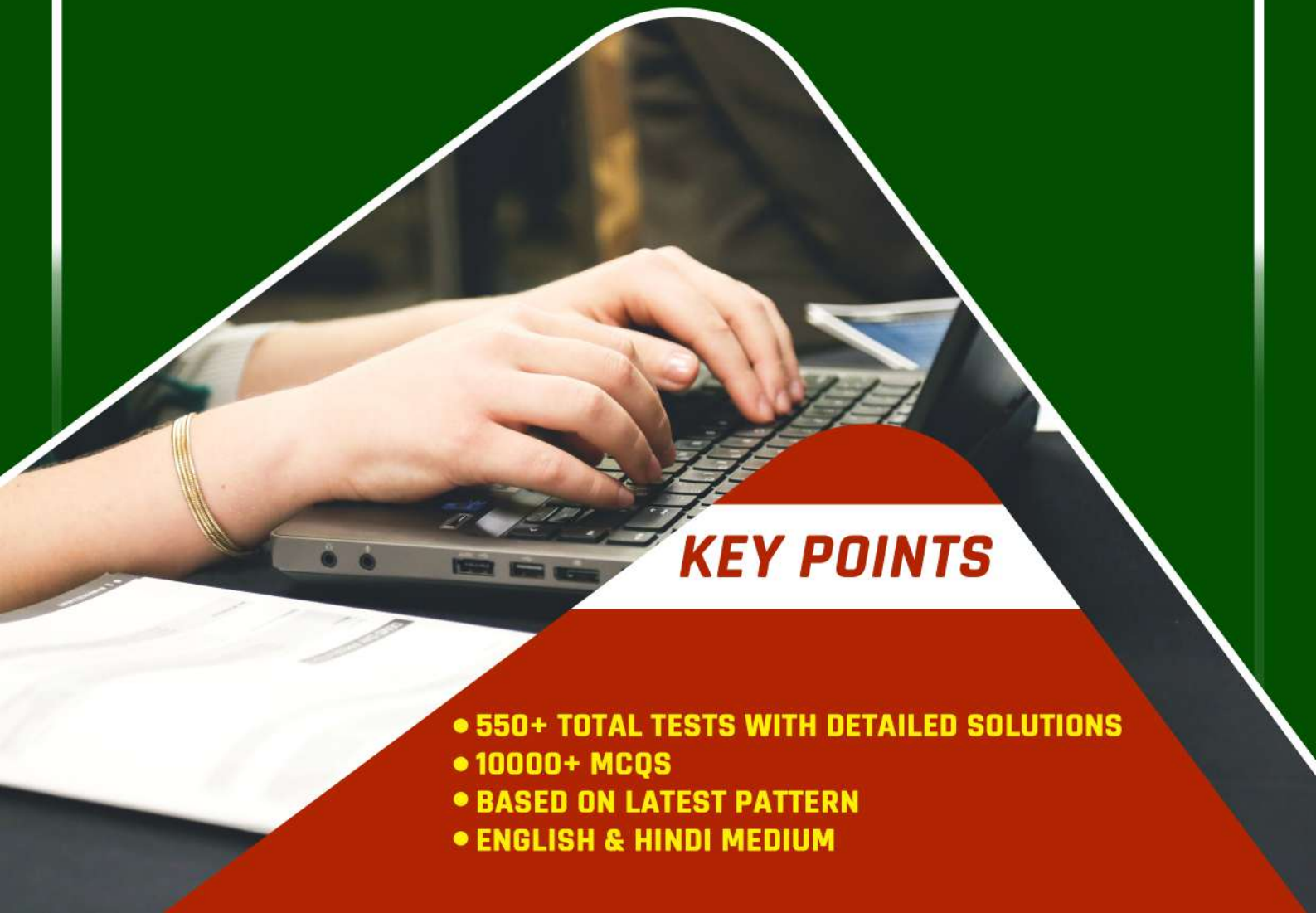


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**Q1.** Consider the following statements regarding the Mekong River

1. Mekong River rises in the Tibetan Plateau and flows into the South China Sea.
2. The capital of Laos and Cambodia is situated on the banks of the Mekong River

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q2.** Consider the following statements

1. Heat waves begin when high pressure in the atmosphere moves in and pushes warm air toward the ground.
2. When heat waves occur, the wind and cloud cover are minimised, which makes the air hotter

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q3.** Consider the following statements

1. Wet-bulb temperature combines heat and humidity to indicate how much evaporation can be absorbed into the air.
2. The wet-bulb temperature is usually lower than the dry-bulb temperature.
3. At wet-bulb temperatures above 35 degrees Celsius, it becomes difficult to reduce body temperature via sweating

Which of the statements given above is/are correct?

- (a) 1 and 2
- (b) 2 and 3
- (c) 1,2 and 3
- (d) 1 and 3

**Q4.** Arrange the following mountain ranges in the increasing order of their lengths-

1. The Ural Mountains
2. The Rockies
3. The Great Dividing Range
4. The Alps

Select the correct answer using the code given below-

- (a) 3-2-1-4
- (b) 4-1-3-2
- (c) 4-2-1-3
- (d) 4-2-3-1

**Q5.** Consider the following statements-

1. Quinary sector represents the highest category of decision-makers who formulate policy guidelines.
2. Quaternary sector is part of the tertiary sector of the economy which is knowledge-based.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q6.** Consider the following statements

1. The ocean warming decreases the frequency of tropical cyclone winds and rainfall, as well as an increase in extreme waves.
2. The productivity of the Oceans decreases when the carbon emission from the atmosphere is sunk by it.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q7.** Consider the following statements

1. Open-cast mining is a surface mining technique for extracting rock or minerals from the earth.
2. It requires extensive tunnelling into the earth.
3. Most of the coal production in India comes from opencast mining

Which of the statements given above is/are correct?

- (a) 1 and 2
- (b) 2 and 3
- (c) 1,2 and 3
- (d) 1 and 3

**Q8.** Baengnyeong Island is a bone of contention between

- (a) China and South Korea
- (b) China and Japan
- (c) North Korea and South Korea
- (d) North Korea and Japan

**Q9.** Arrange the following in north to south direction

1. Galathea Bay
2. Campbell bay
3. Anderson bay

Select the correct code from below :

- (a) 1-2-3
- (b) 3-2-1
- (c) 1-3-2
- (d) 2-3-1

**Q10.** Which of these islands, sometimes seen in news, lie South of Taiwan?

1. Spratly Island
2. Kyushu Island
3. Paracel Island

Select the correct answer code:

- (a) 1 and 2
- (b) 2 and 3
- (c) 1,2 and 3
- (d) 1 and 3

**Q11.** Afghanistan shares its land border with which of the following countries?

1. Kazakhstan
2. Iran
3. China
4. Uzbekistan

Select the correct code from below:

- (a) 1, 2, 3
- (b) 1, 3, 4
- (c) 2, 3, 4
- (d) 1, 2, 3, 4

**Q12.** Consider the following statements regarding Mekong-Ganga Cooperation (MCG).

1. It does not include any nation that is either a member of the ASEAN Summit or has a strategic partnership with China.
2. It only deals with power-sharing and inland waterways transport across the rivers Mekong and Ganga.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q13.** Who among the following wrote commentaries on the Upanishads and the Bhagavad Gita?

- (a) Ramanujan
- (b) Shankaracharya
- (c) Vallabhacharya
- (d) Tulsidas

**Q14.** Which school is responsible for beginning of Physics in India?

- (a) Samakhya school
- (b) Nyaya school
- (c) Mimansa school
- (d) Vaisheshika school

**Q15.** Presence of step tank is an important feature of which of the following school of architecture?

- (a) Khajuraho school
- (b) Odisha school
- (c) Hoyasala school
- (d) Solanki school

**Q16.** Who among the following looked after the ordinary affairs of the realm of the Empire in the Mauryan Administration?

- (a) Yuktas
- (b) Samharta
- (c) Rajukas
- (d) Nikayas

**Q17.** Consider the following statements-

1. The Guptas were the first rulers in India to issue coins (gold, silver, copper, and nickel) which can be definitely attributed to any dynasty.
2. Indo-Greeks introduced the practice of military governorship.
3. The Satavahanas are known in history for starting the practice of giving royal grants of land to Brahmanas and Buddhist monks.

Choose the correct answer using codes below-

- (a) 1 and 2
- (b) 2 and 3
- (c) 1 and 3
- (d) All of the above

**Q18.** Consider the following statements regarding Dhrupad:

1. It is a prominent form of Carnatic music that developed in southern India.
2. The essential quality of the dhrupad approach is its sombre atmosphere and emphasis on rhythm.
3. Tansen, one of the best known dhrupad singers was also one of the nine jewels of Emperor Akbar's court.

Choose the correct answer using codes below-

- (a) 1 and 2
- (b) 2 and 3
- (c) 1 and 3
- (d) All of the above



**Q19.** Consider the following statements about Montagu Chelmsford Reforms of 1919-

1. Under the 1919 Act, the Indian Legislative Council at the Centre was replaced by a bicameral system consisting of a Council of State (Upper House) and a Legislative Assembly (Lower House).
2. Under 1919 Act, Diarchy was introduced in the Centre
3. The principle of communal representation was extended with separate electorates for Sikhs, Christians and Anglo-Indians, besides Muslims.

Choose the correct answer using codes below-

- (a) 1 and 2
- (b) 2 and 3
- (c) 1 and 3
- (d) All of the above

**Q20.** Which among the following commission was set up in 1929 to inquire into the existing conditions of labor in industrial undertakings and plantations in India?

- (a) Linlithgow Commission
- (b) Lee Commission
- (c) Fraser Commission
- (d) Whitley Commission

**Q21.** Which of the following statement about Lakhudiyar rock paintings is/are correct?

1. Lakhudiyar rock paintings at Karnataka depict man, animal and geometric patterns in white, black and red ochre.
2. Hand-linked dancing human figures with superimposition are striking feature of these paintings.
3. A long-snouted animal, a fox and a multiple legged lizard are the main animal motifs.

Choose the correct answer using codes below-

- (a) 1 and 2
- (b) 2 and 3
- (c) 1 and 3
- (d) All of the above

**Q22.** With reference to Nayaka paintings, consider the following statements:

1. The Nayaka paintings depict episodes from the Mahabharata and the Ramayana and also scenes from Krishna-leela.
2. Male figures are shown slim-waisted but with more heavy abdomen as compared to those in Vijayanagara
3. Early paintings depict scenes from the life of Vardhaman Mahavira.

Choose the correct answer using codes below-

- (a) 1 and 2
- (b) 2 and 3
- (c) 1 and 3
- (d) All of the above

**Q23.** Consider the following statements about Paitkar paintings-

1. The Paitkar paintings are also popularly known as the scroll paintings of Jharkhand.
2. The paintings that belong to this form have a common subject of what happens to human life after death.
3. Paitkar painting may be considered as the variable of cheriyal scroll painting of Telangana.

Choose the correct answer using codes below-

- (a) 1 and 2
- (b) 2 and 3
- (c) 1 and 3
- (d) All of the above

**Q24.** Which of these are musical forms of Carnatic Music?

1. Sulladi
2. Pallavi
3. Tappa
4. Kriti

Choose the correct answer using codes below-

- (a) 1, 2 and 4
- (b) 1, 2 and 3
- (c) 2 and 3
- (d) All of the above

**Q25.** With reference to the Rajagopalachari Formula, consider the following statements:

1. The Muslim League would join hands with the INC to demand independence from the British.
2. It implicitly agreed to the creation of a separate state of Pakistan.
3. The formula was widely supported by various sections like the Sikh groups, Hindu Mahasabha etc.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 2 only
- (d) 1, 2 and 3

**Q26.** Which of the following is not correct about Delhi Pact?

- (a) It was signed between Gandhiji and Viceroy Irwin.
- (b) It placed the Congress on an equal footing with the Government.
- (c) Under it the Government agreed to grant the right to make salt in coastal villages for personal consumption.
- (d) It accepted Gandhiji' s demand for public inquiry into police excesses.

**Q27.** Which of the following was the reason for the resignation of congress from the provincial governments in 1939?

- (a) In reaction to the demand for Pakistan by Muslim league.
- (b) Rejection of the demand for formation of constituent assembly by the British government.
- (c) In anticipation of the Japanese aggression on India.
- (d) The Government declared India to be at war with Germany without consulting the Indian leadership.

**Q28.** With reference to the War Conference of 1917, consider the following statements:

- 1. It was convened in Delhi under Lord Reading who was the Viceroy then.
- 2. It was held to persuade national leaders to help the government in war purposes. It mainly included recruiting soldiers for participating in the war.
- 3. Gandhiji was also a part of the conference.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 2 only
- (d) 1, 2 and 3

**Q29.** Consider the following events-

- 1. Formation of the forward bloc
- 2. August Offer
- 3. Day of Deliverance

Which of the following is the correct chronological sequence of the above events (earliest first)?

