



ForumIAS

F

Prelims Marathon

April,
2020

HISTORY

ECONOMICS

POLITY

SCIENCE AND TECHNOLOGY

GEOGRAPHY AND ENVIRONMENT



Polity

Q.1) Consider the following statements with respect to **The World Tourism Organization (UNWTO)**:

1. UNWTO promotes tourism as a driver of economic growth, inclusive development and environmental sustainability.
 2. All countries of United Nations are members of UNWTO
- Which of the following codes below given is/are correct?

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

Q.2) “Exercise Red Flag”- flagship multilateral air exercise conducted by which of the following country?

- a) Japan
- b) Russia
- c) France
- d) United States of America

Q.3) Which of the following is/are exceptions to **rule of equality** (Article 14)?

1. The President or the Governor is not answerable to any court for the exercise and performance of the powers and duties of his office
2. No criminal proceedings shall be instituted or continued against the President or the Governor in any court during his term of office
3. Article 31-B is an exception to Article 14

Which of the following codes below given is/are correct?

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

Q.4) Which of the following institutions is/are headed (Chairman) by **Prime Minister**?

1. NITI Aayog
2. Inter-state council
3. National water resources council
4. National Integration council

Choose the correct code from below given options:

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

Q.5) Consider the following statements with respect to **“High Court”**:

1. The Constitution of India provides for a high court for each state
2. 7th Amendment Act authorized the Parliament to establish a common high court for two or more states or for two or more states and a union territory

Which of the following codes below given is/are **NOT** correct?

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

Q.6) Which of the following is/are recommendations of “**Sarkaria Commission**”?

1. Permanent Inter-state council should be established under article 263.
2. Article 356 should be used very sparingly.
3. Residuary powers of taxation should be given to states.

Choose the correct code from below given options:

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

Q.7) Consider the following statements with respect to “**Zonal Councils**”:

1. Zonal Councils are established under States Reorganization Act, 1956.
2. Act divided the country into six zonal councils.
3. The Prime Minister is the chairman of the zonal councils.

Which of the following codes below given is/are **NOT** correct?

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

Q.8) Consider the following statements with respect to “**President’s Rule**”:

1. It should be approved by at least one house of the Parliament.
2. Maximum period of President’s rule is 3 years.

Which of the following codes below given is/are correct?

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

Q.9) “**Motihari-Amlekhgunj**” oil pipeline is developed between India and which of the following country?

- a) Bhutan
- b) Bangladesh
- c) Myanmar
- d) Nepal

Q.10) Consider the following statements with respect to **India-UN Development Partnership Fund (UNDPF)**:

1. It is a dedicated fund within the United Nations for South-South Cooperation.
2. It supports demand-driven and transformational sustainable development projects across the developing world.

Which of the following codes below given is/are correct?

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

Q.11) Consider the following statements with respect to “**Special Officer for Linguistic Minorities**”:

1. The Constitution of India did not make any provision with respect to the Special Officer for Linguistic Minorities.
2. Seventh Constitutional Amendment Act of 1956 related to Special Officer for Linguistic Minorities.
3. He is appointed President on the recommendation of Appointment Committee.

Which of the following codes below given is/are **NOT** correct?

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

Q.12) Consider the following statements with respect to “**duties and functions of the CAG**”:

1. He audits the accounts related to all expenditure from the Consolidated Fund of India.
2. He audits all expenditure from the Contingency Fund of India and the Public Account of India.
3. He audits the accounts of any other authority when requested by the Parliament and State Legislature.

Which of the following above statements is/are correct?

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

Q.13) “**Article 76**” of the Constitution of India is related to which of the following?

- a) Highest Law Officer
- b) President of India
- c) Prime Minister
- d) All of the above

Q.14) Which of the following country is **NOT** a member of Mekong- Ganga Cooperation?

- a) Thailand
- b) Laos
- c) Myanmar
- d) Bangladesh

Q.15) “**Future Investment Initiative (FII)**” is launched by which of the following country?

- a) Qatar
- b) Iran
- c) Saudi Arabia
- d) UAE

Q.16) Which of the following is/are functional items of “**11th Schedule**”?

1. Animal husbandry, dairying and poultry.
2. Food processing industries.
3. Roads and Water ways.

Choose the correct code from below options:

- a) 1 only
- b) 1 and 2 only

- c) 1 and 3 only
- d) 1, 2 and 3

Q.17) Which of the following is **NOT** part of “**Concurrent List**”?

- a) Industries.
- b) Contracts.
- c) Trust and Trustees.
- d) Bankruptcy and insolvency.

Q.18) Consider the following statements with respect to “**Advocate General**”:

1. He is appointed by President of India.
2. The term of office of the advocate general is not fixed by the Constitution.

Which of the following above statements is/are **NOT** correct?

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

Q.19) Consider the following statements with respect to “**Zero Hour**”:

1. The time immediately following the Question Hour in the House has come to be popularly known as the Zero Hour.
2. At present, twenty matters per day as per their priority in the ballot are allowed to be raised during "Zero Hour".

Which of the following codes below given is/are correct?

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

Q.20) “**Boko Haram**” militant Islamist group is recently in news, is related to which of the following African country?

- a) Chad
- b) Cameroon
- c) Nigeria
- d) South Sudan

Q.21) Which of the following bills is/are passed through “**Joint session of Parliament**”?

1. Dowry Prohibition Bill, 1960.
2. Banking Service Commission (Repeal) Bill, 1977.
3. Prevention of Money Laundering Bill, 1999.
4. Prevention of Terrorism Bill, 2002.

Choose the correct code from below given options:

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

Q.22) Which of the following statement is **NOT** correct about “**Speaker of Lok Sabha**”?

- a) The date of election of the Speaker is fixed by the Lok Sabha.
- b) Speaker can resign by writing to the Deputy Speaker.

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- c) Speaker can be removed by a resolution passed by a majority of all the members of the Lok Sabha.
- d) Whenever the Lok Sabha is dissolved, the Speaker does not vacate his office and continues till the newly-elected Lok Sabha meets.

Q.23) Consider the following statements with respect to “**Leader of the Opposition**”:

1. Only Lok Sabha has Leader of the Opposition.
 2. The leader of Opposition in the Lok Sabha got the statutory recognition in 1977.
- Which of the following codes below given is/are correct?

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

Q.24) Consider the following statements about Biological Weapons Convention (BWC):

1. China has neither signed nor ratified the Biological Weapon Convention.
2. India has signed and ratified the Biological Weapon Convention.

Which of the following codes below given is/are correct?

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

Q.25) Consider the following statements about International Atomic Energy Agency (IAEA):

1. The International Atomic Energy Agency (IAEA) is the world's central intergovernmental forum for scientific and technical co-operation in the nuclear field.
2. IAEA is headquartered in New York.

Which of the following codes below given is/are correct?

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

ANSWER KEY

Que.	Ans.	Que.	Ans.	Que.	Ans.
1	A	11	D	21	D
2	D	12	B	22	A
3	B	13	A	23	B
4	D	14	D	24	B
5	D	15	C	25	A
6	B	16	D		
7	C	17	A		
8	B	18	A		
9	D	19	C		
10	C	20	C		

EXPLANATION

1. Explanation: As the leading international organization in the field of tourism, UNWTO promotes tourism as a driver of economic growth, inclusive development and environmental sustainability and offers leadership and support to the sector in advancing knowledge and tourism policies worldwide. UNWTO encourages the implementation of the Global Code of

Ethics for Tourism, to maximize tourism's socio-economic contribution while minimizing its possible negative impacts, and is committed to promoting tourism as an instrument in achieving the Sustainable Development Goals (SDGs), geared towards reducing poverty and fostering sustainable development worldwide. UNWTO's membership includes 159 countries, 6 Associate Members and over 500 Affiliate Members representing the private sector, educational institutions, tourism associations and local tourism authorities.

