBI). QFIs do not include FIIs/Sub accounts/ Foreign Venture Capital Investor.

Statement 2 is not correct: An NRI cannot make investments simultaneously through the QFI route and portfolio investment scheme (PIS) route. However, a NRI can open a demat account as QFI and make investments through this route provided he has closed all his demat account(s) opened as an NRI.

**Statement 3 is not correct:** The total shareholding by a QFI cannot exceed five percent of the paid up equity capital of any company at any point of time. This limit shall be applicable to each class of equity shares having separate and distinct ISIN. Further, the aggregate shareholding of all QFIs shall not exceed ten percent of the paid up equity capital of the company at any point of time, in respect of each equity share class having separate and distinct ISIN.

#### Q80. Answer-b

All of the above given pairs contain a power project partnership between India and a neighboring country.

**Pair 1 is not correctly matched- Chukha HEP** was built by funding from the Government of India in **Bhutan**.

**Pair 2 is correctly matched- Punatsangchhu HEP** is built by India- **Bhutan** cooperation over Punatsangchhu river.

**Pair 3 is correctly matched- Maitree Super Thermal Power** project is a joint venture between NTPC and BPDB (**Bangladesh** Power Development Board) and is being set up by BHEL.

Q81. Ans: A

**Statement 1 is correct:** The government had issued a notification refreshing the categorisation of currency printing presses and mints as 'public utility service' under the Industrial Disputes Act, 1947. The Ministry of Labour and Employment's notification dated February 22, which is valid for six months and can be reissued after expiry, is part of a series of earlier notifications declaring currency printing presses and mints as 'public utility service.'

**Statement 2 is incorrect:** Upon declaration of a service as a public utility service as per the law, employees need to comply with certain conditions for strikes and lockouts. Thus, they are not barred but has to comply with certain condition for strike.

Q82. Answer: (d)

### **Explanation:**

A 'Patent' is a statutory right for an invention granted for a limited period of time to the patentee by the Government, in exchange of full disclosure of his invention for excluding others, from making, using, selling, importing the patented product or process for producing that product for those purposes without his consent.

The patent system in India is governed by the Patents Act, 1970 as amended by the Patents (Amendment) Act, 2005 and the Patents Rules, 2003. The following are some inventions or situations that do not qualify for a patent under this Act:

- Option 1 is correct: A method of agriculture or horticulture.
- Option 2 is correct: Any process for medicinal, surgical, curative, prophylactic (diagnostic, therapeutic) or other treatment of human beings or any process for a similar treatment of animals to render them free of disease or to increase their economic value or that of their products.
- Plants and animals in whole or any part thereof other than microorganisms but including seeds, varieties and species and essentially biological processes for production or propagation of plants and animals.
- A mathematical or business method or a computer program per se or algorithms;
- Option 3 is correct: A literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever including cinematographic works and television productions.
- A mere scheme or rule or method of performing a mental act or method of playing a game.
- A presentation of information.

- Topography of integrated circuits.
- An invention which, in effect, is traditional knowledge or which is an aggregation or duplication of known properties of traditionally known components or components.
- Option 4 is correct: Inventions relating to atomic energy.

#### Q83. Answer- a

**Context**- On the sidelines of the G20 Leaders' Summit, Leaders of India, European Union, France, Germany, Italy, Saudi Arabia, UAE and US announced an MOU on 9 September 2023 committing to work together to develop a new India-Middle East-Europe Economic Corridor (IMEC).

#### **Explanation-**

Pair 1 is correctly matched and Pair 2 is not correctly matched: The IMEC will comprise of two separate corridors, the east corridor connecting India to the Gulf and northern corridor connecting Gulf to Europe. Among the ports that could be connected on the west coast of India are Mundra (Gujarat), Kandla (Gujarat), and Jawaharlal Nehru Port Trust (Navi Mumbai). In the Middle East, at least five ports have been shortlisted to be connected to the Indian ports which include Jebel Ali, Fujairah and Abu Dhabi in the UAE. Other ports include Dammam and Ras Al Khair ports in Saudi Arabia.