- (a) 1-3-2
- (b) 1-2-3
- (c) 3-1-2
- (d) 3-2-1

**Q30.** Which of the following was/were the reasons for the launch of Quit India Movement?

- 1. The impact of the manner of the British evacuation from Malaya and Burma. It was common knowledge that the British had evacuated the white residents and generally left the subject people to their fate.
- 2. Failure of Simon Mission.
- 3. The threat of Japanese aggression.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

**Q31.** Consider the following statements about Independence for India League-

- 1. It was established by Jawaharlal Nehru and Subash Chandra Bose.
- 2. They demanded that the Congress adopt Purna Swaraj or complete independence as its goal.
- 3. The Independence of India Leaguers decided not to participate in the framing of the constitution and proposed the Congress to consider proper and necessary steps in favour of complete independence.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

**Q32.** In the context of freedom struggle, "The Revolutionary" was the main organ of which of the following organizations?

- (a) Swarajya Party
- (b) Chittagong group
- (c) Hindustan Republican Association
- (d) Yugantar Group

**Q33.** Consider the following statements:

- 1. Rabindranath Tagore created the Indian Society of Oriental Art.
- 2. Abanindranath Tagore established the Bengal school of art.

Choose the correct answer using codes below-

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q34.** Tilak Swaraj Fund was raised to support-

- (a) Home Rule Movement
- (b) Non-Cooperation Movement
- (c) Rowlatt Satyagraha
- (d) All India Trade Union Congress

**Q35.** The joint sitting can be called in which of the following types of the bills?

- 1. Any ordinary bill
- 2. Any Financial bill involving excluding the matters under article 110
- 3. Any Money bill

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 1 and 2
- (c) 1 and 3
- (d) 1, 2 and 3

**Q36.** Which of the following statement is incorrect about the Ordinary Bill?

- (a) It can be introduced either by a minister or by a private member
- (b) It can be detained by the Rajya Sabha for a maximum period of six months.
- (c) It can be rejected, approved, or returned for reconsideration by the President
- (d) It can't be introduced in either house without the prior approval of the President

**Q37.** Which of the following Schedule of the Constitution deals with the allocation of seats in the Rajya Sabha to the states and union territories

- (a) Third
- (b) Fourth
- (c) Seventh
- (d) Second

**Q38.** Which of the following purposes is served by a democratic constitution?

- (a) Defining the way power will be exercised in the country's political system
- (b) Guards against the misuse of power by the authorities
- (c) Protects the minority against the tyranny of the majority
- (d) All of the above

**Q39.** Consider the following statements regarding Right to Equality

1. The Right to Equality provided in the Constitution covers which of the following fundamental rights?
2. All persons are equal before the law.
3. The State cannot discriminate arbitrarily in matters of employment.
4. All citizens are entitled to move freely anywhere in the Indian Territory.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 1 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

**Q40.** Consider the following statements regarding the Appropriation bill

- (a) The Rajya Sabha (Upper House) has the authority to recommend any amendments in this Bill
- (b) to the Lok Sabha to either accept or reject the recommendations made by the Rajya Sabha of Parliament.
- (c) The Appropriation Bill must be passed by both the Houses of Parliament before it can be enacted into law
- (d) If the Appropriation Bill is not passed it leads to the resignation of the Government and calls for a fresh election.

**Q41.** Which of the following is correct about the Private member bill?

- (a) It can be introduced only by any member of the opposition party in the parliament who is not a minister in the ruling government.
- (b) It can be introduced only after giving a 7 days' notice
- (c) The president can use an absolute veto for this.
- (d) The passing of a private member bill leads to the resignation of the parliament and therefore no Private member bill has been passed in the history of India

**Q42.** Which of the following statements regarding the Constitutional amendment Bill is correct?

- (a) An amendment in the constitution can be initiated in the state legislature.
- (b) It can't be introduced by a private member.
- (c) The Constitutional amendment bill must be passed by a two-thirds majority of the individual members of the present and voting in each house separately
- (d) The Lok Sabha has the privilege over Rajya Sabha to initiate and introduce an amendment bill of the Constitution

**Q43.** Consider the following statements regarding the Speaker of the Lok Sabha:

1. The speaker of the Lok Sabha acts as the ex-officio chairman of the Indian Parliamentary Group
2. The Speaker of the Lok Sabha decides whether a bill is money or not and his decision is final and can't be challenged in any court.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both are correct
- (d) None of the above

**Q44.** Consider the following statements regarding the removal of Speaker of the Lok Sabha:

1. The resolution to the speaker of the Lok Sabha can be initiated in Lok Sabha only
2. The resolution for removal must be signed by at least 50 members of that house
3. When a resolution for the removal of the Speaker is under consideration of the House, he cannot preside or vote at the sitting of the House, though he may be present

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3
- (c) 1 and 2
- (d) 1, 2 and 3

**Q45.** Which one of the following suggested that the Governor should be an eminent person from outside the State and should be a detached figure without intense political links and should be debarred from coming into active politics or holding any office of profit?

- (a) Rajamannar committee
- (b) Sarkaria Commission
- (c) First administrative report
- (d) Punchii Commission

**Q46.** Consider the following statements regarding judges of the Supreme Court:

1. A removal motion for the supreme court judges is signed by 100 members in the case of Lok Sabha or 50 members in the case of Rajya Sabha is to be given to the Speaker or Chairman.
2. The Speaker of the Lok Sabha must accept the resolution for the impeachment of the removal of the judge.
3. The President can issue the removal order only after an address by Parliament has been presented to him in the same session for such removal which should be supported by a majority of the total membership of that House and by not less than two-thirds of total members of that House present and voting
4. The Constitution of India has clearly defined the procedure of impeachment of judges on the basis of Proved Misbehaviour and holding Office of profit

Which of the statements given above is/are correct?

- (a) 1 and 2
- (b) 3 and 4
- (c) 1 and 3
- (d) 2 and 4

**Q47.** Under which Schedule of the Constitution of India can the transfer of tribal land to private parties under Hydrocarbon Exploration and Licensing Policy be declared null and void?

- (a) Second schedule
- (b) Fourth schedule
- (c) Sixth schedule
- (d) Seventh schedule

**Q48.** Consider the following statements

1. An appropriation bill is a money bill that must be passed by the lower house to become a law failing of which can lead to the resignation of the government and shall call for fresh elections.
2. The passing of a private member bill leads to the resignation of the government in parliament and therefore no Private member bill has been passed in the history of India

3. A constitutional amendment bill can be introduced in either house with the prior permission of the president.

Which of the statements given above is/are incorrect?

- (a) 1 and 2
- (b) 2 only
- (c) 2 and 3
- (d) 1 only

**Q49.** Which of the following rights of the citizens of India is/are being provided to the citizen of India but are denied the same to foreigners?

1. The Fundamental right to vote in elections to the Lok Sabha and state legislative assembly
2. Cultural and educational rights under Articles 29 and 30.

Select the correct code from below:

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 and 2

**Q50.** Consider the following statements with respect to the joint sitting of the Parliament:

1. Only those amendments that have caused final disagreement between the Houses and those amendments that might have become necessary due to the delay in the passage of the bill can be introduced during the joint sitting
2. The chairman of the Rajya Sabha can put his casting vote during the joint sitting of the house in case equality of the votes occur.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both are correct
- (d) None of the above

**Q51.** Consider the following statements regarding the Parliamentary Committee on Public Accounts:

1. consists of not more than 25 members of the Lok Sabha
2. scrutinizes appropriation and finance accounts of the Government
3. examines the report of the Comptroller and Auditor General of India.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3
- (c) 3 only
- (d) 1, 2 and 3



**Q52.** Lack of "Internal democracy" within political parties implies

1. The concentration of power at the top of the party
2. Provincial decentralization of the party

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None

**Q53.** Consider the following statements:

1. There is no provision in the Constitution of India to encourage equal pay for equal work for both men and women.
2. The Constitution of India does not define backward classes.

Which of the statements given above is/are correct?

- (a) I only
- (b) 2 only
- (c) Both I and 2
- (d) Neither I nor 2

**Q54.** Under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 who shall be the authority to initiate the process for determining the nature and extent of individual or community forest rights or both?

- (a) State Forest Department
- (b) District Collector / Deputy Commissioner
- (c) Tahsildar / Block Development Officer / Mandal Revenue Officer
- (d) Gram Sabha

**Q55.** Consider the following statements regarding Sovereign Gold Bonds-

1. These are government securities denominated in grams of gold issued by Reserve Bank on behalf of Government of India.
2. The Sovereign Gold Bonds will be available only in demat form with tenor of minimum 8 years
3. The Capital gain tax arising on redemption of SGB to an individual is exempted.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

**Q56.** Which among the following constitutes the current account-?

1. Net income
2. interest and dividends
3. Transfers such as foreign aid, remittances, donations among others.

Which of the options given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

**Q57.** Which of the following statements regarding Coalition for Disaster Resilient Infrastructure (CDRI) is correct?

- (a) The CDRI is an intergovernmental organization.
- (b) There are no obligations on the part of the members to make financial contributions to the CDRI.
- (c) ICDRI is the biennial international conference of the Coalition for Disaster Resilient Infrastructure (CDRI)
- (d) The CDRI Secretariat is based in Geneva

**Q58.** With regard to the K-shaped Economic Recovery, consider the following statements-

1. A K-shaped recovery occurs when, following a recession, different parts of the economy recover at different rates, times, or magnitudes.
2. The prospects of a K-shaped recovery from COVID are decreasing both in India and across the world.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q59.** Consider the following statements regarding Higher Education Financing Agency (HEFA):

1. Higher Education Financing Agency (HEFA) is a joint venture of the Ministry of Education and NITI Ayog.
2. It provides the finance at competitive interest rates to educational institutions and supplements it with grants by channelizing CSR funds.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q60.** Consider the following statements regarding Angel Investors-

1. An angel investor is a high-net-worth individual who provides financial backing for small startups or entrepreneurs without any exchange for ownership equity in the company.
2. Often, angel investors are found among an entrepreneur's family and friends.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q61.** Consider the following statements regarding The Agreement on Trade-Related Investment Measures (TRIMs)-

1. The agreement was negotiated under the WTO's predecessor, the General Agreement on Tariffs and Trade (GATT) and came into force in 1995.
2. TRIMs are rules that restrict preference of domestic firms and thereby enable international firms to operate more easily within foreign markets.
3. The agreement was agreed upon by all members of the World Trade Organization.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

**Q62.** In India, which of the following are considered as Alternative Investment Funds (AIFs)?

1. Private Equity (PE) Funds
2. Hedge Fund
3. Debt Fund
4. Social venture funds

Select the correct answer code-

- (a) 1,2,3
- (b) 1,3,4
- (c) 2 and 3 only
- (d) 1,2,3,4

**Q63.** Consider the following statements regarding Currency Deposit Ratio (CDR)-

1. It is a purely behavioral parameter and is calculated only with respect to the Term deposits.
2. It generally decreases during the festive season.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q64.** Consider the following statements regarding revenue receipts and capital receipts of the government-

1. Capital receipts are non-redeemable unlike revenue receipts.
  2. Capital receipts may be debt creating or non-debt creating
- Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q65.** Consider the following statements with regard to Hard Currency-

1. These currencies are prone to dramatic depreciation or appreciation.
2. These are issued by a nation that is seen as politically and economically unstable.
3. These currencies are less liquid in the forex or foreign exchange (FX) market.

Which of the options given above is/are incorrect?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

**Q66.** Consider the following statements regarding Consumer Price Index — Industrial Workers (CPI-IW)-

1. The CPI-IW is primarily used to regulate the dearness allowance of government employees and the workers in the industrial sectors.
2. The index is released by Central Statistics Office every year since its inception in 1946
3. The base year for CPI-IW is 2011.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

**Q67.** Consider the following statements about International Finance Corporation (IFC)-

1. IFC is a sister organization of the World Bank and member of the World Bank Group.
2. It offers an array of debt and equity financing services to the governments of developing nations
3. It advises governments on building infrastructure and partnerships to support private sector development.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

**Q68.** Which of the followings are components of RBI's capital reserves?

1. Contingency Fund
2. Asset Development Fund (ADF)
3. Currency and Gold Revaluation Account (CGRA)
4. Foreign Exchange Forward Contracts Valuation Account (FCVA)

Select the correct answer code-

- (a) 1,2,3
- (b) 1,3,4
- (c) 2 and 3 only
- (d) 1,2,3,4

**Q69.** Consider the following statements regarding Merchant Discount Rate-

1. Merchant Discount Rate is the sum total of all the charges (excluding taxes) that a digital payment entails.
2. It is paid by consumers to merchants.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q70.** Consider the following statements regarding Gene Drive Technology-

1. Gene drive technology is a genetic engineering technology that can permanently change the traits of a population or even an entire species.
2. Gene drives occur naturally but can also be engineered.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q71.** Which of the following pair of missions to venus-

1. Magellan – a Nasa mission
2. Venus Express – A European mission
3. Akatsuki – China

Which of the pair/s given above is/are correct?