2. Explanation: The U.S. Air Force has cancelled Phase-I of its flagship multilateral air exercise, Red Flag, scheduled in Alaska from April 30. Red Flag-Alaska is a Pacific Air Forces-sponsored exercise meant to provide realistic training in a simulated combat environment over the Joint Pacific Alaska range complex.

3. Explanation: The rule of equality before law is not absolute and there are constitutional and other exceptions to it. These are mentioned below:

1. The President of India and the Governor of States enjoy the following immunities (Article 361):

- i) The President or the Governor is not answerable to any court for the exercise and performance of the powers and duties of his office.
- ii) No criminal proceedings shall be instituted or continued against the President or the Governor in any court during his term of office.
- iii) No process for the arrest or imprisonment of the President or the Governor shall be issued from any court during his term of office.

2. Article 31-C is an exception to Article 14. It provides that the laws made by the state for implementing the Directive Principles contained in clause (b) or clause (c) of Article 39 cannot be challenged on the ground that they are violative of Article 14. The Supreme Court held that "where Article 31-C comes in, Article 14 goes out".

4. Explanation: The Prime Minister has various other roles. These are:

- He is the chairman of the Planning Commission (now NITI Aayog), National Development Council, National Integration Council, Inter-State Council and National Water Resources Council.
- He plays a significant role in shaping the foreign policy of the country.
- He is the chief spokesman of the Union government.
- He is the crisis manager-in-chief at the political level during emergencies.
- As a leader of the nation, he meets various sections of people in different states and receives memoranda from them regarding their problems, and so on.
- He is leader of the party in power.
- He is political head of the services.

5. Explanation: The Constitution of India provides for a high court for each state, but the Seventh Amendment Act of 1956 authorized the Parliament to establish a common high court for two or more states or for two or more states and a union territory. The territorial jurisdiction of a high court is co-terminus with the territory of a state. Similarly, the territorial jurisdiction of a common high court is co-terminus with the territories of the concerned states and union territory.

6. Explanation: In 1983, the Central government appointed a three-member Commission on Centre-state relations under the chairmanship of R S Sarkaria, a retired judge of the Supreme Court. The Commission made 247 recommendations to improve Centre-state relations. The important recommendations are mentioned below:

- A permanent Inter-State Council called the Inter-Governmental Council should be set up under Article 263.
- Article 356 (President's Rule) should be used very sparingly, in extreme cases as a last resort when all the available alternatives fail.
- The institution of All-India Services should be further strengthened and some more such services should be created.
- The residuary powers of taxation should continue to remain with the Parliament, while the other residuary powers should be placed in the Concurrent List.
- When the president withholds his assent to the state bills, the reasons should be communicated to the state government.

7. Explanation: The Zonal Councils are the statutory (and not the constitutional) bodies. They are established by an Act of the Parliament, that is, States Reorganisation Act of 1956. The act divided the country into five zones (Northern, Central, Eastern, Western and Southern) and provided a zonal council for each zone. Each zonal council consists of the following members: (a) home minister of Central government. (b) Chief Ministers of all the States in the zone. (c) Two other ministers from each state in the zone. (d) Administrator of each union territory in the zone. The home minister of Central government is the common chairman of the five zonal councils. Each chief minister acts as a vice-chairman of the council by rotation, holding office for a period of one year at a time.

8. Explanation: A proclamation imposing President's Rule must be approved by both the Houses of Parliament within two months from the date of its issue. However, if the proclamation of President's Rule is issued at a time when the Lok Sabha has been dissolved or the dissolution of the Lok Sabha takes place during the period of two months without approving the proclamation, then the proclamation survives until 30 days from the first sitting of the Lok Sabha after its reconstitution, provided the Rajya Sabha approves it in the mean time. If approved by both the Houses of Parliament, the President's Rule continues for six months⁶. It can be extended for a maximum period of three years with the approval of the Parliament, every six months.

9. Explanation: India and Nepal have successfully concluded the 'testing transfer' of the Motihari-Amlekhgunj oil Pipeline. The 69-km long petroleum pipeline from Motihari in Bihar to Amlekhgunj in Nepal has been constructed by India. This is the first transnational petroleum pipeline from India, first South Asian oil pipeline corridor and first oil pipeline in Nepal. It will ensure smooth, cost-effective and environment-friendly supply of petroleum products to Nepal. The Motihari-Amlekhgunj oil pipeline project was first proposed in 1996. The two governments had inked an agreement to execute the project in August 2015.

10. Explanation: India-UN Development Partnership Fund (UNDPF) is a dedicated facility within the United Nations Fund for South-South Cooperation established in 2017. It supports Southern-owned and led, demand-driven, and transformational sustainable development projects across the developing world, with a focus on least developed countries and Small Island developing states.

11. Explanation: The Constitution of India did not make any provision with respect to the Special Officer for Linguistic Minorities¹. Later, the States Reorganisation Commission (1953-55) made a recommendation in this regard. Accordingly, the Seventh Constitutional Amendment Act of 1956 inserted a new Article 350-B in Part XVII of the Constitution². This article contains the following provisions:

1. There should be a Special Officer for Linguistic Minorities. He is to be appointed by the President of India.

2. It would be the duty of the Special Officer to investigate all matters relating to the safeguards provided for linguistic minorities under the Constitution. He would report to the President upon those matters at such intervals as the President may direct. The President should place all such reports before each House of Parliament and send to the governments of the states concerned.

It must be noted here that the Constitution does not specify the qualifications, tenure, salaries and allowances, service conditions and procedure for removal of the Special Officer for Linguistic Minorities.

12. Explanation: The duties and functions of the CAG as laid down by the Parliament and the Constitution are:

- He audits the accounts related to all expenditure from the Consolidated Fund of India, consolidated fund of each state and consolidated fund of each union territory having a Legislative Assembly.
- He audits all expenditure from the Contingency Fund of India and the Public Account of India as well as the contingency fund of each state and the public account of each state.
- He audits all trading, manufacturing, profit and loss accounts, balance sheets and other subsidiary accounts kept by any department of the Central Government and state governments.
- He audits all transactions of the Central and state governments related to debt, sinking funds, deposits, advances, suspense accounts and remittance business. He also audits receipts, stock accounts and others, with approval of the President, or when required by the President.
- He audits the accounts of any other authority when requested by the President or Governor. For example, the audit of local bodies.

13. Explanation: The Constitution (Article 76) has provided for the office of the Attorney General for India. He is the highest law officer in the country. The Attorney General (AG) is appointed by the president. He must be a person who is qualified to be appointed a judge of the Supreme Court. In other words, he must be a citizen of India and he must have been a judge of some high court for five years or an advocate of some high court for ten years or an eminent jurist, in the opinion of the president.

14. Explanation: Mekong- Ganga Cooperation is an initiative by six countries – India and five ASEAN countries, namely, Cambodia, Laos, Myanmar, Thailand and Vietnam (Mekong passes through these five countries along with China). It seeks for cooperation in tourism, culture, education, as well as transport and communications. It was launched in 2000 at Vientiane, Laos. Both the Ganga and the Mekong are Civilization Rivers, and the MGC initiative aims to facilitate closer contacts among the people inhabiting these two major river basins.