**Pair 3 is not correctly matched**: The onward rail route connectivity from five ports in UAE and Saudi Arabia stretching up to **Haifa port in Israel** will be a mix of already existing Brownfield projects and fresh Greenfield projects to connect missing links.

**Pair 4 is not correctly matched:** As per the preliminary alignment plans, from Haifa in Israel, landing destinations for Europe include **Piraeus port in Greece**, Messina in South Italy, and Marseille in France.



#### Q84. Answer-(a)

**Statement 1 is correct: The United Nations Educational, Scientific and Cultural Organization (UNESCO) was born on 16 November 1945.** The Secretariat, headed by the Director-General, implements the decisions of these two bodies. The Organization has more than 50 field offices around the world and its headquarters are located in Paris.

Statement 2 is not correct: The United States officially accepted the Constitution of the United Nations Education, Culture and Science (UNESCO) on 10th July 2023. From then, it became, once more, a full member of UNESCO.

**Statement 3 is not correct:** UNESCO will convene the World Conference on Culture and Arts Education from 13 to 15 February 2024 in **Abu Dhabi, United Arab Emirates, at the Abu Dhabi National Exhibition Centre (ADNEC).** 

Q85. Answer: (b)

**Statement 1 is not correct:** The specific place occupied by an organism in the food chain is called **trophic level** not habitat. This place in the food chain is decided by the feeding relationships with other organisms. **Habitat** is simply the physical environment in which an organism lives.

Statements 2 and 3 are correct: Grazing food chain starts with producers (plants, phytoplankton) and ends with carnivores through herbivores. Detritus food chain starts from dead organic matter to detritivores (decomposers) e.g. fungi, bacteria, ends with inorganic matter which is helpful for plants to prepare the food. Due to more detritus accumulation and decomposers on terrestrial ecosystem than aquatic ecosystem and high growth rate and simpler tissue structure of producers in aquatic ecosystem like phytoplankton, detritus food chain is the dominant mode of energy flow in terrestrial ecosystem and grazing food chain is the major channel through which energy flow occurs in aquatic ecosystem.

### Q86. Answer-(d)

**Context:** Recently, The Wildlife Institute of India and the Zoological Survey of India have been carrying out assessment of the black-necked cranes.

**Statement 1 is not correct:** The Black-necked Crane breeding range includes much of the Qinghai-Tibetan Plateau in western China, with a small breeding population occurring in **adjacent Ladakh in India.** Wintering grounds include lower elevations of the Qinghai-Tibet and Yunnan-Guizhou Plateaus in China, with several hundred occurring in Bhutan and **few birds in Arunachal Pradesh in northeast India**.

The Black-necked Crane is a monotypic species. No genetic study has been done on sub-populations or subspecies. The summer breeding range of this crane stretches throughout mostly continuous plateaus. There are three isolated wintering populations.

Statement 2 is not correct: The Black-necked Crane (*Grus nigricollis*) is listed in Schedule I of the Wild Life (Protection) Act, 1972, thereby according them the highest degree of protection.

- i. The species is also listed in Appendix I of Convention on International Trade in Endangered Species of wild fauna and flora and the Convention on conservation of Migratory Species.
- ii. The important habitats of Black-necked Crane have been notified as Protected Areas, for example, Changthang Sanctuary, Ladakh.
- iii. The Tso Kar Wetlands Complex, an important foraging and breeding ground for Black-necked Crane, has been designated as a Ramsar Site in December 2020.
- iv. The National Wildlife Action Plan (2017-2031) released by the Ministry in October 2017 provides for specific Chapters and priority actions on various aspects of wildlife conservation like, conservation of threatened species, mitigating human wildlife conflict, conservation of inland and coastal and marine ecosystems, landscape level conservation, etc.
- v. The Central Government provides financial assistance to State/Union Territory Governments under the Centrally Sponsored Schemes 'Development of Wildlife Habitats' for management of wildlife and its habitat in the country.
- vi. In accordance with provisions contained under Section 33 of the Wild Life (Protection) Act, 1972, the Ministry has issued guidelines for the process of management planning for Protected Areas.
- vii. The Government of India has initiated Mission LiFE (Lifestyle for Environment) programme, that aims to generate public awareness about the environment, and conservation.