- (a) 1 and 2
- (b) 2 and 3
- (c) 1,2 and 3
- (d) 1 and 3

**Q72.** Consider the following statements with respect to winter-grade diesel-

1. It is a specialized fuel developed by DRDO specifically for high altitude regions and low-temperature regions.
2. It remains unfrozen up to minus 1000 degree Celsius thus provides year-round access to snow-capped border regions.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q73.** Consider the following statements regarding SOFIA

1. It is the world's largest flying telescope made by NASA.
2. It discovered water traces on the sun-facing side of the Moon.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q74.** Consider the following statements regarding PM Mega Integrated Textile Regions and Apparel Park (PM MITRA) Parks Scheme

1. The PM MITRA Park will be developed by a Special Purpose Vehicle (SPV), wholly owned by the central Government in a Public-Private Partnership (PPP) Mode.
2. It will focus to reduce logistics costs to the Industry.
3. Under this scheme, only Greenfield Integrated Textile Regions and Greenfield Apparel parks would be built.

Which of the statements given above is/are correct?

- (a) 1 and 2
- (b) 2 and 3
- (c) 2 only
- (d) 1,2 and 3

**Q75.** Recently NASA has announced space missions VERITAS and DAVINCI+. The aim of the two space missions is to-

- (a) Search for exoplanets
- (b) Study the effect of coronal mass ejections from the surface of the sun
- (c) Study the geology of Venus
- (d) Study the black holes and gravitational waves produced due to the merger of it



**Q76.** With reference to ballistic missiles, consider the following statements:

1. Unlike cruise missile, ballistic missile can travel outside the atmosphere of earth.
2. Ballistic missiles have much longer range than possible for cruise missiles of same size.
3. They have lower precision and high cost than cruise missiles.

Select the correct answer using the code given below-

- (a) 1 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

**Q77.** With regard to the Missile Technology Control Regime (MTCR), consider the following statements-

1. It is a legally binding treaty aimed to prevent the proliferation of missile & unmanned aerial vehicle capable of carrying payload above 500kg for more than 300Km.
2. India is a member of MTCR.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q78.** Consider the following statements regarding Defense Space Agency-

1. This agency is responsible for formulating the strategies regarding protection of India's interest in space including addressing space-based threats.
2. DSA is to be headed by Chief of Defense Staff and to have personnels from three wings of armed forces.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q79.** Which of the following statements regarding the 'Shukrayaan' mission is incorrect

- (a) Synthetic aperture radar (SAR) will be embedded to examine the Venusian surface
- (b) Orbiter's Near-Infrared Spectrometer will be utilized to check the presence of phosphine on the planet
- (c) It is the first completely indigenous mission to venus
- (d) It will be launched in 2024

**Q80.** Consider the following statements regarding West Bank

1. It is located on the Jordan River
2. West Bank has been occupied by Israel

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q81.** Consider the following statements regarding 'Unicorn'

1. The term 'Unicorn' refers to the rarest of the rare startups who become Unicorns attaining a valuation of more than USD 1 billion
2. The Indian Startup Ecosystem, is the largest in the world in number of Unicorns.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q82.** Consider the following statements regarding Eco-ducts-

1. These are areas of wildlife habitat that aim to enhance wildlife connectivity that can be disrupted because of highways or logging
2. Usually these bridges are overlaid with planting from the area to give it a contiguous look with the landscape.

Choose the correct answer using codes below-

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q83.** With respect to CITES, consider the following statements-

1. It is an International agreement to regulate worldwide commercial trade in wild animal and plant species
2. It is administered by the World Wildlife Fund (WWF).
3. CITES is legally binding on state parties to the convention, which are obliged to adopt their own domestic legislation to implement its goals.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

**Q84.** Consider the following statements about Green Rating for Integrated Habitat Assessment (GRIHA)-

1. It is a rating tool that helps people assesses the performance of their building against certain nationally acceptable benchmarks.
2. It is given by the GRIHA Council, a not-for-profit society jointly setup by The Energy and Resources Institute (TERI) and the Ministry of Environment, forests and Climate Change to promote green buildings in India.

Choose the correct answer using codes below-

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q85.** Consider the following statements about Pobitora Wildlife Sanctuary-

1. Pobitora Wildlife Sanctuary has the highest density of one-horned rhinos in the world
2. It is situated in the flood plains of River Brahmaputra in the district of Morigaon.
3. It is often called 'Mini Kaziranga' due to similar landscape and vegetation.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

**Q86.** Consider the following statements about Montreux Record-

1. The Montreux Record is a register of wetland sites on the List of Wetlands of International Importance where changes in ecological character have occurred, are occurring, or are likely to occur as a result of technological developments, pollution or other human interference.
2. At present, three wetlands of India are in Montreux Record
3. It is maintained as part of the Ramsar List.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

**Q87.** Which of the following protested areas are located in Odisha?

1. Satkosia Tiger Reserve.
2. Nandankanan Wildlife Sanctuary
3. Bhitarkanika National Park

Choose the correct answer using codes below-

- (a) 1 and 2
- (b) 2 and 3
- (c) 1 and 3
- (d) All of the above

**Q88.** The term, 'Brute Force Acquisition', recently in the news is associated with which of the following

- (a) Private land acquisition
- (b) Military arrangements
- (c) Encryption of mobile data
- (d) Mobile device forensics

**Q89.** Consider the following pairs-

1. Green hydrogen- Hydrogen derived using fossil fuels
2. Grey Hydrogen- It is derived by electrolysis of water
3. Blue hydrogen- It is derived from natural gas through the process of steam methane reforming (SMR)

Choose the correct answer using codes below-

- (a) 2 only
- (b) 3 only
- (c) 1 and 3
- (d) All of the above

**Q90.** Consider the following statements

1. India has a bi-annual cyclone season that occurs between March to May and October to December.
2. Cyclones are less common from October to December as the retreating monsoon season has a very high wind shear.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q91.** Consider the following statements regarding Trade Winds-

1. The trade winds are those blowing from the equatorial low-pressure belt towards the sub-tropical high-pressure areas.
2. They flow as the north-eastern trades in the northern hemisphere and the south-eastern trades in the southern hemisphere.
3. This deflection in their ideally expected north-south direction is explained on the basis of Coriolis force and Farrel's law.

Choose the correct answer using codes below-

- (a) 1 and 2
- (b) 2 and 3
- (c) 1 and 3
- (d) All of the above

**Q92.** Consider the following statements regarding Easterly Jet Stream-

1. Winter rain and heat storms in north-western plains and occasional heavy snowfall in hilly regions are caused by these disturbances.

2. This helps in the sudden onset of the south-west monsoons.

Choose the correct answer using codes below-

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q93.** Minsk I and Minsk II Peace agreements are associated with which of the following regions are in conflict?

- (a) Kachin
- (b) Tigray
- (c) Ukraine
- (d) Darfur

**Q94.** Consider the following statements regarding the W Boson particle

1. The W boson is a charged force-carrying particle that transmits the weak force

2. It switches protons into neutrons

3. They have a significant role in the burning of stars

Which of the statements given above is/are correct?

- (a) 1 and 2
- (b) 2 and 3
- (c) 1 and 3
- (d) 1,2 and 3

**Q95.** Consider the following statements regarding Tight oil:

1. Tight oil' is found in smaller batches and at a greater depth than the conventional crude deposits.

2. Currently, there is no large-scale commercial production of tight oil in India.

3. The hydraulic fracking process is utilized for the production of Tight oil.

Which of the statements given above is/are correct?

- (a) 1 and 2
- (b) 2 and 3
- (c) 1 and 3
- (d) 1,2 and 3

**Q96.** "Prime Editing" is related to which of the following?

- (a) Blockchain Technology
- (b) Artificial Intelligence
- (c) Genetic engineering Technology
- (d) Quantum Communication

**Q97.** Which of the following statements regarding the Electoral bond is incorrect?

(a) A political party hasn't encashed within 15 days into the Prime Minister's Relief Fund.

(b) The bonds will be issued in multiples of Rs 1,000 with a maximum value of 1 crore.

(c) Any party registered under section 29A of the Representation of the Peoples Act, 1950 and has secured at least one percent of the votes polled in the most recent General elections or Assembly elections are eligible to receive electoral bonds.

(d) The companies can donate only up to 7.5 percent of their average net profit to a political party and can also claim gets tax exemption on it.

**Q98.** Consider the following statements regarding Eastern swamp deer

1. It is only is only found in Assam

2. It is classified as endangered as per the IUCN list.

3. it is included under Schedule I of the Wildlife Protection Act of 1972.

Which of the statements given above is/are correct?

- (a) 1 and 2
- (b) 2 and 3
- (c) 1 and 3
- (d) 1,2 and 3

**Q99.** Consider the following statements

1. Swadesh Darshan Scheme is a Central Sector Scheme launched for the integrated development of theme-based tourist circuits.

2. The Swadesh Darshan scheme is being implemented by the Ministry of external affairs.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q100.** Consider the following statements:

1. A supermoon occurs when the orbit of the moon is close to the Earth at the same time when the moon is full.

2. An exomoon or extrasolar moon is a natural satellite that orbits an exoplanet

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

## Solutions

**S1. Ans.(c)**

**Sol.** The Mekong begins on the Tibetan Plateau and runs for more than 2,600 miles through China, Myanmar, Thailand, Laos, Cambodia, and Vietnam before emptying into the South China Sea. The capital of Laos, and the capital of Cambodia both stand on their banks.

**S2. Ans.(c)**

**Sol.** Temperatures must be above the historical average in an area for two or more days before the label "heat wave" is applied to a hot spell. But the definition can vary by region; Heat waves begin when high pressure in the atmosphere moves in and pushes warm air toward the ground. That air warms up further as it is compressed, and we begin to feel a lot hotter. The high-pressure system pressing down on the ground expands vertically, forcing other weather systems to change course. It even minimizes wind and cloud cover, making the air more stifling. This is also why a heat wave parks itself over an area for several days or longer.

**S3. Ans.(c)**

**Sol.** The wet-bulb temperature is usually lower than the dry-bulb temperature, and the difference between the two increases dramatically as the air becomes dry. The most worrying weather measurement is not the heat typically reported in forecasts but the wet-bulb temperature, which combines heat and humidity to indicate how much evaporation can be absorbed into the air. At wet-bulb temperatures above 35 degrees Celsius, we become unable to reduce our temperature via sweating and will suffer potentially fatal heatstroke after only a few hours, even with shade and water

**S4. Ans.(b)**

**Sol.** The following are the prominent mountain ranges of the world-

- \* The Andes (South America) – 7,000 km
- \* The Rockies (US) – 4,830 km
- \* The Great Dividing Range (Australia) – 3,500 km
- \* The Ural Mountains – 2,500 km
- \* The Atlas Mountains – 2,500 km
- \* The Appalachian Mountains – 2,414 km
- \* The Himalayas – 2,400 km
- \* The Altai Mountains – 2,000 km
- \* The Western Ghats – 1,600 km
- \* The Alps – 1,200 km

**S5. Ans.(c)**

**Sol.** Quaternary activities: They involve some of the following: the collection, production, and dissemination of information or even the production of information. Quaternary activities center around research, development, and may be seen as an advanced form of services involving specialized knowledge, technical skills, and administrative competence.

Quinary activities: The services that focus on the creation, re-arrangement, and interpretation of new and existing ideas; data interpretation and the use and evaluation of new technologies. Often referred to as 'gold collar' professions, they represent another subdivision of the tertiary sector representing special and highly paid skills of senior business executives, government officials, research scientists, financial and legal consultants, etc. Their importance in the structure of advanced economies far outweighs their numbers. The basic difference between quaternary and quinary activities: Quinary sector represents the highest category of decision-makers who formulate policy guidelines whereas Quaternary is part of the tertiary sector of the economy which is knowledge-based.

**S6. Ans.(b)**

**Sol.** Due to greenhouse gas emissions, global warming is already 1°C higher than the pre-industrial levels. There is vast evidence that this has serious consequences for ecosystems and human being. The IPCC's special report on Oceans and Cryosphere (published in 2019) reveals that the ocean is 0.8 degrees warmer than in the preindustrial age. It is more acidic, and less productive because of the carbon emission that was sunk by the oceans. The impact of ocean warming would be an increase in the frequency of tropical cyclone winds and rainfall, as well as an increase in extreme waves, all of which would be accompanied by a rise in relative sea level.

**S7. Ans.(c)**

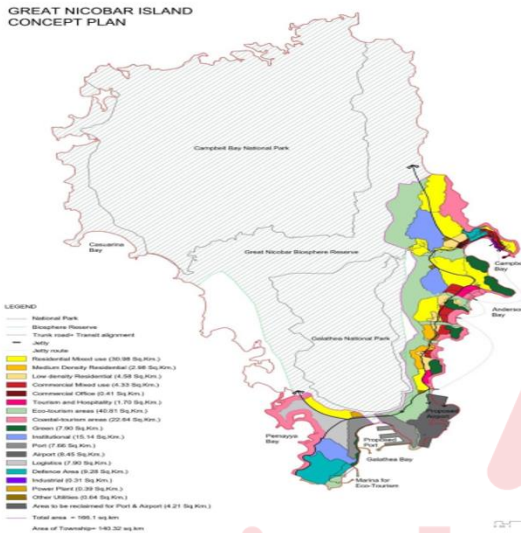
**Sol.** Open-pit mining, also known as open-cast mining is a surface mining technique of extracting rock or minerals from the earth from an open-air pit, sometimes known as a borrow. This form of mining differs from extractive methods that require tunnelling into the earth, such as long wall mining. Open-pit mines are used when deposits of commercially useful ore or rocks are found near the surface. Most of the coal production in India comes from opencast mining, contributing over 83% of the total production

**S8. Ans.(c)**

**Sol.** The 1953 Korean Armistice Agreement which ended the Korean War specified that the five islands including **Baengnyeong Island** would remain under United Nations Command and South Korean control. This agreement was signed by both North Korea and the United Nations Command.