15. Explanation: Future Investment Initiative (FII) is an initiative by Saudi Arabia to diversify the kingdom's economy and reduce its dependence on petroleum products. FII brings together policymakers, investors and global experts, to discuss the role of investment in driving global prosperity and development. FII is widely being described as "Davos in the desert".

16. Explanation: Eleventh Schedule It contains the following 29 functional items placed within the purview of panchayats:

- Agriculture, including agricultural extension
- Land improvement, implementation of land reforms, land consolidation and soil conservation
- Minor irrigation, water management and watershed development
- Animal husbandry, dairying and poultry
- Fisheries
- Social forestry and farm forestry
- Minor forest produce
- Small-scale industries, including food processing industries
- Khadi, village and cottage industries
- Rural housing
- Drinking water
- Fuel and fodder
- Roads, culverts, bridges, ferries, waterways and other means of communication
- Rural electrification, including distribution of electricity.

17. Explanation: Industries is part of State list.

18. Explanation:

Statement 1 is incorrect: The advocate general is appointed by the governor. He must be a person who is qualified to be appointed a judge of a high court. In other words, he must be a citizen of India and must have held a judicial office for ten years or been an advocate of a high court for ten years.

Statement 2 is correct: The term of office of the advocate general is not fixed by the Constitution. Further, the Constitution does not contain the procedure and grounds for his removal. He holds office during the pleasure of the governor. This means that he may be removed by the governor at any time.

19. Explanation: Both statements are correct.

Statement 1 is correct: The time immediately following the Question Hour and laying of papers and before any listed business is taken up in the House has come to be popularly known as the 'Zero Hour'. As it starts around 12 noon, this period is euphemistically termed as 'Zero Hour'. For raising matters during the 'Zero Hour' in Lok Sabha, Members give notice between 8.30 a.m. and 9.00 a.m. everyday to the Speaker stating clearly the subject which they consider to be important and wish to raise in the House. It is, of course, for the Speaker to allow or not to allow for raising such matters in the House. The term 'Zero Hour' is not formally recognised in our parliamentary procedure.

Statement 2 is correct: At present, twenty matters per day as per their priority in the ballot are allowed to be raised during "Zero Hour". The order in which the matters will be raised is decided by the Speaker at his/her discretion. In the first phase, 5 matters of urgent national and international importance, as decided by the Chair, are taken up after Question Hour and laying of papers, etc. In the second phase, the remaining admitted matters of urgent public importance are taken up after 6.00 P.M. or at the end of the regular business of the House. However, since there is no provision in the rules regarding 'Zero Hour', hence there is no maximum limit on the number of matters that can be raised on any given day.

20. Explanation: Nigeria's militant Islamist group Boko Haram - which has caused havoc in Africa's most populous country through a wave of bombings, assassinations and abductions - is fighting to overthrow the government and create an Islamic state. Boko

Haram promotes a version of Islam which makes it "haram", or forbidden, for Muslims to take part in any political or social activity associated with Western society. This includes voting in elections, wearing shirts and trousers or receiving a secular education.

21. Explanation: Since 1950, the provision regarding the joint sitting of the two Houses has been invoked only thrice. The bills that have been passed at joint sittings are:

- Dowry Prohibition Bill, 1960.
- Banking Service Commission (Repeal) Bill, 1977.
- Prevention of Terrorism Bill, 2002.

22. Explanation: The Speaker is elected by the Lok Sabha from amongst its members (as soon as may be, after its first sitting). Whenever the office of the Speaker falls vacant, the Lok Sabha elects another member to fill the vacancy. The date of election of the Speaker is fixed by the President.

23. Explanation: Statement 1 is incorrect: In each House of Parliament, there is the "Leader of the Opposition". The leader of the largest Opposition party having not less than one-tenth seats of the total strength of the House is recognised as the leader of the Opposition in that House.

Statement 2 is correct: In a parliamentary system of government, the leader of the opposition has a significant role to play. His main functions are to provide a constructive criticism of the policies of the government and to provide an alternative government. Therefore, the leader of Opposition in the Lok Sabha and the Rajya Sabha were accorded statutory recognition in 1977.

24. Explanation: Statement 1 is not correct: The Biological Weapons Convention (BWC) is a legally binding treaty that outlaws biological arms. After being discussed and negotiated in the United Nations' disarmament forum starting in 1969, the BWC opened for signature on April 10, 1972, and entered into force on March 26, 1975. It currently has 183 states-parties, including Palestine, and four signatories (Egypt, Haiti, Somalia, Syria, and Tanzania). Ten states have neither signed nor ratified the BWC (Chad, Comoros, Djibouti, Eritrea, Israel, Kiribati, Micronesia, Namibia, South Sudan and Tuvalu).

Statement 2 is correct: India has ratified the Biological and Toxin Weapons Convention (BTWC) and pledges to abide by its obligations. There is no clear evidence, circumstantial or otherwise, that directly points toward an offensive BW program. India has defensive biological warfare (BW) capabilities and has conducted research on countering various diseases. India also has an extensive and advanced dual-use pharmaceutical industry.

25. Explanation: Statement 1 is correct: The International Atomic Energy Agency is the world's central intergovernmental forum for scientific and technical co-operation in the nuclear field. It works for the safe, secure and peaceful uses of nuclear science and technology, contributing to international peace and security and the United Nations' Sustainable Development Goals.

Statement 2 is not correct: In October 1957, the delegates to the First General Conference decided to establish the IAEA's headquarters in Vienna, Austria. The IAEA has also two regional offices located in Toronto, Canada (since 1979) and Tokyo, Japan (since 1984), as well as two liaison offices in New York City, United States of America (since 1957) and Geneva, Switzerland (since 1965). The Agency runs laboratories specialized in nuclear technology in Vienna and Seibersdorf, Austria, opened in 1961, and, since 1961, in Monaco.

Science & technology

Q.1) Which of the following is/are provisions of the **DNA Technology (Use and Application) Regulation Bill, 2019**?

1. DNA testing is allowed to individual identity and civil matters.
2. No consent is required from arrested person for collecting DNA.

Choose the correct code from below given options:

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

Q.2) **Next Generation Sequencing (NSG)** facility, is recently in news, is located in which of the following city?

- a) Lucknow
- b) Jaipur
- c) Bangalore
- d) Hyderabad

Q.3) Which of the following is/are functions of **Genetic Engineering Appraisal Committee (GEAC)**?

1. To appraise activities involving large scale use of hazardous microorganisms and recombinants in research and industrial production from the environmental angle.
2. To appraise proposals relating to release of genetically engineered organisms and products into the environment including experimental field trials.
3. It has no powers to take punitive action under the Environment Protection Act.

Which of the following codes below given is/are **NOT** correct?

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

Q.4) Consider the following statements with respect to **GSLV MkIII**:

1. GSLV MkIII is a three stage launch vehicle.
2. It can carry thrice the capability of GSLV MkII.
3. Cryogenic upper stage used in GSLV MkIII is imported from Russia.

Which of the following codes below given is/are correct?

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

Q.5) Consider the following statements with respect to the **Gagan Enabled Mariner's Instrument for Navigation and Information (GEMINI)** device:

1. It is developed by ISRO.
2. It provides seamless and effective emergency information and communication on disaster warnings, Potential Fishing Zones (PFZ) and Ocean States Forecasts (OSF) to fishermen.

Which of the following codes below given is/are correct?