#### 087. Ans: C

Agricultural and Processed Food Products Export Development Authority is an authority established under an act of Parliament and under the administrative control of the Ministry of Commerce and Industry, Government of India. It has been mandated with the responsibility of export promotion and development of the scheduled products viz. fruits, vegetables, meat products, dairy products, alcoholic and non-alcoholic beverages etc. APEDA has also been entrusted with the responsibility to monitor import of sugar. It is an autonomous society promoted by the Ministry of Agriculture, Cooperation and Farmers' Welfare. It is a pioneer in organising small and marginal farmers as Farmers Interest Groups, Farmers Producers Organisation (FPOs) and Farmers Producers Company for endowing them with bargaining power and economies of scale. It provides a platform for increased accessibility and cheaper availability of agricultural inputs to small and marginal farmers and in establishing forward and backward linkages in supply chain management. In News: Agricultural and Processed Food Products Export Development Authority (APEDA) has signed a MoU with the Small Farmers Agribusiness Consortium (SFAC) to have a better sync with their activities for the benefit of farmers.

#### Q88. A

**Statement 1** is correct: Any Indian ruler who entered into the subsidiary alliance with the British had to maintain a contingent of British troops in his territory. It was commanded by a British officer. **The Indian state was called 'the protected state' and the British hereinafter were referred to as 'the paramount power'.** It was the duty of the British to safeguard that state from external aggression and to help its ruler maintain internal peace. The protected state should give some money or give part of its territory to the British to support the subsidiary force.

Statement 2 is not correct: The protected state need not cut off their connection with all the European powers but they should cut off their connection with European powers other than the English and with the French in particular. The state was also forbidden to have any political contact even with other Indian powers without the permission of the British.

Statement 3 is not correct: The paramount power should not interfere in the internal affairs of the protected state. The ruler of the protected state should keep a British Resident at his court and disband his own army. He should not employ Europeans in his service without the sanction of the paramount power.

#### Q89. A

**Statement 1 is not correct:** Four of the nine vulture species in India fall under the 'Critically Endangered' category in the IUCN Red List of Threatened Species. These foure are: Oriental white-backed (aka whiterumped) vulture (Gyps bengalensis), Long-billed (aka Indian) vulture (Gyps indicus), Slender-billed vulture (Gyps tenuirostris), Red-headed Vulture (aka king vulture) (Sarcogyps calvus).

**Statement 2 is correct:** All Indian Bear species are listed under Appendix I in CITES and Schedule I of the Wildlife (Protection) Act, 1972. This provides complete protection to the species from hunting and trade

Statement 3 is not correct: The snow leopard, a large cat species native to the mountainous areas of Central and South Asia, not only to western Himalayas, is also referred to as the ounce. With its dense fur coat aiding in blending seamlessly into the snowy terrain, this creature faces the threat of vulnerability as per the classification by the International Union for Conservation of Nature (IUCN). With an estimated population of fewer than 10,000 mature individuals, factors such as poaching, habitat loss, and climate change are anticipated to contribute to its decline.

#### 090. Ans: C

**Statement 1 is correct** - The Constitution provides for an Address by the President to either House or both Houses assembled together [Article 86(1)]. The Constitution also makes incumbent upon the President to address both Houses of Parliament assembled together at the commencement of the first Session after each 37

General Election to the Lok Sabha and at the commencement of the first Session each year and inform Parliament of the causes of its summons. [Article 87(1)]. No Member can raise questions on the Address by the President. Any action on the part of a Member which mars the occasion or creates disturbance is punishable by the House to which the Member belongs.

**Statement 2 is correct** - A substantive motion is a self-contained, independent proposal made in reference to a subject which the mover wishes to bring forward. All Resolutions, Motions for election of the Speaker and Deputy Speaker, and Motion of Thanks on the Address by the President, etc. are examples of substantive motions.