**S9. Ans.(d)**

**Sol.**



**S10. Ans.(d)**

**Sol.** Kyushu is the southwesternmost of Japan's main islands,



**S11. Ans.(c)**

**Sol.** Afghanistan is bordered by Pakistan to the east and south; Iran to the west; Turkmenistan, Uzbekistan, and Tajikistan to the north; and China to the northeast.

**S12. Ans.(d)**

**Sol.** The Mekong-Ganga Cooperation (MGC) is an initiative by six countries – India and five ASEAN countries, namely, Cambodia, Lao PDR, Myanmar, Thailand, and Vietnam for cooperation in tourism, culture, education, as well as transport and communications. So, both 1 and 2 are wrong.

Both the Ganga and the Mekong are civilizational rivers, and the GC initiative aims to facilitate closer contacts among the people inhabiting these two major river basins.

India-Myanmar-Thailand Trilateral Highway project and Hanoi Programme of Action (HPA) are some of the key projects being monitored by MCG.

**S13. Ans.(b)**

**Sol.** Shankaracharya wrote the commentaries on the Upanishads, Brahmsutras and the Bhagvad Gita. His philosophical views came to be known as Advaita Vedanta. Advaita literally means non-dualism or belief in one reality. So, option (b) is correct.

**S14. Ans.(d)**

**Sol.** Vaisheshika school was also responsible for the beginning of physics in Indian subcontinent. They are considered to be the propounders of the mechanical process of formation of this Universe. Thus, option D is correct.

**S15. Ans. (d)**

**Sol.** A unique feature of this school is the presence of step-tank, known as surya-kund in the proximity of the temple. The steps of the tank are full of small temples. There are wooden carvings present in these temples. Thus, option D is correct

**S16. Ans.(d)**

**Sol.** The Maurya period was marked by innovative administrative changes and an elaborate administration. The king appointed a council of ministers to assist him in day-to-day administration called Mantriparishad. Amatyas (all high officials, counsellors, and executive heads of departments/ministers) were the civil servants to look after day-to-day administration. There were also bodies of Nikayas (trained officials) who looked after the ordinary affairs of the realm. Among all the executive officials, Samahartri or Samharta (chief collector of revenue) was the most important and his responsibility involved maintaining accounts and collection of taxes from all types of sources. Most of the superintendents mentioned above functioned on his orders. The provinces were further divided into divisions headed by Pradeshikas, who had no advisory council. Divisions were divided into districts under officials called Rajukas. He was assisted by Yuktas (clerks) in accounting, secretarial, and other miscellaneous works.



**S17. Ans.(b)**

**Sol.** The Indo-Greeks were the first rulers in India to issue coins (gold, silver, copper, and nickel) which can be definitely attributed to any dynasty and were also the first to issue gold coins in India (which increased in number under the Kushanas). The Central Asian conquerors introduced new styles in administration. For instance, the Indo-Greeks introduced the practice of military governorship wherein they appointed military governors called strategos while the Kushanas introduced the 'Satrap' system of government, under which the empire was divided into numerous satrapis and each satrapi was placed under the rule of a satrap. These systems led to the development of a feudatory organisation wherein these Central Asian conquerors established their supremacy over numerous small princes who regularly paid tributes to them.

The Satavahanas assumed the title of Dakshinapathapati (Lord of the Dakshinapatha). The Satavahanas are also known in history for starting the practice of giving royal grants of land to Brahmanas and Buddhist monks, including those associated with tax exemptions. It is mentioned in one of the inscriptions of Gautamiputra Satkarni that the land gifted to the Brahmanas was not to be entered or disturbed by the royal troops, was not to be dug for salt, was free from the control of state officials, and was to enjoy all sorts of parihas (immunities). They also promoted Buddhism by granting land to the monks.

**S18. Ans.(b)**

**Sol.** While Dhrupad might have had an impetus for popularity even by the 14th century, it finds a blossoming period from 15th century onwards to about the 18th century. It is a prominent form of Hindustani music that developed in northern India. In structure dhrupad has two parts, the anibaddha section and the sanchari dhrupad proper. The first is free alap. The dhrupad proper is a song in four parts: the asthayee, the antara, the Sanchari and the abhoga. The essential quality of the dhrupadic approach is its sombre atmosphere and emphasis on rhythm. During these centuries we find the most respected and renowned singers and patrons of this form. There was Man Singh Tomar, the Maharaja of Gwalior. It was he who was mainly responsible for the enormous vogue of dhrupad. There were Baiju, Bakshu and others. Swami Haridasa a hermit of Brindavan was not only a dhrupadiya, but one of the most central figures in the Bhakti cult in the Northern areas of India. By tradition he was the guru of Tansen, one of the best known dhrupad singers and one of the nine jewels of Emperor Akbar's court.

**S19. Ans.(c)**

**Sol.** Some provisions of the Montego Chelmsford Reforms of 1919 include-

\*The Act separated for the first time the provincial and central budgets, with provincial legislatures being authorised to make their budgets.

Under the 1919 Act, the Indian Legislative Council at the Centre was replaced by a bicameral system consisting of a Council of State (Upper House) and a Legislative Assembly (Lower House). Government of India Act, 1935 introduced bicameralism in six out of eleven provinces.

\*The 1919 Act divided the provincial subjects into two parts - transferred and reserved. The transferred subjects were to be administered by the governor with the aid of ministers responsible to the legislative Council. The reserved subjects, on the other hand, were to be administered by the governor and his executive council without being responsible to the legislative Council.

\*Under 1919 Act, Diarchy was introduced in the provinces to meet two main aims. Firstly, to give responsibility to popular representatives, and secondly, to meet the condition of political backwardness and administrative inexperience of the Indian people.

\*The principle of communal representation was extended with separate electorates for Sikhs, Christians and Anglo-Indians, besides Muslims.

\*A High Commissioner for India was appointed with some of the functions hitherto performed by the Secretary of State for India were transferred to the high commissioner.

\*The Secretary of State for India who used to get his pay from the Indian revenue was now to be paid by the British Exchequer.

\*It provided that a Royal Commission would be appointed ten years after the Act to report on its working.



**S20. Ans.(d)**

**Sol.** The Royal Commission on Labour or the Whitley Commission on Labour was set up in 1929 to inquire into the existing conditions of labour in industrial undertakings and plantations in India. The Commission was chaired by John Henry Whitley. The commission submitted its report in 1931.

**S21. Ans.(b)**

**Sol.** Lakhudiyar rock shelters on banks of the River Suyal at Lakhudiyar, Uttarakhand bear prehistoric paintings. Lakhudiyar literally means one lakh caves. The paintings here can be divided into three categories: man, animal and geometric patterns in white, black and red ochre. Humans are represented in stick-like forms. One of the interesting scenes depicted here is of hand-linked dancing human figures. There is some superimposition of paintings. The earliest are in black; over these are red ochre paintings and the last group comprises white paintings. A long-snouted animal, a fox and a multiple legged lizard are the main animal motifs. Wavy lines, rectangle-filled geometric designs, and groups of dots can also be seen here.

**S22. Ans.(c)**

**Sol.** Paintings of the Nayaka dynasty in the seventeenth and eighteenth centuries are seen in Thiruparakunram, Sreerangam and Tiruvarur in Tamil Nadu. Early paintings depict scenes from the life of Vardhaman Mahavira. The Nayaka paintings depict episodes from the Mahabharata and the Ramayana and also scenes from Krishna-leela. In Tiruvarur, there is a panel narrating the story of Muchukunda. In Chidambaram, there are panels of paintings narrating stories related to Shiva and Vishnu - Shiva as Bhikshatana Murti, Vishnu as Mohini, etc. In the Sri Krishna temple at Chengam in Arcot District there are 60 panels narrating the story of the Ramayana which represent the late phase of Nayaka paintings. The examples cited above suggest that Nayaka paintings were more or less an extension of the Vijayanagara style with minor regional modifications and incorporations. The figures, mostly in profile, are set against a flat background. Male figures are shown slim-waisted but with less heavy abdomen as compared to those in Vijayanagara. The artist, as in the previous centuries and following traditions, has tried to infuse movement and make the space dynamic. The painting of Nataraja at Tiruvalanjuli is a good example.

**S23. Ans.(a)**

**Sol.** The village Amadubi situated in the Eastern part of Jharkhand is also called the village of Paitkar. 'Paitkar' is the traditional painting of this village, an art form which is present in the village from ancient times. The Paitkar paintings are also popularly known as the scroll paintings of Jharkhand. This painting form is popular in West Bengal, Bihar, Orissa and other adjacent states of India. The tribal artists in Jharkhand have fostered this art of scroll painting that has long been used in storytelling performances and in socio-religious customs. The paintings that belong to this form have a common subject of what happens to human life after death. This scroll painting also mirrors the Bengali and Jharkhand daily life. The historical lineage of the Paitkar painting can be traced to the culture associated with the state of West Bengal, but now the art is practiced only in Amadubi village. Paitkar painting may be considered as the variable of Pata painting.

**S24. Ans.(a)**

**Sol.** Musical forms of Carnatic Music:

\*Gitam: It is the simplest type of composition with an easy and melodious flow of raga.

\*Suladi: The Suladi is a talamalika, the sections being in different talas.

\*Svarajati: It consists of three sections, called Pallavi, Anupallavi and Charanam. The theme is either devotional, heroic or amorous.

\*Jatisavaram: It is noted for the use of rhythmical excellence and the Jati pattern.

\*Varnam: It is the only form which does not find a counterpart in Hindustani music. This form is called a Varnam because many of the Svara group patterns called 'Varnas' in ancient music are interwoven in its texture.

\*Kirtanam: It is valued for the devotional content or Bhakti Bhava of the Sahitya.

\*Kriti: It developed from the Kirtanam. It is a highly evolved musical form.

\*Pada: Padas are scholarly compositions in Telegu and Tamil and are composed mainly as dance forms.

\*Tillana: It corresponding to the Tarana of Hindustani music, is a short and crisp form. It is mainly a dance form, but on account of its brisk and attractive music.

\*Javali: A javali is a composition belonging to the sphere of light classical music. Sung both in concert programmes and dance concerts, the javalis are popular because of the attractive melodies in which they are composed.

\*Pallavi: This is the most important branch of creative music. It allows improvisation.

There are ten main styles of singing in Hindustani music like the Dhrupad, Khayal, Tappa, Chaturanga, Tarana, Sargam, Thumri and Ragasagar, Hori and Dhamar.

**S25. Ans.(c)**

**Sol.** During the Second World War, the British government had said that any move towards an Indian statehood would be possible only if the Indian National Congress (INC) and the Muslim League resolve their differences. The League was increasingly demanding a separate nation of Pakistan for the Muslims whereas the INC was against the partitioning of the country. To break this deadlock, C. Rajagopalachari, INC member who was close to Mahatma Gandhi, proposed a set of plans called the Rajagopalachari Formula or C R Formula.

\*The Muslim League would join hands with the INC to demand independence from the British. Both parties would cooperate and form a provisional government at the centre.

\*After the war, a commission would be entrusted with the task of demarcating Muslim-majority areas and a plebiscite to be held in those areas, where all the inhabitants (Muslims and non-Muslims) would vote on the basis of adult suffrage whether to form a separate sovereign nation or not. Therefore, it had implicit provision for creation of a separate state of Pakistan.

\*In case of partition, joint agreements to be made for the safeguarding of defence, communications and commerce.

\*The above terms to come to fruition only if Britain transfers full powers to India

\*However, the talks were a failure as Jinnah had objected to the proposal. He did not want the entire population of the Muslim majority areas to vote on the plebiscite, but only the Muslim population in those areas. He was also against the idea of a common centre.

\*The Sikhs also looked upon the formula unfavourably because the formula meant a division of Punjab and although the Sikhs were a big chunk of the population, there were not in a majority in any of the district.

\*V D Savarkar and Shyama Prasad Mukherjee of the Hindu Mahasabha and Srinivas Sastri of the National Liberal Federation were also against the C R Formula. The CR formula was evolved with the approval of Mahatma Gandhi for Congress. This was the first acknowledgement by a Congress person about the inevitability of the partition of the country.