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

Q.6) Consider the following statements with respect to “**Hydrothermal Carbonization technology**”:

1. The technology is aimed at conversion of wet biomass into hydro-char.
2. Hydrothermal Carbonization technology is developed by IIT-Kanpur.

Which of the following codes below given is/are correct?

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

Q.7) Consider the following statements with respect to “**Sodium Sulphur Battery**”:

1. It is a high-temperature battery which operates at 300°C and utilizes a solid electrolyte.
2. It has a high-power density and is suitable for large-scale energy storage and space applications.
3. It is costlier than lithium battery.

Which of the following codes below given is/are NOT correct?

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

Q.8) In which of the following city, South Asia's first “**proton therapy centre**” was launched?

- a) Amravati
- b) Chennai
- c) Bangalore
- d) Cochin

Q.9) “**Harpoon Capture**” is recently in news, is related to which of the following?

- a) Space debris
- b) Deep-Sea fishing
- c) Fossil finding technique
- d) Horticulture

Q.10) Consider the following statements with respect to “**Agni-II**”:

1. It is a Short Range Ballistic Missile (SRBM).
2. It can carry a payload of 1000kg.
3. Range of Agni-II is 2000km.

Which of the following above statements is/are correct?

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

Q.11) Consider the following statements with respect to “**Indian Data Relay Satellite System (IDRSS)**”:

1. It is a satellite to satellite communication and transfer of data.
2. It will also be useful in monitoring launches and benefitting crew members of the Gaganyaan mission.
3. At present only USA and Russia have DRS system.

Which of the following above statements is/are correct?

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

Q.12) Consider the following statements with respect to “**Cartosat-3**”:

1. It is an earth observation satellite and helps to detect changes in natural geographical or man-made features.
2. The mission life of the Cartosat-3 is 10 years.

Which of the following codes below given is/are correct?

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

Q.13) Consider the following statements with respect to “**5G**”:

1. 5G is a wireless communication technology uses radio waves or radio frequency (RF) energy to transmit and receive data.
2. 5G will provide the capacity and bandwidth to accommodate technologies such as Internet of Things.

Which of the following above statements is/are **NOT** correct?

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

Q.14) “**RAISE 2020**” is related to which of the following?

- a) CoVID-19
- b) Environmental Conservation
- c) Artificial Intelligence
- d) Organic farming

Q.15) Consider the following statements with respect to “**Astra Missile**”:

1. It is an indigenously developed Surface to Air Missile.
2. It works on beyond visual range air to air missile (BVRAAM) technology.

Which of the following codes below given is/are correct?

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

Q.16) Consider the following statements with respect to **“NewSpace India Limited (NSIL)”**:

1. It is the only commercial arm of ISRO.
2. It was established for commercially utilizing research and development activities carried out by ISRO with an authorized share capital of Rs 1000 crore.

Which of the following codes below given is/are correct?

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

Q.17) Which of the following is/are **“Space Technology Cells”** set up by ISRO?

1. IIT-Bombay.
2. IIT-Guwahati.
3. IIT-Kanpur.
4. Savitribai Phule Pune University.

Choose the correct code from below given options:

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

Q.18) Consider the following statements with respect to **“Blockchain technology”**:

1. It is a specific type of data structure which can be used to transact across nodes or participants.
2. It is a centralized technology which can greatly save the cost and improve the efficiency.

Which of the following codes below given is/are correct?

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

Q.19) **“LINPACK benchmark”** is related to which of the following?

- a) Shale Oil Production
- b) Carbon Storage
- c) Super Computers
- d) Quantum Computers

Q.20) Consider the following statements with respect to **“Integrated gasification combined cycle”**:

1. IGCC plants convert coal into a synthesis gas called syngas, which is sent to a combined cycle system to generate electricity.
2. It has the ability to use a variety of feed-stocks, and high efficiency relative to other power generation technologies.
3. Capital costs for IGCC are low compared with alternative power plant designs.

Which of the following above statements is/are correct?

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

Q.21) Which of the following convention is called as “**Satellite Convention**”?

- a) Madrid Convention
- b) Marrakesh Convention
- c) Berne Convention
- d) Brussels Convention

Q.22) Consider the following statements with respect to “**Sowa-Rigpa**”:

- 1. It is one of the oldest, Living and well documented medical tradition of the world.
- 2. It has been popularly practiced in central India tribal belt.

Which of the following above statements is/are correct?

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

Q.23) Which of the following “**Intellectual Property Rights**” is/are administered by Department for Promotion of Industry and Internal Trade?

- 1. Patents
- 2. Designs
- 3. Trade marks
- 4. Geographical Indications

Choose the correct code from below given options:

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

Q.24) Consider the following statements with respect to “**Asian Productivity Organization**” (APO):

- 1. It is a non-profit organization to increase productivity in the Asia-Pacific region through mutual cooperation.
- 2. India, Australia, China, New Zealand, Japan and South Korea are member states of Asian Productivity Organization.

Which of the following above statements is/are correct?

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

Q.25) World Health Organization (WHO) launched by “**Global Technical Strategy**” to contain which of the following Disease?

- a) Small Pox
- b) Malaria
- c) AIDS
- d) CoVID-19

ANSWER KEY

Que.	Ans.	Que.	Ans.	Que.	Ans.
1	A	11	B	21	D
2	D	12	A	22	A
3	D	13	D	23	B
4	A	14	C	24	D
5	B	15	B	25	B
6	A	16	D		
7	D	17	B		
8	B	18	A		
9	A	19	C		
10	C	20	B		

EXPLANATION

1. Explanation: In a landmark decision, the Lok Sabha passed “The DNA Technology (Use and Application) Regulation Bill - 2019”.

- The purpose of this Bill is to expand the application of DNA-based forensic technologies to support and strengthen the justice delivery system of the country. The utility of DNA based technologies for solving crimes, and to identify missing persons, is well recognized across the world.
- By providing for the mandatory accreditation and regulation of DNA laboratories, the Bill seeks to ensure that with the proposed expanded use of this technology in this country, there is also the assurance that the DNA test results are reliable, and furthermore that the data remain protected from misuse or abuse in terms of the privacy rights of our citizens.
- The key components of this Bill include: establishment of a DNA Regulatory Board; accreditation of DNA laboratories undertaking DNA testing, analysing, etc.; establishment of the National and Regional DNA Data Banks, as envisaged in the Bill, will assist in forensic investigations. This will aid in scientific up-gradation and streamlining of the DNA testing activities in the country with appropriate inputs from the DNA Regulatory Board which would be set up for the purpose. The Bill will add value in empowering the criminal justice delivery system by enabling the application of DNA evidence, which is considered the gold standard in crime investigations.

2. Explanation: Union Minister of Health and Family Welfare, Science and Technology and Earth Sciences, Dr Harsh Vardhan inaugurated the Next Generation Sequencing (NSG) facility at the Centre for Cellular and Molecular Biology in Hyderabad today. The facility includes technology for high genome sequencing and also diagnostic sequencing of clinical samples. The state of art machine, acquired at a cost of Rs. 8 crore can sequence 18,000 samples in 8 minutes. The NSG would help prenatal genetic screening and counselling, thereby generating large scale genomic data critical for diagnosis and therapy.

3. Explanation: The Genetic Engineering Appraisal Committee (GEAC) functions in the Ministry of Environment, Forest and Climate Change (MoEF&CC). As per Rules, 1989, it is responsible for appraisal of activities involving large scale use of hazardous microorganisms and recombinants in research and industrial production from the environmental angle. The committee is also responsible for appraisal of proposals relating to release of genetically engineered (GE) organisms and products into the environment including experimental field trials. The committee or any persons authorized by it has powers to take punitive action under the Environment Protection Act.