#### Q91. A

**ISRO** has used three cryogenic engines over the years: KVD-1, CE-7.5, and CE-20. Cryogenic engines are used in LVM-3 launch vehicles which can lift up to eight tonnes of payload to low-earth orbit and will also be used in the first **Gaganyaan Mission**.

**Hydrogen stands out as the preferred fuel for cryogenic engines due to its ability to generate the highest exhaust velocity when combusted.** For instance, when hydrogen is burned with oxygen, it produces an exhaust velocity of 4.5 km/s, surpassing the 3.4 km/s generated by alternative fuels like unsymmetrical dimethylhydrazine and nitrogen tetroxide. Also, engineers prefer liquid fuels for rocket motors due to their more efficient flow and reduced bulk as compared to solid fuels. **Gaseous hydrogen is liquefied by cooling it to below –253°C (–423°F).** This makes hydrogen highly desirable for rocket propulsion systems.

Thus, both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I

### Q92. Answer-(c)

Living organisms are continuously exposed to a variety of radiations called background radiations. If the level of the radioactive radiation increases above a certain limit it causes harmful effects to living beings. This harmful level of radiation emitted by radioactive elements is called **radioactive pollution**.

There are two sources of radiation pollution, namely natural sources and anthropogenic sources.

#### **Natural Sources of Radiation:**

- 1. Atomic radioactive minerals
- 2. Cosmic rays
- 3. Naturally occurring radioisotopes
- 4. Radioactive elements

### **Anthropogenic Sources of Radiation:**

- 1. Diagnostic medical applications
- 2. Nuclear Tests
- 3. Nuclear Reactors

#### Q93. A

**Context:** Recently, the Rat Hole Mining method has been used to evacuate 41 workers who were trapped inside the collapse of the Silkyara-Barkot tunnel.

**Statement 1 is correct:** The construction of this tunnel will provide **all weather connectivity to Yamunotri, one of the dham on Chardham Yatra,** encouraging regional socio-economic development, trade and tourism within the country. It will reduce the travel distance from Dharasu to Yamunotri by about 20 km and travel time by about an hour. The proposed tunnel will save a number of trees that would have been required to be removed in the road improvement of 25.600 km, had the original alignment been followed. It is a part of **chardham Mahamarg Pariyojana.** 

Statement 2 is not correct: The project will be implemented by the Ministry of Road Transport & Highways (MoRTH), through National Highways & Infrastructure Development Corporation Ltd. (NHIDCL), a wholly state owned company, formed in 2014 for development of highways in states on the international borders. The project aims at construction of 4.531 Km long two lane Bi-Directional tunnel (along with 328m approach road) with escape passage on Dharasu –Yamunotri in the State of Uttarakhand.

#### Q94. Ans: A

Alluri Sitaram Raju was a tribal freedom fighter who provided leadership to the tribals of Gudem Hills of Andhra Pradesh. His vision of 'Swaraj' was to gain rightful rights to use forest produce, graze their cattle and collect fuel wood. The Rampa Rebellion during the 1920s was a revolt against the British intervention in traditional agricultural practices of the tribesmen of Rampa. The British forbade the free movement of the tribals and engaging in podu cultivation which was a kind of shifting cultivation practice. This led to a tribal uprising. Statement 2 is incorrect. He was inspired by Gandhiji's Non-Cooperation Movement and persuaded people to wear Khadi and give up drinking. But at the same time, he did not believe in non-violence, he thought that India could be liberated only by the use of force.

#### Q95. Ans: A

Option (a) – 1 and 3 only is the correct answer.

- Sabratha Libya
- Berdyansk Ukraine
- Palu Indonesia

Araku – India

#### Q96. Ans: B

**Option (b) – 1 and 2 only, is the correct answer.** India is home to 106 species of raptors, popularly known as 'birds of prey,' says a recent publication by the Zoological Survey of India.

**Statement 1 is correct**: The presence of raptors in the wild serves as a barometer for ecological health. They play an important ecological role by keeping the balance, especially by controlling the population of rodents and other small mammals.