**S26. Ans.(d)**

**Sol.** On January 25, 1931, Gandhi and all other members of the Congress Working Committee (CWC) were released unconditionally. The CWC authorised Gandhi to initiate discussions with the Viceroy. As an outcome of these discussions, a pact was signed between the Viceroy, representing the British Indian Government, and Gandhi,

representing the Indian people, in Delhi on February 14, 1931. This Delhi Pact, also known as the Gandhi-Irwin Pact. The Pact was signed by Gandhiji on behalf of the Congress and by Lord Irwin on behalf of the Government, a procedure that was hardly popular with officialdom as it placed the Congress on an equal footing with the Government. Among other things, the Government also conceded the right to make salt for consumption to villages along the coast, as also the right to peaceful and non-aggressive picketing. The Viceroy turned down two of Gandhi's demands—(i) public inquiry into police excesses and (ii) commutation of Bhagat Singh and his comrades' death sentence to life sentence.

**S27. Ans.(d)**

**Sol.** The Government of India immediately declared India to be at war with Germany without consulting the Congress or the elected members of the central legislature. All India Congress Committee (AICC) passed a resolution which while unequivocally condemning the Nazism and Fascism, declared that India could not be party to a war which was ostensibly being fought for democratic freedom while that freedom was being denied to her. Britain should declare how her war aims would be implemented in India at the end of the war. Linlithgow, the Viceroy, tried to use the Muslim League and the Princes against the Congress and refused to define Britain's war aims beyond stating that Britain was resisting aggression. Consequently, the Congress Working Committee rejected the Viceroy's statement as a reiteration of the old imperialist policy, decided not to support the War, and called upon the Congress ministries to resign as a protest, and the Congress ministries resigned.

**S28. Ans.(b)**

**Sol.** The War Conference was held to seek Indian participation in the war efforts. The conference was convened in 1917 when the war had entered a critical phase. Germany had inflicted crushing defeats on both the British and French troops in France. Russia's war effort had broken down and the Russian Revolution was threatening its Czarist Government. At that moment, Indian support became crucial for the British Empire. Overall around 1.3 million Indian troops had served in World War. The Conferences existed concurrently with the Imperial War Cabinet, which was a British body for wartime coordination. It had representatives from all British colonies like Canada, India etc. It recognized the contributions of colonies to war efforts. It was convened in Delhi under Lord Chelmsford who was the Viceroy then. It was held to persuade national leaders to help the government in war purposes. It mainly included recruiting soldiers for participating in the war. Gandhiji attended the conference and accepted to give his services. He later started an active recruiting campaign in Kaira (Kheda) District. Gandhiji believed that only the absolutely unconditional and whole-hearted co-operation with the government on the part of educated India will bring Swaraj.

**S29. Ans. (a)**

**Sol.** Formation of Forward Bloc: The Forward Block was formed on May 3, 1939, within the Congress, by Netaji Subhas Chandra Bose, who had resigned from the presidency of the Indian National Congress.

August Offer: It was made on 8 August 1940 by Lord Linlithgow to secure active cooperation of Indians in the war.

Day of Deliverance: It was a celebration announced by the Muslim League on 22 December 1939 to celebrate the resignation of Congress ministries to protest against involving India into the War by British without the consent of Indian leadership.

**S30. Ans. (c)**

**Sol.** Apart from British obduracy, there were various other factors that made a struggle both inevitable and necessary. They are:

\*Popular discontent, a product of rising prices and war-time shortages, was gradually mounting

\*Failure of Cripps Mission

\*High-handed government actions such as the commandeering of boats in Bengal and Orissa to prevent their being misused by the Japanese had led to considerable anger among the people.

\*Combined with this was the impact of the manner of the British evacuation from Malaya and Burma. It was common knowledge that the British had evacuated the white residents and generally left the subject people to their fate. Letters from Indians in South-East Asia to their relatives in India were full of graphic accounts of British betrayal and their being left at the mercy of the dreaded Japanese.

\*In fact, one major reason for the leadership of the national movement thinking it necessary to launch a struggle was their feeling that the people were becoming demoralized and, that in the event of a Japanese occupation, might not resist at all, In order to build up their capacity to resist Japanese aggression, it was necessary to draw them out of this demoralized state of mind and convince them of their own power. Gandhiji, as always, was particularly clear on this aspect.

**S31. Ans. (d)**

**Sol.** At the Calcutta Session of Congress (December 1928), the Nehru Report was approved but the younger elements led by Nehru, Subhash and Satyamurthy expressed their dissatisfaction with the dominion status as the goal of Congress and considered as a step backward. Not only were the Muslim League, the Hindu Mahasabha and the Sikh communalists unhappy about the Nehru Report. The younger sections of the Congress, led by Jawaharlal Nehru and Subhash Bose, were angered and rejected the Congress' modified goal and jointly set up the Independence for India

League. They demanded that the Congress adopt Purna Swaraj or complete independence as its goal. Jawahar Lal Nehru defined the Independence for India League as being representative of the "the left wing element in the country and the congress." Its programme was fired by the ideology of socialism. The first meeting of the Independence league was held at Delhi, where a Central Council of twenty members was formed to help the organization of its works in the respective province. Maulana Abdul Bari from Bihar became its member. The Independence of India Leaguers decided not to participate in the framing of the constitution and proposed the Congress to consider proper and necessary steps in favour of complete independence. They were keenly interested in the settlement of the communal problem and agreed with the point of view which was recommended by Nehru Committee report and of the All Parties Conference at Lucknow. Provincial branches of the Independence League were set up all over the country and much publicity was given through speeches and conferences to the socialist ideology.

**S32. Ans. (c)**

**Sol.** Ramprasad Bismil, Jogesh Chatterjea and Sachindranath Sanyal met in Kanpur in October 1924 and founded the Hindustan Republican Association (or Army) to organize armed revolution to overthrow colonial rule and establish in its place a Federal Republic of the United States of India whose basic principle would be adult franchise. Its founding council, in its meeting in October 1924, had decided to preach social revolutionary and communistic principles. Its main organ was 'The Revolutionary'. It had proposed the nationalization of the railways and other means of transport and large-scale industries such as steel and shipbuilding. The HRA had also decided to start labour and peasant organizations and to work for an organized and armed revolution.



**S33. Ans. (b)**

**Sol.** Abanindranath Tagore, the nephew of Rabindranath Tagore, was one of the most prominent artists of India. He was the first major supporter of swadeshi values in Indian art. Abanindranath first created the 'Indian Society of Oriental Art' and later went on to establish Bengal school of art. His idea of modernizing Mughal and Rajput paintings eventually gave rise to modern Indian painting, which took birth at his Bengal school of art. His sole aim for establishing the school was to counter the English influence on Indian artists. He did that by incorporating Indian elements in his works and achieved success when British art institutions accepted to teach and propagate his style of works in their organizations. He believed that Indian art and its art forms gave importance to spirituality as opposed to the West which stressed on materialism. In his later works, Abanindranath started integrating Chinese and Japanese calligraphic traditions into his style. The intention behind this move was to construct an amalgamation of the modern pan-Asian artistic tradition and the common elements of Eastern artistic and spiritual culture. Ganesh Janani, Bharat Mata, The Victory of Buddha are some of his notable paintings.

**S34. Ans. (b)**

**Sol.** The NCM began in January 1921. A year into the Non-Cooperation Movement, Mahatma Gandhi announced the Tilak Swaraj Fund. The Fund, a homage to Bal Gangadhar Tilak on his first death anniversary, aimed at collecting Rs 1 crore to aid India's freedom struggle and resistance to the British rule. The AICC, at its session at Vijayawada in March 1921, directed that for the next three months. Congressmen should concentrate on collection of funds, enrolment of members and distribution of charkhas. As a result, a vigorous membership drive was launched and though the target of one crore members was not achieved, Congress membership reached to around 50 lakhs. The Tilak Swaraj Fund was oversubscribed, exceeding the target of rupees one crore.

**S35. Ans.(b)**

**Sol.** 1) A joint sitting can be called over any ordinary bill or any bill which is not a money bill. **Statement 1 and 2 are correct.**

2) Financial bills that exclude the matters under article 110 are just ordinary bills and joint sitting can be called for them.

3) Further, Joint sitting can't be called for any kind of money bill. **So statement 3 is incorrect.**

Note that

Financial bills are of two types.

Financial Bills -I which include the matters under article 110. It is a kind of money bill.

Financial Bills-II which do not include matters under article 110. It is a kind of Ordinary bill

**S36. Ans.(c)**

**Sol.** a bill is not to be deemed to be a money bill by reason only that it provides for:

- 1) the imposition of fines or other pecuniary penalties, or
- 2) the demand or payment of fees for licenses or fees for services rendered; or
- 3) the imposition, abolition, remission, alteration, or regulation of any tax by any local authority or body for local purposes. **Statement (c) is incorrect.**

**S37. Ans.(b)**

**Sol.** The Fourth Schedule of the Constitution deals with the allocation of seats in the Rajya Sabha to the states and union territories 2.

The maximum strength of the Rajya Sabha is fixed at 250, out of which, 238 are to be the representatives of the states and union territories (elected indirectly) and 12 are nominated by the president. At present, the Rajya Sabha has 245 members. Of these, 229 members represent the states, 4 members represent the union territories and 12 members are nominated by the president.

**S38. Ans.(d)**

**Sol.** An important purpose of a Constitution is to define the nature of a country's political system. For example, Nepal's earlier Constitution stated that the country was to be ruled by the King and his council of ministers. So, A is correct. In democratic societies, the Constitution often lays down rules that guard against this misuse of power by our political leaders. In the case of the Indian Constitution, many of these laws are contained in the section on Fundamental Rights. So, B is correct.

Another important function that a Constitution plays in a democracy is to ensure that a dominant group does not use its power against other, less powerful people or groups. Every society is prone to this tyranny of the majority. The Constitution usually contains rules that ensure that minorities are not excluded from anything that is routinely available to the majority. So, C is correct.

**S39. Ans.(a)**

**Sol.** Statement 3 comes under the Right to Freedom (Article 19).

The Right to Equality (Articles 14-18) covers several fundamental rights.

This right means that all persons shall be equally protected by the laws of the country.

It also states that no citizen can be discriminated against based on their religion, caste, or sex.

Every person has access to all public places including playgrounds, hotels, shops, etc.

The practice of untouchability has also been abolished by the Right to Equality.

The State cannot discriminate against anyone in matters of employment.

**S40. Ans.(c)**

**Sol.** The Appropriation Bill is a money bill that allows the government to withdraw funds from the Consolidated Fund of India to meet its expenses during a financial year. The government first introduces the Appropriation Bill (being a money bill) in the lower house of Parliament after discussions on Budget proposals and Voting on Demand for Grants and after passed by the Lok Sabha, thereafter sent to the Rajya Sabha.

The Rajya Sabha (Upper House) has the authority to recommend any amendments in this Bill. But, it is the privilege of the Lok Sabha to either accept or reject the recommendations made by the Rajya Sabha of Parliament. So statement (c) is incorrect.

In the case of a money bill, RS has only recommendatory power and need not be passed by RS.

**S41. Ans.(c)**

**Sol.** 1) The private member bill or generally called a private bill is a bill that can be introduced by any member of the parliament other than a minister in the ruling government. So it can be introduced by the MP of the ruling party or MP of any opposition party in the parliament. statement (a) is incorrect

2) It can be introduced only after giving a one month notice. statement (b) is incorrect

3) The president can use Absolute veto power that it can withhold or in other words, rejects the bill for giving assent. It is generally done when an MP of opposition party brings a bill and it gets passed by both the houses and council of minister advice president to not to give assent to it, Hence statement (c) is correct

4) Further, The passing of a private member bill does not affect confidence in government and it does not lead to the resignation of the parliament

There first Private member bill has been passed in the history of India which become law was the Muslim Wakfs Bill, 1952. Aimed to provide better governance and administration of wakfs, it was introduced by Syed Mohammed Ahmed Kasmi in the Lok Sabha and was passed in 1954. statement (c) is incorrect

**S42. Ans.(d)**

**Sol.** 1) Article 368 in Part XX of the Constitution deals with the powers of Parliament to amend the Constitution and its procedure. An amendment of the Constitution can be initiated only by the introduction of a bill for the purpose in either House of Parliament (Lok Sabha do not have any special privileges regarding this) and not in the state legislatures. Statement (a) and (d) are incorrect.

2) The bill can be introduced either by a minister or by a private member. Statement (b) is incorrect.

3) The Constitutional amendment bill must be passed by a two-thirds majority of the individual members of the present and voting in each house separately. Statement (c) is correct  
Note that

Any Constitutional amendment bill seeking to change any federal features of the constitution then it must be ratified by 50% of the legislatures of the states.

**S43. Ans.(c)**

**Sol.** Both the statements are correct.

He acts as the ex-officio chairman of the Indian Parliamentary Group which is a link between the Parliament of India and the various parliaments of the world. He also acts as the ex-officio chairman of the conference of presiding officers of legislative bodies in the country. statement 1 is correct.