4. Explanation: GSLV MkIII, chosen to launch Chandrayaan-2 spacecraft, is a three-stage heavy lift launch vehicle developed by ISRO. The vehicle has two solid strap-ons, a core liquid booster and a cryogenic upper stage. GSLV Mk III is designed to carry 4 ton class of satellites into Geosynchronous Transfer Orbit (GTO) or about 10 tons to Low Earth Orbit (LEO), which is about twice the capability of the GSLV Mk II. The first developmental flight of GSLV Mk III, the GSLV-Mk III-D1 successfully placed GSAT-19 satellite to a Geosynchronous Transfer Orbit (GTO) on June 05, 2017 from SDSC SHAR, Sriharikota. GSLV MkIII-D2, the second developmental flight of GSLV MkIII successfully launched GSAT-29, a high throughput communication satellite on November 14, 2018 from Satish Dhawan Space Centre SHAR, Sriharikota. GSLV MkIII-M1, successfully injected Chandrayaan-2, India's second Lunar Mission, in to Earth Parking Orbit on July 22, 2019 from Satish Dhawan Space Centre SHAR, Sriharikota. The C25 is powered by CE-20, India's largest cryogenic engine, designed and developed by the Liquid Propulsion Systems Centre, Mahendragiri.

5. Explanation: For seamless and effective dissemination of emergency information and communication on disaster warnings, Potential Fishing Zones (PFZ) and Ocean States Forecasts (OSF) to fishermen, the Government today launched the Gagan Enabled Mariner's Instrument for Navigation and Information (GEMINI) device. Though the advisories and forecasts are disseminated through multiple communication modes, none of them could provide such information, including the disaster warnings when the fishermen move away from the coast beyond 10-12 km (typical ranges of mobile phones and VHF). That remained as a major limitation in disseminating the information to fishermen who go in the sea beyond 50 nautical miles; sometimes up to 300 nautical miles and beyond to conduct multiday fishing. To overcome this difficulty, Indian National Centre for Ocean Information Services (INCOIS), an autonomous body under the Ministry of Earth Sciences (MoES) joined hands with Airports Authority of India (AAI) to utilize the GAGAN (GPS Aided Geo Augmented Navigation) satellite system to transmit the PFZ, OSF and disaster warnings to fishermen with GAGAN system consisting of three geosynchronous satellites (GSAT-8, GSAT-10 and GSAT-15).

6. Explanation: Recently, IIT Kharagpur has developed Hydrothermal Carbonisation technology which can generate energy from solid waste with high moisture content. The technology is aimed at conversion of **wet biomass** into hydro-char (a coal like fuel) under suitable temperature and pressure conditions. The hydro-char, rich in carbon and high calorific content, can be utilized as fuel, as an alternative for coal, as feedstock for gasification, as a soil additive for nutrient enrichment, or as an adsorbent for activated carbon. Its by-products include ash which can be applied as a plant nutrient enhancer because of its phosphorus content, and also a potassium loaded liquid that can be used for watering plants.

7. Explanation: Sodium Sulphur Battery is a high-temperature battery which operates at 300°C and utilises a solid electrolyte, making it unique among the common secondary cells (rechargeable batteries). It has a high-power density and is suitable for large-scale energy storage and space applications. As electrodes are solid at room temperature and therefore inactive when cold and the battery can be stored for more than 50 years in that state. The battery must be activated with a heat source and the electrodes become liquid. The biggest advantage of sodium is in the cost area, as it is a far more common material than lithium and is much more widely available. However, the safety concerns greatly inhibit their widespread adoption.

8. Explanation: South Asia's first proton therapy centre was launched in Chennai. Apollo Proton Cancer Centre, equipped with the path-breaking pencil beam technology, offers hope to cancer patients from India and abroad. It is a type of radiation therapy which uses protons rather than x-rays to treat cancer. It is considered as one of the most advanced forms of external beam radiation therapy for cancer treatment in the world. It is also known as Proton Beam Therapy and offers high levels of precision as compared to other treatment options.

9. Explanation: A harpoon designed to capture orbital junk has been successfully tested in space for the first time as part of the active debris-removal demonstration mission called RemoveDebris. The pen-size titanium harpoon developed by Airbus engineers in the U.K. was fired into an aluminum target, which extended from the spacecraft attached to a carbon-fiber boom. During the test, it successfully snagged the target out of orbit and reeled it back to the main spacecraft.

10. Explanation: 'Agni-II', an intermediate range ballistic missile (IRBM) has already been inducted into the armed forces. The 20-metre long two stage ballistic missile has a launch weight of 17 tonnes and can carry a payload of 1000 kg over a distance of 2000 km. The two stage missile equipped with advanced high accuracy navigation system was guided by a novel state-of-the-art command and control system and propelled by solid rocket propellant system. The 2000 plus km range surface to surface missile has already been inducted and is part of countries arsenal for strategic deterrence.

11. Explanation: India plans for its own space-to-space tracking and communication of its space assets this year by putting up a new satellite series called Indian Data Relay Satellite System (IDRSS). A set of 2 IDRSS satellites will be placed in geostationary orbit, enabling satellite to satellite communication and transfer of data. It will track, send and receive real-time information from other Indian satellites, in particular those in low-earth orbits (LEO) which have limited coverage of earth. It will also be useful in monitoring launches and benefitting crew members of the Gaganyaan mission ensuring mission control throughout their travel. First satellite will be launched by 2020 end and second one by 2021. India will join US, China, Japan and Europe who already have such DRS systems.

12. Explanation: Cartosat satellites are earth observation satellites, used mainly for large-scale mapping of the Earth through high-resolution cameras. They help to detect changes in natural geographical or man-made features. Cartosat-3 satellite is a third-generation agile advanced satellite having high resolution imaging capability. The mission life of the Cartosat-3 is 5 years. It will be followed by additional satellites of the same design, namely Cartosat-3A and 3B, next year.

13. Explanation: 5G is a wireless communication technology using radio waves or radio frequency (RF) energy to transmit and receive data. It is the next generation mobile networks technology after 4G LTE networks. 5G technologies will enter services gradually, beginning in 2019 and advance to a full range of services by 2024. 5G will provide the capacity and bandwidth as per the need of the user to accommodate technologies such as Internet of Things. It will provide Faster Data Speed, Ultra-low latency etc.

14. Explanation: Responsible AI for Social Empowerment 2020 (RAISE 2020) is a global meeting of minds to use Artificial Intelligence (AI) for social empowerment, inclusion and transformation in key areas like Healthcare, Agriculture, Education and Smart Mobility amongst other sectors.

15. Explanation: Recently India successfully test-fired its first indigenous air-to-air missile 'Astra'. It is designed and developed by DRDO. It works on beyond visual range air to air missile (BVRAAM) technology that enables fighter-pilots to shoot precisely at the enemy targets which are beyond their visual range. It was launched from Sukhoi-30 MKI fighter jet and will be further integrated with other jets such as Mirage 2000, the MiG-29 and Tejas. With this India joined the league of other countries having this technology such as France, Germany, UK, South Africa etc.

16. Explanation: Both statements are incorrect.

Statement 1 is incorrect: Antrix is the first commercial arm of ISRO. However recently, the Indian Space Research Organization (ISRO), inaugurated its commercial arm NewSpace India Limited (NSIL), in Bangalore.