**Statement 2 is correct:** The Union Cabinet has given its approval to sign Memoranda of Understanding (MOU) on the Conservation of Migratory Birds of Prey in Africa and Eurasia, also called the 'Raptor MOU' with the Convention on Conservation of Migratory Species (CMS). With the signing of this MOU, India will become the 54th signatory to the MOU. The Raptors MoU extends its coverage to 76 species of birds of prey out of which 46 species including vultures, falcons, eagles, owls, hawks, kites, harriers, etc. also occur in India. The CMS or Bonn Convention, under the auspices of the United Nations Environment Programme (UNEP), aims to conserve migratory species throughout their range. India had become a party to the CMS since 1st November 1983.

**Statement 3 is incorrect:** Among these raptors, the Indian White-backed Vulture, the Long Billed Vulture, the Slender Billed Vulture, the Red headed Vulture and the Forest Owlet are in the 'critically endangered' category, and the Egyptian Vulture and the Saker are in the 'endangered' list of the International Union for Conservation of Nature's (IUCN) 'Red List.'

#### Q97.C

**Statement 1 is correct: Inflation Indexed Bonds** (IIBs) were issued in the name of **Capital Indexed Bonds** (CIBs) during 1997. The CIBs issued in 1997 provide **inflation protection only to the principal** and **not to interest payments**. The new product of IIBs provides **inflation protection to both principal and interest payments**.

**Statement 2 is not correct:** The **consumer price index** (CPI) reflects the inflation people face and therefore, globally CPI or **Retail Price Index** (RPI) is used for inflation targets by the Central Banks as well as for providing inflation protection in IIBs. In India, all India CPI has been released since January 2011. Monetary policy has also continued **targeting WPI for its price stability objective**. It was decided to **consider WPI for inflation protection in IIBs**.

**Statement 3 is correct:** As IIBs are G-Secs (Government securities), they can be tradable in the **secondary market** like other G-Secs. Investors will be able to trade them in **NDS-OM**, **NDS-OM** (web-based), **OTC market**, and **stock exchanges**.

**Statement 4 is correct:** As IIBs are G-Secs and therefore, **would be eligible for short-sale and repo transactions.** In addition to this, they are eligible for a statutory liquidity ratio.

#### Q98. Ans: A

Manas National Park or Manas Wildlife Sanctuary is a national park, UNESCO Natural World Heritage site, a Project Tiger reserve, an elephant reserve and a biosphere reserve in Assam, India. Located in the Himalayan foothills, it is contiguous with the Royal Manas National Park in Bhutan. The park is known for its rare and endangered endemic wildlife such as the Assam roofed turtle, hispid hare, golden langur and pygmy hog. Manas is famous for its population of the wild water buffalo.

#### **Q99. Ans: A ONLY STATEMENT 2 IS CORRECT**

Food Safety and Standards Authority of India is an autonomous body established under the Ministry of Health & Family Welfare, Government of India. The FSSAI has been established under the Food Safety and Standards Act, 2006. FSSAI issues a 14-digit License number to food business operators who are in Compliance of the rules and regulations under the FSS act. Import of GM crop is approved by GEAC.

#### Q100. Answer-(c)

**Statement 1 is correct: Pabna revolt** was a peasants' **movement** of 1873-1885 in **Bengal.** In 1873 the Pabna peasants formed an agrarian league which spread out the entire district very soon.

**Statement 2 is correct:** The peasants of Pabna did not object to rent hikes, and, in fact between 1858 and 1873 they met the rent demands of their landlords without any resistance. **At the root of the movement was the tendency of the zamindars to annihilate the tenants' newly acquired occupancy rights. Occupancy tenants were being converted into tenants-at-will through forcible written agreements.** 

Statement 3 is correct: Two prominent leaders of the Pabna peasants were Kesab Chandra Roy and Sambhunath Pal. For nearly a decade, from 1873 the Pabna peasants movement undermined the landlord's perception of their right to fleece the peasants. Besides, the movement also spread to other areas like Dacca, Rajshahi, Bakergunje, Faridpur, Tripura and Bogra, etc