The Speaker of the Lok Sabha decides whether a bill is money or not and his decision is final and can't be challenged in any court. statement 2 is correct

**S44. Ans.(c)**

**Sol.** 1) He can be removed only by a resolution passed by the Lok Sabha by a special majority (ie, a majority of all the then members of the House). This motion of removal can be considered and discussed only when it has the support of at least 50 members. Statements 1 and 2 are correct.

2) When a resolution for the removal of the Speaker is under consideration of the House, he cannot preside at the sitting of the House, though he may be present. However, he can speak and take part in the proceedings of the House at such a time and vote in the first instance, though not in the case of an equality of votes. Statements 3 is incorrect.

**S45. Ans.(b)**

**Sol.** The Sarkaria Commission suggested that active politicians should not be appointed governors. When the state and the center are ruled by different political parties, the governor should not belong to the ruling party at the center. Further, the retiring governors should be debarred from accepting any office of profit. In January 1999, the inter-state council decided to accept 124 recommendations of the Sarkaria Commission. In 2001 the interstate council decided that the governor, after demitting office, would be banned from returning to active politics that chief ministers on the appointment of governors, the governor can, however, become vice-president or president.

**S46. Ans.(c)**

**Sol.** A judge of the Supreme Court can be removed from his office by an order of the president. The President can issue the removal order only after an address by Parliament has been presented to him in the same session for such removal. The address must be supported by a special majority of each House of Parliament (ie, a majority of the total membership of that House and a majority of not less than two-thirds of the members of that House present and voting). Statements 3 is correct).

While the Constitution does not use the word 'impeachment', it is colloquially used to refer to the proceedings under Article 124 (for the removal of a Supreme Court judge) and Article 218 (for the removal of a High Court judge) but the procedure for removal of judges is elaborated in the Judges Inquiry Act, 1968 on the basis of proved misbehavior or incapacity. Statement 4 is incorrect.

The Act sets out the following steps for removal from office:

- 1) A removal motion signed by 100 members (in the case of Lok Sabha) or 50 members (in the case of Rajya Sabha) is to be given to the Speaker/Chairman. Statement 1 is correct
- 2) The Speaker/Chairman may admit the motion or refuse to admit it. Statement 2 is incorrect
- 3) If it is admitted, then the Speaker/Chairman is to constitute a three-member committee (made of (a) the chief justice or a judge of the Supreme Court, (b) chief justice of a high court, and (c) a distinguished jurist. to investigate the charges.
- 4) If the committee finds the judge to be guilty of misbehavior or suffering from an incapacity, the House can take up the consideration of the motion.
- 5) After the motion is passed by each House of Parliament by a special majority, an address is presented to the president for removal of the judge.
- 6) Finally, the president passes an order removing the judge.

**S47. Ans.(c)**

**Sol.** The Sixth Schedule of the Constitution provides for the administration of tribal areas in Assam, Meghalaya, Tripura, and Mizoram to safeguard the rights of the tribal population in these states. This special provision is provided under Article 244(2) and Article 275(1) of the Constitution. 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.

The governor is empowered to organize and re-organize the autonomous districts

The acts of Parliament or the state legislature do not apply to autonomous districts and autonomous regions or apply with specified modifications and exceptions.

**S48. Ans.(d)**

**Sol.** Statement 1 is incorrect: The Appropriation Bill is a money bill that allows the government to withdraw funds from the Consolidated Fund of India to meet its expenses during a financial year. The government first introduces the Appropriation Bill (being a money bill) in the lower house of Parliament after discussions on Budget proposals and Voting on Demand for Grants and after passed by the Lok Sabha, thereafter sent to the Rajya Sabha.

The Rajya Sabha (Upper House) has the authority to recommend any amendments in this Bill. But, it is the privilege of the Lok Sabha to either accept or reject the recommendations made by the Rajya Sabha of Parliament and within 14 days after being sent to Rajya Sabha it comes back to Lok Sabha where it must be passed and failing which can lead to the resignation of the government and shall call for fresh elections

Statement 2 is correct: The private member bill or generally called a private bill is a bill that can be introduced by any member of the parliament other than a minister in the ruling government. So it can be introduced by the MP of the ruling party or MP of any opposition party in the parliament. If passed in both the houses by a special majority of the total membership of the house and members passing the bill must be two-thirds of the members present and voting separately in each house the president of India can't withhold his assent or return the bill and he must give assent to the Constitutional amendment bill.

Statement 3 is correct Article 368 in Part XX of the Constitution deals with the powers of Parliament to amend the Constitution and its procedure. An amendment of the Constitution can be initiated only by the introduction of a bill for the purpose in either House of Parliament (Lok Sabha do not have any special privileges regarding this) and not in the state legislatures and prior permission of the president is not needed.

**S49. Ans. (a)**

**Sol.** Note that the right to vote is not a fundamental right it's a **Constitutional Right**.

Every constitutional right is not a fundamental right.

So the statement 1 itself is conceptually wrong.

**The statement is 2 is correct**

**fundamental Rights available only to citizens and not to foreigners are-**

Protection of language, script, and culture of minorities (Article 29).

Right of minorities to establish and administer educational institutions (Article 30).

**S50. Ans.(a)**

**Sol.** The Constitution has specified that at a joint sitting, new amendments to the bill cannot be proposed except in two cases:

- 1) those amendments that have caused final disagreement between the Houses; and
- 2) those amendments that might have become necessary due to the delay in the passage of the bill

Statement 1 is correct

The chairman of the Rajyasabha is not a member of any house so he can't vote in joint sitting and even he does not get the opportunity to preside the joint sitting session. The chairman of Rajya sabha is although not a member of the Rajyasabha he can put his casting vote only when voting is carried out in Rajya sabha only for any bill and he is presiding the session and equality of votes occur. Statement 2 is incorrect

**S51. Ans.(b)**

**Sol.** At present, the Public Accounts Committee consists of 22 members (15 from the Lok Sabha and 7 from the Rajya Sabha. The function of the committee is -

\* To examine the annual audit reports of the comptroller and auditor general of India (CAG), which are laid before the Parliament by the President.

\* To examine the appropriation accounts and the financial accounts of the Union government and any other accounts laid before the Lok-Sabha

**S52. Ans.(a)**

**Sol.** All over the world, there is a tendency in political parties towards the concentration of power in one or few leaders at the top. Parties do not keep membership registers, do not hold organizational meetings, and do not conduct internal elections regularly.

\* Ordinary members of the party do not get sufficient information on what happens inside the party.

\* They do not have the means or the connections needed to influence the decisions. As a result, the leaders assume greater power to make decisions in the name of the party.

\* Since one or few leaders exercise paramount power in the party, those who disagree with the leadership find it difficult to continue in the party. More than loyalty to party principles and policies, personal loyalty to the leader becomes more important.

**S53. Ans.(b)**

**Sol.** Statement 1 is incorrect as equal pay for equal work for both men and women is provided under Article 39(d) in Directive Principles of the State Policy under Part IV of the Constitution. Under Article - 340 of the Indian constitution, it is obligatory for the government to promote the welfare of the Other Backward Classes (OBC).

**S54. Ans.(d)**

**Sol.** Section C of the Forest Dwellers Act provides a transparent three-step procedure for deciding on who gets rights. Firstly, the Gram Sabha makes a recommendation, who has been cultivating land for how long, which minor forest produce is collected; etc. The Gram Sabha plays this role because it is a public body where all people participate and hence is fully democratic and transparent. The Gram Sabha's recommendation goes through two stages of screening committees- the Taluka and the District levels

**S55. Ans.(c)**

**Sol.** Sovereign Gold Bond (SGB) Scheme: SGBs are government securities denominated in grams of gold. They are substitutes for holding physical gold. Investors have to pay the issue price in cash and the bonds will be redeemed in cash on maturity. The Bond is issued by Reserve Bank on behalf of Government of India. The Bonds bear interest at the rate of 2.50 per cent (fixed rate) per annum on the amount of initial investment. Interest will be credited semiannually to the bank account of the investor and the last interest will be payable on maturity along with the principal. The Reserve Bank of India, in consultation with the Government of India, issues tranches of Sovereign Gold Bonds. The Bonds will be sold through Scheduled Commercial banks(except Small Finance Banks and Payment Banks), Stock Holding Corporation of India Limited (SHCIL), designated post offices, and recognised stock exchanges viz., National Stock Exchange of India Limited and Bombay Stock Exchange Limited.

Benefits: The Sovereign Gold Bonds will be available both in demat and paper form. The tenor of the bond is for a minimum of 8 years with option to exit from 5th year. They will carry sovereign guarantee both on the capital invested and the interest. Bonds can be used as collateral for loans. Bonds would be allowed to be traded on exchanges to allow early exits for investors who may so desire. The Capital gain tax arising on redemption of SGB to an individual is exempted.

**S56. Ans.(d)**

**Sol.** Current account maintains a record of the country's transactions with other nations, in terms of trade of goods and services, net earnings on overseas investments and net transfer of payments over a period of time, such as remittances. This account goes into a deficit when money sent outward exceeds that coming inward. The current account constitutes net income, interest and dividends and transfers such as foreign aid, remittances, and donations among others. It is measured as a percentage of GDP. Current account balance measures the external strength or weakness of an economy. A current account surplus implies the country is a net lender to the rest of the world, while a deficit indicates it is a net borrower. A country with rising Current Account Deficit (CAD) shows that it has become uncompetitive, and investors are not willing to invest there. They may withdraw their investments.

**S57. Ans.(b)**

**Sol.** The Coalition for Disaster Resilient Infrastructure (CDRI) is a multistakeholder global partnership of the national governments, the UN agencies and programs, the multilateral development banks and financing mechanisms, the private sector, and the academic and knowledge institutions. It is not an intergovernmental organization.



The CDRI Secretariat is based in New Delhi, India.

A large share of the estimated fund requirements to cover the core costs over the first five years has been invested by India. There are no obligations on the part of the members to make financial contributions to the CDRI. However, at any point (during the first five years or beyond), the members of the CDRI may make voluntary financial or in-kind contributions to the CDRI, such as the assignment of the experts from the national institutions to the CDRI Secretariat, hosting of thematic workshops and meetings, and travel support.

**S58. Ans.(a)**

**Sol.** A K-shaped recovery occurs when, following a recession, different parts of the economy recover at different rates, times, or magnitudes. It describes the path of different disaggregated economic variables, such as income across different segments of society or employment in different industries, relative to one another. In India, households at the top of the pyramid are likely to have seen their incomes largely protected, and savings rates forced up during the lockdown. Meanwhile, households at the bottom are likely to have witnessed permanent hits to jobs and incomes. COVID has triggered an effective income transfer from the poor to the rich, this will be demand-impeding because the poor have a higher marginal propensity to consume (i.e.) they tend to spend (instead of saving) a much higher proportion of their income. The prospects of a K-shaped recovery from COVID are increasing both in India and across the world.

**S59. Ans.(b)**

**Sol.** Higher Education Financing Agency (HEFA) is a joint venture of the Ministry of Education, the Government of India, and Canara Bank. HEFA is registered under Section 8 [Not-for-profit] under the Companies Act 2013 as a Union Govt company and as Non-a deposit-taking NBFC with RBI. Statement 2 is correct. HEFA Vision: To enable India's premier educational institutions to excel and reach the top in global rankings by financing and building world-class infrastructure including R&D Infra. HEFA Mission: To provide timely finance at competitive interest rates for capital assets creation in India's educational institutions and supplement it with grants by channelizing CSR funds from the corporate and donations from others.

**S60. Ans.(b)**

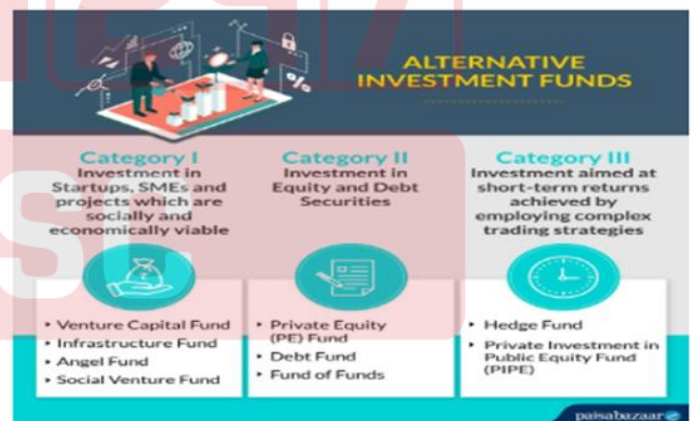
**Sol.** An angel investor (also known as a private investor, seed investor or angel funder) is a high-net-worth individual who provides financial backing for small startups or entrepreneurs, typically in exchange for ownership equity in the company. Often, angel investors are found among an entrepreneur's family and friends. The funds that angel investors provide may be a one-time investment to help the business get off the ground or an ongoing injection to support and carry the company through its difficult early stages.