Statement 2 is incorrect: It was incorporated for commercially utilizing research and development activities carried out by ISRO with an authorised share capital of Rs 100 crore and initial paid up capital of Rs 10 crore.

17. Explanation: ISRO has set up 5 Space Technology Cells (STCs) at Indian Institute of Technologies (IITs) - Bombay, Kanpur, Kharagpur & Madras; Indian Institute of Science (IISc), Bengaluru and Joint Research Programme with Savitribai Phule Pune University (SPPU, Pune) to carry out research activities in the areas of space technology and applications.

18. Explanation: Statement 1 is correct: A blockchain is a specific type of data structure which can be used to transact across nodes or participants. The ownership rights are recorded in cryptographically stored and linked blocks which contain records of ownership of assets among the participants that can remain anonymous.

Statement 2 is incorrect: The blockchain technology generally has key characteristics of decentralization, persistency, anonymity and auditability. With these traits, blockchain can greatly save the cost and improve the efficiency.

19. Explanation: When it comes to measuring how powerful supercomputers are, we use a unit of measurement referred to as "floating-point operations per second" or "flops". The authority when it comes to keeping track of who has the fastest computer is the TOP500 project. Ever since 1993, TOP500 has been using the LINPACK benchmark to measure relative performance among supercomputers to determine who has the fastest computer.

20. Explanation: Statement 1 is correct: While gasification has many applications, power generation has received a lot of attention, especially in the United States as part of the Clean Coal Power Initiative. The most well-known design for this purpose is the integrated gasification combined cycle (IGCC). Similar to a natural gas combined cycle (NGCC), IGCC uses gas and steam turbines to generate electricity, but in this case the gas is synthesis gas (syngas; a mixture of primarily hydrogen [H₂] and carbon monoxide [CO]) produced by the gasifier (see Gasifiers for more information).

Statement 2 is correct: IGCC plants benefit from the advantages of gasification technology, particularly environmental benefits, ease of carbon dioxide (CO₂) capture, the ability to use a variety of feed-stocks, and high efficiency relative to other power generation technologies.

Statement 3 is incorrect: Some important challenges to the wide-spread adoption of IGCC technology include cost, availability, and complexity. Cost is widely cited as the greatest barrier to IGCC acceptance. Capital costs for IGCC are high compared with alternative power plant designs, particularly NGCC, and financial viability is often dependent upon

subsidies or tax credits. As a relatively new technology relative to PC and NGCC, development and design costs are much higher for IGCC. Availability also impacts operating costs and must be high enough to compete favorably with the conventional alternatives. The complexity of IGCC relative to older, more established plant designs also increases operating costs and can impact availability and the generation of capital for plant development.

21. Explanation: The Brussels or Satellites Convention provides for the obligation of each Contracting State to take adequate measures to prevent the unauthorized distribution on or from its territory of any programme-carrying signal transmitted by satellite.

22. Explanation: Statement 1 is correct: "Sowa-Rigpa" commonly known as Amchi system of medicine is one of the oldest, Living and well documented medical tradition of the world. The majority of theory and practice of Sowa-Rigpa is similar to "Ayurveda". The first Ayurvedic influence came to Tibet during 3rd century AD but it became popular only after 7th centuries with the approach of Buddhism to Tibet. There after this trend of exportation of Indian medical literature, along with Buddhism and other Indian art and sciences were continued till early 19th century.

Statement 2 is incorrect: It has been popularly practice in Tibet, Magnolia, Bhutan, some parts of China, Nepal, Himalayan regions of India and few parts of former Soviet Union etc. There are various schools of thought about the origin of this medical tradition, some scholars believe that it is originated from India; some says China and others consider it to be originated from Tibet itself.

23. Explanation: Department for Promotion of Industry and Internal Trade is also responsible for Intellectual Property Rights relating to Patents, Designs, Trade Marks and Geographical Indication of Goods and oversees the initiative relating to their promotion and protection. These include the outlining of policy and its implementation through the Office of the Controller General of Patents, Designs and Trade Marks. It promotes awareness regarding protection of the Intellectual Property Rights inherent in industrial property in conjunction with the World Intellectual Property Organisation (WIPO) and apex industry organisations apart from similar initiatives involving regional industry associations. It also provides inputs on various issues relating to the Agreement on Trade Related Aspects of Intellectual Properties (TRIPS) related to World Trade Organisation (WTO) in these fields.

24. Explanation: Both statements are incorrect.

Statement 1 is incorrect: The APO is an intergovernmental organization established in 1961 to increase productivity in the Asia-Pacific region through mutual cooperation. The APO contributes to the sustainable socioeconomic development of the region through policy advisory services, acting as a think tank, and undertaking smart initiatives in the industry, agriculture, service, and public sectors.

Statement 2 is incorrect: APO membership is open to countries in Asia and the Pacific which are members of the United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP). The current membership is 21 economies, comprising Bangladesh, Cambodia, Republic of China, Fiji, Hong Kong, India, Indonesia, Islamic Republic of Iran, Japan, Republic of Korea, Lao PDR, Malaysia, Mongolia, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, Turkey, and Vietnam. These countries/economies pledge to assist each other in their productivity drives in a spirit of mutual cooperation by sharing knowledge, information, and experience and coordinate with the APO through the designated national productivity organizations (NPOs).

25. Explanation: The Global Technical Strategy for Malaria 2016–2030 was adopted by the World Health Assembly in May 2015. It provides a comprehensive framework to guide countries in their efforts to accelerate progress towards malaria elimination. The strategy sets the target of reducing global malaria incidence and mortality rates by at least 90% by 2030. It emphasizes the need for universal coverage of core malaria interventions for all populations at risk and highlights the importance of using high-quality surveillance data for decision-making. It also identifies areas where innovative solutions will be essential for attaining the goals, and summarizes the estimated global costs of implementation.

Geography

Q.1) Consider the following statements with respect to **“Tropic of Cancer”**:

1. It passes through more than two states in north east area.
2. Mahi River is the only river in India that cuts the Tropic of Cancer twice.

Which of the following above statements is/are correct?

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

Q.2) Consider the following statements with respect to **“Nallamala forest”**:

1. It is spread across Andhra Pradesh, Telangana and Chattisgarh states.
2. Chenchus, a Particularly Vulnerable Tribal Group (PVTG) lives in this forest.

Which of the following codes below given is/are **NOT** correct?

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

Q.3) Consider the following statements with respect to characteristics of **“Tropical Evergreen Forests”**:

1. Tropical Evergreen Forests are located at more than 200cm rainfall.
2. It has no dry season.
3. Vegetation of all kinds found in these forests.

Which of the following codes below given is/are correct?

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

Q.4) Consider the following statements with respect to **“Peninsular Drainage System”**:

1. Peninsular Drainage System is older than Himalayan drainage system.
2. The Eastern Ghats running close to the western coast act as the water divide between the major Peninsular Rivers.
3. Chambal, Narmada and Tapi rivers flow from east to west.

Which of the following codes below given is/are **NOT** correct?

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

Q.5) **“Pichavaram mangrove”** forest is located in which of the following state?

- a) West Bengal
- b) Odisha
- c) Andhra Pradesh
- d) Tamil Nadu

Q.6) Consider the following statements with respect to **“Palani Mountain Range”**:

1. It is completely located in Tamil Nadu.
 2. Kodaikanal hill station located in the Palani range.
- Which of the following codes below given is/are correct?