**S61. Ans.(d)**

**Sol.** The Agreement on Trade-Related Investment Measures (TRIMs) are rules that are applicable to the domestic regulations a country applies to foreign investors, often as part of an industrial policy. The agreement, concluded in 1994, was negotiated under the WTO's predecessor, the General Agreement on Tariffs and Trade (GATT), and came into force in 1995. The agreement was agreed upon by all members of the World Trade Organization. Trade-Related Investment Measures is one of the four principal legal agreements of the WTO trade treaty. TRIMs are rules that restrict preference of domestic firms and thereby enable international firms to operate more easily within foreign markets. Policies such as local content requirements and trade balancing rules that have traditionally been used to both promote the interests of domestic industries and combat restrictive business practices are now banned.

**S62. Ans.(d)**

**Sol.** Alternative Investment Fund (AIF) refers to an investment which differs from conventional investment avenues such as stocks, debt securities, etc. Alternative Investment Fund is described under Regulation 2(1) (b) of the Regulation Act, 2012 of Securities and Exchange Board of India (SEBI). AIF can be established in the form of a company or a corporate body or a trust or a Limited Liability Partnership (LLP). Generally, high net worth individuals and institutions invest in Alternative Investment Funds as it requires a high investment amount, unlike Mutual Funds.



**S63. Ans.(d)**

**Sol.** The currency deposit ratio (cdr) is the ratio of money held by the public in currency to that they hold in bank deposits.  $CDR = CU/DD$ . If a person gets Re 1 she will put Rs  $1 / (1 + cdr)$  in her bank account and keep Rs  $cdr / (1 + cdr)$  in cash. It reflects people's preference for liquidity. It is a purely behavioral parameter which depends, among other things, on the seasonal pattern of expenditure. For example, CDR increases during the festive season as people convert deposits to cash balance for meeting extra expenditure during such periods.

**S64. Ans.(b)**

**Sol.** The main difference between revenue receipts and capital receipts is that in the case of revenue receipts, government is under no future obligation to return the amount, i.e., they are non-redeemable. But in case of capital receipts which are borrowings, government is under obligation to return the amount along with Interest. Capital receipts may be debt creating or non-debt creating. Examples of debt creating receipts are—Net borrowing by government at home, loans received from foreign governments, borrowing from RBI. Examples of non-debt capital receipts are—Recovery of loans, proceeds from sale of public enterprises (i.e., disinvestment), etc. These do not give rise to debt.

**S65. Ans.(d)**

**Sol.** Hard currency refers to money that is issued by a nation that is seen as politically and economically stable. Hard currencies are widely accepted around the world as a form of payment for goods and services and may be preferred over the domestic currency. A hard currency is expected to remain relatively stable through a short period of time, and to be highly liquid in the forex or foreign exchange (FX) market. The most tradable currencies in the world are the U.S. dollar (USD), European euro (EUR), Japanese yen (JPY), British pound (GBP), Swiss franc (CHF), Canadian dollar (CAD) and the Australian dollar (AUD). All of these currencies have the confidence of international investors and businesses because they are not generally prone to dramatic depreciation or appreciation.

**S66. Ans.(a)**

**Sol.** The government recently launched a new series for Consumer Price Index — Industrial Workers (CPI-IW) changing the base year to 2016 from 2001. The CPI-IW is primarily used to regulate the dearness allowance of government employees and the workers in the industrial sectors. It is also used in the determination and revision of minimum wages in scheduled employments. The new series is more representative in character and reflects the latest consumption pattern of the industrial workers. Labour Bureau, a unit of the labour ministry, has been compiling and releasing CPI-IW numbers since its inception in 1946. The base year for inflation gauges is typically changed from time to time to capture the complex churnings in the economy.

**S67. Ans. (c)**

**Sol.** IFC—a sister organization of the World Bank and member of the World Bank Group—is the largest global development institution focused exclusively on the private sector in developing countries. The World Bank Group has set two goals for the world to achieve by 2030: end extreme poverty and promote shared prosperity in every country. Its functions include:

- It offers an array of debt and equity financing services and helps companies face their risk exposures, while refraining from participating in a management capacity.
- The corporation also offers advice to companies on making decisions, evaluating their impact on the environment and society, and being responsible.
- It advises governments on building infrastructure and partnerships to further support private sector development.

Since 2009, the IFC has focused on a set of development goals that its projects are expected to target. Its goals are to increase sustainable agriculture opportunities, improve healthcare and education, increase access to financing for microfinance and business clients, advance infrastructure, help small businesses grow revenues, and invest in climate health.

**S68. Ans.(d)**

**Sol.** The main purpose of the capital reserve is to enable the RBI to meet any financial emergency situation out of liquidity crisis etc., – on its own. Capital actually indicate the ready funds available with the RBI to manage own business. The RBI can consider this as a financial capacity while delivering some action like liquidity injection. When your purse is big or assets are strong, your readiness to provide funds during a crisis also will be big. There are five components in the RBI's capital reserve.

- ☑ Contingency Fund (CF)
- ☑ Asset Development Fund (ADF)
- ☑ Currency and Gold Revaluation Account (CGRA)
- ☑ Investment Revaluation Account (IRA) and
- ☑ Foreign Exchange Forward Contracts Valuation Account (FCVA).

The first two (CF and ADF) are Funds created to meet specific purposes and provisions are made yearly to add money to these funds. The other three (CGRA, IRA and FCVA) are valuation accounts just shows the gain or losses in foreign exchange, government securities or foreign currency contracts handled by the RBI.

**S69. Ans.(d)**

**Sol.** Merchant Discount Rate (alternatively referred to as the Transaction Discount Rate or TDR) is the sum total of all the charges and taxes that a digital payment entails. For instance, the MDR includes bank charges, which a bank charges customers and merchants for allowing payments to be made digitally. Similarly, MDR also includes the processing charges that a payments aggregator has to pay to online or mobile wallets or indeed to banks for their service.

**S70. Ans.(c)**

**Sol.** In a breakthrough in the global fight for malaria, scientists have wiped out an entire population of malaria-carrying mosquitoes in lab conditions using a CRiSPR gene drive technology. Gene drive technology is a genetic engineering technology that can permanently change the traits of a population or even an entire species. Gene drives are genetic elements that pass from parents to unusually high numbers of their offspring, thereby spreading quickly. Gene drives occur naturally but can also be engineered. The gene drive technology is basically designed to introduce a genetic tweak in the population of a species by altering the rules of inheritance from parent to offspring. Firstly using CRiSPR gene editing tool, a gene called 'doublesex' in female mosquitoes is disrupted. This genetic tweak of double-sex gene follows gene drive inheritance. Here the gene drive inheritance makes the female mosquitoes inherit two copies of the disrupted gene. When the female mosquitoes inherit two copies of the disrupted gene, they develop like males and are unable to bite or lay eggs.

**S71. Ans.(a)**

**Sol.** Historic missions to Venus:

Magellan – a Nasa mission that ended in 1994.

Venus Express– A European mission- focused on atmospheric science.

Akatsuki– Japanese spacecraft- focused on atmospheric science.

**S72. Ans.(d)**

**Sol.** Indian Oil Corporation Ltd (IOC) has developed winter diesel specialized fuel specifically for high altitude regions and low-temperature regions such as Ladakh, where ordinary diesel can become unusable. It remains unfrozen up to minus 33 degree celsius thus provide year-round access to snow-capped border regions. Besides a low pour point, it had higher cetane rating — an indicator of the combustion speed of diesel and compression needed for ignition— and lower sulphur content, which would lead to lower deposits in engines and better performance.

**S73. Ans. (c)**

**Sol.** It is the world's largest flying telescope

In 2020, NASA announced that SOFIA discovered water molecules (H<sub>2</sub>O) on the sun-facing side of the Moon. The site is the Clavius Crater, located in the Moon's southern hemisphere.

**S74. Ans.(c)**

**Sol.** five years.

**PM Mega Investment Textiles Parks (MITRA) scheme:**

1. The PM MITRA park will be developed by a Special Purpose Vehicle (SPV), which will be owned by the State Government and the Government of India in a Public-Private Partnership (PPP) Mode.
2. These will be set up at greenfield or brownfield sites located in different willing states.
3. 7 PM MITRA Parks with a total outlay of Rs. 4,445 crore are opened.
4. These are aimed at helping India to achieve **United Nations SDG 9:** "Build resilient infrastructure, promote sustainable industrialization, and foster innovation".
5. It is hoped that the PM MITRA Parks will have world-class industrial infrastructure which would attract **cutting edge technology** and **boost FDI and local investment in the textiles sector.**
6. The park will have two components-Development Capital Support which will provide 30% of the estimated project cost of ₹ 1,700 crores for each park with a cap of ₹ 500 crores. For brownfield projects, the support will be capped at ₹ 200 crores. Simultaneously, for the first movers or anchor investors who begin production at these parks, competitive incentive support will be provided.
7. if the investors end up spending more on setting up a plant or working out logistics, competitive incentive support will be given to offset any such expenses on a first come-first served basis to those who create at least 100 jobs. Rs 300 crore will be given for each park, which means Rs 2,100 crore will be given to these units. Maximum support of ₹ 10 crores per year for a maximum of three years will be provided to such anchor investors.

**S75. Ans.(c)**

**Sol.** NASA two missions to Venus, Earth's closest planetary neighbor, as part of its 'Discovery Program' that aims to explore and study the solar system.

The VERITAS (Venus Emissivity, Radio Science, InSAR, Topography, and Spectroscopy) mission will map the surface of the planet, study its geology, and hunt for volcanic activity, while the DAVINCI+ (Deep Atmosphere Venus Investigation of Noble gases, Chemistry, and Imaging) with its atmospheric probe, called Plus, will study the dense atmosphere of Venus to understand the trigger and evolution of the runaway greenhouse effect active on the planet.

**S76. Ans.(d)**

**Sol.** A ballistic missile follows ballistic trajectory (projectile trajectory) over most of its flight path. Unlike cruise missile which remains in same atmosphere, ballistic missile can change their atmosphere. It can travel well outside the atmosphere and then warhead detaches and falls back to the earth. With high terminal speed of around 5000m/sec, ballistic missiles have shorter time available making them harder to intercept than cruise missiles. Ballistic missiles flying over atmosphere have much longer range than possible for cruise missiles of same. However they have lower precision & high cost than cruise missiles size.

**S77. Ans.(b)**

**Sol.** MTCR is an informal association of governments that was established by G7 nations(US, UK, France, Germany, Canada, Italy, Japan) in 1987. It was created to prevent the proliferation of missile & unmanned aerial vehicle capable of carrying payload above 500kg for more than 300Km. It is a legally non-binding treaty. India became 35th member of MTCR. China, Israel & Pakistan are not members of MTCR.

**S78. Ans.(a)**

**Sol.** The Defence Space agency was established to command space assets of Army, navy and air force including military's anti satellite capability. The agency is also responsible to formulate strategies to protect India's interest in space including addressing space based threats. DSA to be headed by Air Force vice Marshall and to have personnels from three wings of armed forces. DSA will also seek input from ISRO and DRDO.

**S79. Ans.(c)**

**Sol.** Shukrayaan's mission to Venus is to study the planet for more than four years to be launched either in 2024 or 2026 during the optimal launch window (Venus is closest to the Earth), which comes about every 19 months.

**Scientific objectives of mission:**

Investigation of the surface processes and shallow subsurface stratigraphy o study solar wind interaction with Venusian Ionosphere o study the structure, composition, and dynamics of the planet's atmosphere.

**Instruments to be carried with a mission:**

- Synthetic aperture radar (SAR) to examine the Venusian surface, which is shrouded by thick clouds that make it impossible to glimpse the surface in visible light. (earlier launched on Chandrayaan-2 spacecraft)
- Swedish-Indian collaboration, the Venusian Neutrals Analyzer to examine how charged particles from the sun interact with the atmosphere of Venus. (earlier launched on the Indian Chandrayaan-1).

- Also, the instrument to examine the planet's atmosphere in infrared, ultraviolet, and submillimetre wavelengths and the presence of phosphine, and other biomarkers and locate any active volcanism could be confirmed using the orbiter's Near-Infrared Spectrometer

**S80. Ans.(c)**

**Sol.** About West Bank

- It is located on the west bank of the Jordan River and is bounded by Israel on the north, west, and south. On the east lies Jordan.
- Since the Six-Day War in 1967, West Bank has been occupied by Israel. Both Israelis and Palestinians assert their rights to the territory of the West Bank.
- Palestinians who live in the West Bank live under Israeli military rule, as well as limited self-rule.
- Also present in the West Bank are some 132 Israeli settlements and 124 unauthorized settlements, along with military outposts

**S81. Ans.(a)**

**Sol.** The term 'Unicorn' refers to the rarest of the rare startups who become Unicorns attaining a valuation of more than USD 1 billion. The Indian Startup Ecosystem, the third-largest in the world in the number of Unicorns, as of 5th May 2022, is home to 100 unicorns with a total valuation of USD 332.7 billion.

Innovation in India is not just limited to certain sectors; we have recognized startups solving problems in 56 diverse sectors with 13% from IT services, 9% from healthcare and life sciences, 7% from education, 5% from professional and commercial services, 5% agriculture, and 5% food & beverages.

**S82. Ans. (c)**

**Sol.** Eco-ducts or Eco-bridges are areas of wildlife habitat that aim to enhance wildlife connectivity that can be disrupted because of highways or logging. Usually these bridges are overlaid with planting from the area to give it a contiguous look with the landscape. Types of Eco-bridges → It includes 1. canopy bridges (usually for monkeys, squirrels and other arboreal species); 2. concrete underpasses or overpass tunnels or viaducts (usually for larger animals); 3. amphibian tunnels or culverts. Eco-bridges play a very important role in maintaining connections between animal and plant populations that would otherwise be isolated and therefore at greater risk of local extinction. Recently, Ramnagar Forest Division in Nainital district, Uttarakhand, built its first eco-bridge for reptiles and smaller mammals.

**S83. Ans. (b)**

**Sol.** CITES is an International agreement to regulate worldwide commercial trade in wild animal and plant species. It also restricts trade in items made from such plants and animals, such as food, clothing, medicine, and souvenirs. It was signed on March 3, 1973 (Hence world wildlife day is celebrated on March 3). It is administered by the United Nations Environment Programme (UNEP). Its Secretariat is located at Geneva (Switzerland). CITES is legally binding on state parties to the convention, which are obliged to adopt their own domestic legislation to implement its goals. India is a signatory to and has also ratified CITES convention in 1976.

**S84. Ans. (a)**

**Sol.** Green Rating for Integrated Habitat Assessment (GRIHA) is a rating tool that helps people assess the performance of their building against certain nationally acceptable benchmarks. It is given by the GRIHA Council, a not-for-profit society jointly setup by The Energy and Resources Institute (TERI) and the Ministry of New and Renewable Energy (MNRE) to promote green buildings in India. The system has been developed to help 'design and evaluate' new buildings (buildings that are still at the inception stages). A building is assessed based on its predicted performance over its entire life cycle. Parameters used:

- \*Site selection and planning
- \*Conservation and efficient utilization of resources
- \*Building operation and maintenance
- \*Innovation points.

This system, along with the activities and processes that lead up to it, benefits the community with the improvement in the environment by reducing GHG (greenhouse gas) emissions, reducing energy consumption and the stress on natural resources.

**S85. Ans. (d)**

**Sol.** The Pobitora Wildlife Sanctuary is situated in the flood plains of River Brahmaputra in the district of Morigaon. It has the highest density of one-horned rhinos in the world and second highest concentration in Assam after Kaziranga National Park. It is often called 'Mini Kaziranga' due to similar landscape and vegetation. In 1987, Pobitora was declared a wildlife sanctuary. The wildlife sanctuary is home to endangered one-horned rhinoceros and the other mammals such as Leopard, Leopard cat, Fishing cat, Jungle cat, Feral Buffalo, Wild pigs, Chinese pangolins, etc. It is an Important Bird Area and home for more than 2000 migratory birds and various reptiles. About 72% of Pobitora Sanctuary consists of wet savannah of *Arundo donax* and *Saccharum*. The remaining area is covered by water bodies.

**S86. Ans. (b)**

**Sol.** The Montreux Record is a register of wetland sites on the List of Wetlands of International Importance where changes in ecological character have occurred, are occurring, or are likely to occur as a result of technological developments, pollution or other human interference. It is maintained as part of the Ramsar List. At present, two wetlands of India are in Montreux Record: Keoladeo National Park (Rajasthan) and Loktak Lake (Manipur). Chilika Lake (Odisha) was placed in the record but later removed from it. Ramsar Convention on Wetlands is an intergovernmental treaty adopted in 1971 in the Iranian city of Ramsar, on the southern shore of the Caspian Sea. It came into force for India on 1st February, 1982. Those wetlands which are of international importance are declared as Ramsar sites. The Convention's mission is "the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world."

**S87. Ans. (d)**

**Sol.** Major Protected Areas in Odisha-  
National Parks →

- \*Bhitarkanika National Park
- \*Simlipal National Park

Wildlife Sanctuaries →

- \*Badrama WLS
- \*Chilika (Nalaban) WLS
- \*Hadgarh WLS
- \*Kotagarh WLS
- \*Nandankanan WLS
- \*Lakhari Valley WLS
- \*Gahirmatha (Marine) WLS
- \*Satkosia Tiger Reserve

**S88. Ans. (d)**

**Sol.** Brute force acquisition can be performed by 3rd party passcode brute force tools that send a series of passcodes/passwords to the mobile device. This technique uses trial and error in an attempt to create the correct combination of passwords or PINs to authenticate access to the mobile device.

**S89. Ans. (b)**

**Sol.** Hydrogen (H<sub>2</sub>) is an alternative fuel that can be produced from diverse domestic resources. It is abundant in our environment and it's stored in water (H<sub>2</sub>O), hydrocarbons (such as methane, CH<sub>4</sub>), and other organic matter. Hydrogen is an energy carrier that can be used to store, move, and deliver energy produced from other sources. Hydrogen with its abundance, high energy density,

better combustion characteristics, nonpolluting nature etc. has vast advantages over the conventional fuels. Types of hydrogen depending upon process of extraction-

☒☒Green hydrogen: It is derived by electrolysis of water, separating the hydrogen atom within it from oxygen using renewable energy (such as wind, solar or hydro) that eliminates emissions during process.

☒☒Grey hydrogen: Hydrogen derived using fossil fuels is called as grey hydrogen.

☒☒Blue hydrogen: It is derived from natural gas through the process of steam methane reforming (SMR). SMR mixes natural gas with very hot steam, in the presence of a catalyst, where a chemical reaction creates hydrogen and carbon monoxide.

**S90. Ans.(a)**

**Sol.** India has a bi-annual cyclone season that occurs between March to May and October to December.

Cyclones are less common during the June to September monsoon season because wind shear is very high. Wind shear is the difference between wind speeds at lower and upper atmospheric levels. As a result, clouds do not grow vertically and monsoon depressions often fail to intensify into cyclones.

**S91. Ans. (b)**

**Sol.** The trade winds are those blowing from the sub-tropical high-pressure areas towards the equatorial low-pressure belt. Therefore, these are confined to a region between 30°N and 30°S throughout the earth's surface. They flow as the north-eastern trades in the northern hemisphere and the south-eastern trades in the southern hemisphere. This deflection in their ideally expected north-south direction is explained on the basis of Coriolis force and Farrel's law. Trade winds are descending and stable in areas of their origin (sub-tropical high pressure belt), and as they reach the equator, they become humid and warmer after picking up moisture on their way. The trade winds from two hemispheres meet at the equator, and due to convergence they rise and cause heavy rainfall. The eastern parts of the trade winds associated with the cool ocean currents are drier and more stable than the western parts of the ocean.

**S92. Ans. (b)**

**Sol.** the reversal in upper air circulation takes place in summer due to the apparent shift of the sun's vertical rays in the northern hemisphere results in the formation of Easterly jet stream. The westerly jet stream is replaced by the easterly jet stream which owes its origin to the heating of the Tibet plateau. This helps in the sudden onset of the south-west monsoons.

Westerly jet stream blows at a very high-speed during winter over the subtropical zone. Southern branch of the jet stream exercises a significant influence on the winter weather conditions in India. This jet stream is responsible for bringing western disturbances from the Mediterranean region in to the Indian sub-continent. Winter rain and heat storms in north-western plains and occasional heavy snowfall in hilly regions are caused by these disturbances. These are generally followed by cold waves in the whole of northern plains.

**S93. Ans. (c)**

**Sol. Minsk Agreements:**

1. Minsk I: Ukraine and the Russian-backed separatists agreed on a 12-point ceasefire deal in the capital of Belarus in September 2014. Its provisions included prisoner exchanges, deliveries of humanitarian aid, and the withdrawal of heavy weapons. The agreement quickly broke down, with violations by both sides.

2. Minsk II: In 2015, an open conflict was averted after the 'Minsk II' peace agreement was signed, under the mediation of France and Germany. It was designed to end the fighting in the rebel regions and hand over the border to Ukraine's national troops.

**S94. Ans.(d)**

**Sol.** • The W boson is a charged force-carrying particle that transmits the **weak force**.

- Discovered in 1983, the W boson is a fundamental particle. Together with the Z boson, it is responsible for the weak force, one of four fundamental forces that govern the behavior of matter in our universe.

- Particles of matter interact by exchanging these bosons, but only over short distances.

- The W boson, which is electrically charged, changes the very makeup of particles. It switches protons into neutrons, and vice versa, through the weak force, triggering nuclear fusion and letting stars burn. This burning also creates heavier elements and, when a star dies, those elements are tossed into space as the building blocks for planets and even people.

**S95. Ans. (d)**

**Sol.** Shale Oil is also called as the "Tight oil".

The key difference between shale or Tight oil and conventional crude is that the 'tight /shale oil', is found in smaller batches, and deeper than conventional crude deposits. Its extraction requires the creation of fractures in oil and gas-rich shale to release hydrocarbons through a process called hydraulic fracking.

Russia and the US are among the largest shale oil producers in the world.

Currently, there is no large-scale commercial production of shale oil and gas in India. State-owned ONGC had, in 2013, started exploration and, by the end of FY21, assessed shale oil and gas potential in 25 nomination blocks, but has reduced investments over the past few years after only getting limited success in shale exploration efforts. While ONGC's assessment found prospects of shale oil at the Cambay basin in Gujarat and the Krishna Godavari basin in Andhra Pradesh, the company concluded that "the quantity of oil flow observed in these basins" did not indicate "commerciality"

**S96. Ans.(c)**

**Sol. Prime editing** is a 'search-and-replace' genome editing technology in molecular biology by which the genome of living organisms may be modified. The technology directly writes new genetic information into a targeted DNA site.

It uses a fusion protein, consisting of a catalytically impaired Cas9 endonuclease fused to an engineered reverse transcriptase enzyme, and a prime editing guide RNA (pegRNA), capable of identifying the target site and providing the new genetic information to replace the target DNA nucleotides.

**S97. Ans. (d)**

**Sol.** The electoral bonds were introduced with the Finance Bill (2017). The NDA government notified the Electoral Bond Scheme in 2018.

**Statement a is correct:** An electoral bond is like a promissory note that can be bought by any Indian citizen or company incorporated in India from select branches of the State Bank of India.

The bonds are similar to banknotes that are payable to the bearer on demand and are free of interest.

**Statement b is incorrect:** The bonds will be issued in multiples of Rs 1,000, Rs 10,000, Rs 100,000, and Rs 1 crore (the range of a bond is between Rs 1,000 to Rs 1 crore). These will be available at some branches of SBI.

The electoral bonds are available for purchase for 10 days at the beginning of every quarter that is The first 10 days of January, April, July, and October,

**Statement c is incorrect:** Any party that is registered under section 29A of the **Representation of the Peoples Act, 1951** and has secured at least one percent of the votes polled in the most recent General elections or Assembly elections is eligible to receive electoral bonds.

**Statement d is incorrect:**

**An amendment to the Companies Act of 2013 removes the cap that barred companies from donating more than 7.5 percent of their average net profit to a political party.** The scheme has been criticized for the same manner in

which it was structured. It is said that the removal of a limit on corporate donations that existed earlier and allowed donation of only 7.5% of the three-year average net profit, has since allowed businesses to make anonymous political donations and the donations are also tax-deductible. Hence, a donor will get a deduction and the recipient, or the political party, will get tax exemption, provided returns are filed by the political party

**S98. Ans.(c)**

**Sol.** The **barasingha** (*Rucervus duvaucelii*), also called **swamp deer**, is a deer species distributed in the Indian subcontinent. The swamp deer differs from all other Indian deer species in that the antlers carry more than three horns. And can reach up to 20 horns. That is why it is designated *bārah-singgā*, meaning "twelve-horned

Three subspecies are currently recognized:

1. Western swamp deer-habitat in the Indo-Gangetic plain;
2. Southern swamp deer -survives only in the Kanha National Park, and Satpura national park
3. Eastern swamp deer-only found in Assam,

It is listed on CITES Appendix I. In India, it is included under Schedule I of the Wildlife Protection Act of 1972.

**S99. Ans.(c)**

**Sol.** About: Swadesh Darshan Scheme is a Central Sector Scheme launched in 2014-15 for the integrated development of theme-based tourist circuits. Swadesh Darshan scheme is an initiative taken by the government to enrich the tourist experiences and enhance opportunities and promote lesser-known destinations. Parent Ministry: Swadesh Darshan scheme is being implemented by the Ministry of Tourism and Culture, Government of India.

**S100. Ans.(c)**

**Sol.** Astronomers have recently found evidence for a second supermoon beyond our solar system.

Exomoon

Close to 5,000 planets beyond our solar system, or exoplanets, have been identified, compared to only two such moons, called exomoons. An exomoon or extrasolar moon is a natural satellite that orbits an exoplanet or other non-stellar extrasolar body. It is inferred from the empirical study of natural satellites in the Solar System that they are likely to be common elements of planetary systems.

Supermoon

A supermoon occurs when the Moon's orbit is closest to the Earth at the same time that the Moon is full. As the Moon orbits the Earth, there is a point of time when the distance between the two is the least (called the perigee when the average distance is about 360,000 km from the Earth).