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

Q.7) Arrange the following states in ascending order with respect to **bauxite production** in India:

1. Odisha
2. Andhra Pradesh
3. Jharkhand
4. Gujarat

Choose the correct code from below given options:

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

Q.8) Consider the following statements with respect to **“River Godavari”**:

1. It originates from Trimbakeshwar, Nasik District in Western Ghats.
2. The biggest city on the riverbanks of the Godavari is Rajahmundry.
3. Kaleshwaram project was built on Godavari River.

Which of the following codes below given is/are NOT correct?

- a) 1 and 2 only
- b) 2 only
- c) 3 only
- d) NONE

Q.9) Consider the following statements:

1. Mesosphere lies above Stratosphere and extends up-to a height of 120km.
2. The ionosphere contains electrically charged particles known as ions, and hence, it is known as ionosphere.
3. The stratosphere extends up to a height of 50 km and it contains the ozone layer.

Which of the following codes below given is/are **NOT** correct?

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

Q.10) Consider the following statements:

1. The insolation received by the earth is in long waves forms and heats up its surface.
2. Earth radiates its energy in short wave forms.

Which of the following codes below given is/are correct?

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

Q.11) Which of the following is/are consists of present day **“Gondwana land”**?

1. Africa
2. Latin America
3. Arabian Peninsula
4. Gibraltar
5. Indian Sub-continent

Choose the correct code from below given options:

- a) 1, 2, 4 and 5 only
- b) 1, 2, 3 and 5 only
- c) 1, 2 and 4 only
- d) 1, 2, 3, 4 and 5

Q.12) Arrange the following **geological events** in chronological order:

1. Proterozoic
2. Mesozoic
3. Cenozoic
4. Paleozoic

Choose the correct code from below given options:

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

Q.13) Consider the following statements with respect to **“Cauvery River Basin”**:

1. The basin lies in the States Tamil Nadu, Karnataka and Kerala.
2. Soil types found in the basin are black soils, red soils, lateritic, alluvial soils, forest soils and mixed soils.

Which of the following codes below given is/are **NOT** correct?

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

Q.14) **“Carpathian Mountain Range”** is located in which of the following Continent?

- a) Asia
- b) Australia
- c) South America
- d) Europe

Q.15) Consider the following statements with respect to **“Coal”**:

1. Gondwana coal deposits are found in peninsular India only.
2. Indian lignite deposits occur in the Tertiary sediments in the southern and western parts of peninsular.

Which of the following above statements is/are correct?

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

Q.16) Consider the following statements with respect to **“Barail Range”**:

1. The Barail range is the highest hill range in Assam.

2. The Barail Range is the watershed between the Brahmaputra and Barak rivers.
Which of the following above statements is/are correct?

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

Q.17) Consider the following statements with respect to **“Mediterranean Climatic Region”**:

- 1. Sclerophyll shrublands known as maquis is a distinctive of the Mediterranean climate zone.
- 2. The regions are located in the western parts of the continent between 30 and 45 degrees north and south of the equator.

Which of the following codes below given is/are **NOT** correct?

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

Q.18) **“MacDonnell Mountain Ranges”** is located in which of the following country?

- a) Australia
- b) France
- c) Mongolia
- d) North America

Q.19) Consider the following statements with respect to **“Beach Sand Minerals (BSM)”**:

- 1. Beach sand minerals in India considered as “Atomic Minerals”.
- 2. India has almost 50 per cent of the world’s total beach sand mineral deposits.

Which of the following above statements is/are correct?

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

Q.20) **“Parasnath hills”** located in which of the following state?

- a) Rajasthan
- b) Jharkhand
- c) Karnataka
- d) Chhattisgarh

Q.21) Consider the following statements with respect to **“Mahi river basin”**:

- 1. Mahi River drains into Gulf of Kachchh.
- 2. The basin lies in the States of Rajasthan and Gujarat only.

Which of the following codes below given is/are correct?

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

Q.22) **“Okavango Swamps”** are located in which of the following region?

- a) South East Asia

- b) Africa
- c) South America
- d) Australia

Q.23) Consider the following statements with respect to **“Tundra Biome”**:

1. Permafrost is a defining characteristic of the tundra biome.
2. These biome regions are also sometimes referred as polar desert.

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

Q.24) Which of the following **“iron ore mines”** is/are located in Karnataka state?

1. Hospet.
2. Bagalkot.
3. Tumkur.

Choose the correct code from below given options:

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

Q.25) Consider the following statements with respect to **“Satpura range”**:

1. Satpura range stretches through Maharashtra and Madhya Pradesh states only.
2. Range forms the watershed between the Narmada and Tapi rivers.

Which of the following above statements is/are **NOT** correct?

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

ANSWER KEY

Que.	Ans.	Que.	Ans.	Que.	Ans.
1	B	11	B	21	D
2	A	12	C	22	B
3	C	13	D	23	C
4	C	14	D	24	C
5	D	15	B	25	D
6	C	16	C		
7	A	17	D		
8	D	18	A		
9	A	19	A		
10	D	20	B		

EXPLANATION

1. Explanation: Tropic of Cancer is an imaginary line, at an angle of 23.50 degrees north from the Equator that passes through the middle of India. If you run this imaginary line around Earth (Yes, Flat-Earthlings, the Earth is spherical), it passes through 17 countries, India being one of them. The Tropic of Cancer passes through eight states in India: Gujarat (Jasdan), Rajasthan (Kalinjarh), Madhya Pradesh (Shajapur), Chhattisgarh (Sonhat),

Jharkhand (Lohardaga), West Bengal (Krishnanagar), Tripura (Udaipur) and Mizoram (Champhai). Mahi River is the only river in India that cuts the Tropic of Cancer twice, first in Madhya Pradesh from where it flows towards Rajasthan and enters Gujarat where it cuts for the second time.

2. Explanation: Nallamala forest is spread across five districts in Andhra Pradesh and two erstwhile districts in Telangana – Mahbubnagar and Nalgonda. The forest may soon face what is being dubbed as an environmental catastrophe by activists. The Forest Advisory Committee under the Ministry of Environment and Forests and Climate Change recently recommended an 'in-principle' approval to the Department of Atomic Energy for survey and exploration of uranium over 83 square kilometres in as many as four blocks. The exploration in the region has particularly triggered concerns about the Chenchus, a Particularly Vulnerable Tribal Group (PVTG) in Telangana, who already are witnessing a decline in their population. According to the 2011 Census, their population is 16,912. Most of them reside deep in the Nallamala forest.

3. Explanation: Tropical Evergreen forests are restricted to heavy rainfall areas of the Western Ghats and the island groups of Lakshadweep, Andaman and Nicobar, upper parts of Assam and Tamil Nadu coast. They are at their best in areas having more than 200 cm of rainfall with a short dry season. The trees reach great heights up to 60 metres or even above. Since the region is warm and wet throughout the year, it has a luxuriant vegetation of all kinds — trees, shrubs and creepers giving it a multilayered structure. There is no definite time for trees to shed their leaves. As such, these forests appear green all the year round.

4. Explanation: The Peninsular drainage system is older than the Himalayan one. This is evident from the broad, largely-graded shallow valleys, and the maturity of the rivers. The Western Ghats running close to the western coast act as the water divide between the major Peninsular Rivers, discharging their water in the Bay of Bengal and as small rivulets joining the Arabian Sea. Most of the major Peninsular Rivers except Narmada and Tapi flow from west to east. The Chambal, the Sind, the Betwa, the Ken, the Son, originating in the northern part of the Peninsula belong to the Ganga river system. The other major river systems of the peninsular drainage are – the Mahanadi the Godavari, the Krishna and the Kaveri. Peninsular rivers are characterised by fixed course, absence of meanders and non-perennial flow of water. The Narmada and the Tapi which flow through the rift valley are, however, exceptions.

5. Explanation: Pichavaram mangrove is one of the largest mangrove in India, situated at Pichavaram near Chidambaram in Tamil Nadu. Pichavaram ranks among the one of the most exquisite scenic spot in Tamil Nadu and home of many species of Aquatic birds.

6. Explanation: Palni Hills, range of hills, an eastward extension of the Western Ghats, in southwestern Tamil Nadu state, southern India. The range is a continuation of the Anaimalai Hills in Kerala state. The Palnis are about 45 miles (70 km) wide and 15 miles (23 km) long. In the south the hills terminate abruptly in steep slopes. The upper Palnis, in the west, consist of rolling hills covered with coarse grasses; dense forests grow in the valleys. Peaks include Vandaravu, 8,376 feet (2,553 metres); Vembadi Shola, 8,221 feet (2,505 metres); and Karunmakadu, 8,042 feet (2,451 metres). The town of Kodaikanal is located in a high basin about 7,000 feet (2,150 metres) above sea level. Potatoes, beans, root crops, pears, and peaches are cultivated in and around the hill villages.

7. Explanation: By States, Odisha alone accounts for 51% of country's resources of bauxite followed by Andhra Pradesh (16%), Gujarat (9%), Jharkhand (6%), Maharashtra (5%) and Madhya Pradesh & Chhattisgarh (4% each). Major bauxite resources are concentrated in the East Coast bauxite deposits in Odisha and Andhra Pradesh.

8. Explanation: The River Godavari is an important stream in central India, rising in the Western Ghats Mountain Range. The name of the origin is Trimbakeshwar and it is situated in the Nashik District or Subdivision in the state of Maharashtra and runs towards the east over the Deccan terrain through the Maharashtra state. The river is also named as Southern Ganges or Dakshin Ganga. The river moves into Andhra Pradesh at Kandhakurthi in Nizamabad district of Andhra Pradesh, moves past the Deccan terrain and subsequently bends to run according to a southeasterly course till it pours into the Bay of Bengal via two mouths. An important place of attraction on the riverbanks is Basara in Adilabad District. It houses a popular place of worship for Goddess Saraswati. It is also the second oldest temple for the deity in India. The biggest city on the riverbanks of the Godavari is Rajahmundry. In this place, the river has the maximum breadth (about 5 km from Rajahmundry to the other bank at Kovvur. The Kaleshwaram Lift Irrigation Project or KLIP is a multi-purpose irrigation project on the Godavari River in Kaleshwaram, Bhoopalpally, Telangana, India.

9. Explanation: The stratosphere is found above the tropopause and extends up to a height of 50 km. One important feature of the stratosphere is that it contains the ozone layer. This layer absorbs ultra-violet radiation and shields life on the earth from intense, harmful form of energy. The mesosphere lies above the stratosphere, which extends up to a height of 80 km. In this layer, once again, temperature starts decreasing with the increase in altitude and reaches up to minus 100°C at the height of 80 km. The upper limit of mesosphere is known as the mesopause. The ionosphere is located between 80 and 400 km above the mesopause. It contains electrically charged particles known as ions, and hence, it is known as ionosphere. Radio waves transmitted from the earth are reflected back to the earth by this layer.

10. Explanation: The insolation received by the earth is in short waves forms and heats up its surface. The earth after being heated itself becomes a radiating body and it radiates energy to the atmosphere in long wave form. This energy heats up the atmosphere from below. This process is known as terrestrial radiation. The long wave radiation is absorbed by the atmospheric gases particularly by carbon dioxide and the other green house gases. Thus, the atmosphere is indirectly heated by the earth's radiation. The atmosphere in turn radiates and transmits heat to the space. Finally the amount of heat received from the sun is returned to space, thereby maintaining constant temperature at the earth's surface and in the atmosphere.

11. Explanation: Gondwanaland or "Gondwana" is the name for the southern half of the Pangaeon supercontinent that existed some 300 million years ago. Gondwanaland is composed of the major continental blocks of South America, Africa, Arabia, Madagascar, Sri Lanka, India, Antarctica, and Australia. The name "Gondwana" is derived from a tribe in India (Gonds) and "wana" meaning "land of." Gondwanaland is superficially divided into a western half (Africa and South America) and an eastern half (India, Sri Lanka, Madagascar, Antarctica, and Australia).

12. Explanation:

EON	ERA	PERIOD	MILLIONS OF YEARS AGO	KEY EVENTS
Phanerozoic	Caenozoic	Quaternary	1.6	Humans evolve
		Tertiary		
	Mesozoic	Cretaceous	138	Extinction of Dinosaurs
		Jurassic		
		Triassic		
	Paleozoic	Permian	240	Permian mass extinction
		Carboniferous	330	
		Devonian	410	Invertebrates become common
		Silurian		
		Ordovician	500	
		Cambrian		
Proterozoic		Also known as Precambrian	3500	Earliest life
Archean				
Hadean				

13. Explanation: Cauvery basin extends over an area of 87,900 sq. km. which is nearly 2.7% of the total geographical area of the country. It is bounded by the Western Ghats on the west, by the Eastern Ghats on the east and south and by the ridges separating it from Krishna basin and Pennar basin on the north. The basin lies in the States Tamil Nadu, Karnataka and Kerala. Physiographically, the basin can be divided into three parts—the Western Ghats, the Plateau of Mysore and the Delta. The delta area is the most fertile tract in the basin. The principal soil types found in the basin are black soils, red soils, lateritic, alluvial soils, forest soils and mixed soils. Red soils occupy large areas in the basin. Alluvial soils are found in the delta areas. The cultivable area of the basin is about 5.8 M.ha which about 3% of the cultivable area of the country.

14. Explanation: The Carpathian Mountains form a 1,500km-long range in Central and Eastern Europe. They stretch west to east in an arc from the Czech Republic to Romania. The Tatra range between Slovakia and Poland is a national park and has several peaks above 2,400 meters. More than half of the Carpathian range lies in Romania, where spruce forests are home to brown bears, wolves and lynxes.

15. Explanation: The coal deposits in India primarily are concentrated in the Gondwana sediments occurring mainly in the eastern and central parts of Peninsular India, although Gondwana coal deposits also are found to occur in the north-eastern part of the country mainly in Assam and Sikkim. The Tertiary coal-bearing sediments are found in Assam, Arunachal Pradesh, Nagaland and Meghalaya. Indian lignite deposits occur in the Tertiary sediments in the southern and western parts of peninsular shield particularly in Tamil Nadu, Puducherry, Kerala, and Gujarat & Rajasthan and also in Jammu & Kashmir.

16. Explanation: Both statements are correct.

Statement 1 is correct: The Barail is the highest hill range in Assam. It includes the North Cachar Hill Reserve Forest (RF) of Cachar district, Barail RF of Cachar and North Cachar Hills districts and the unclassified forests stretching from the Simleng river valley in the west to Laike in the east (in North Cachar Hills district).

Statement 2 is correct: The Barail Range is the watershed between the Brahmaputra and Barak rivers. The terrain ranges from flat and undulating in the river valleys, to mountainous with steep slopes.

17. Explanation: Both statements are correct.

Statement 1 is correct: The Mediterranean Climate zone is closely associated with the Mediterranean forests, woodland, and scrub biomes. Sclerophyll shrublands known as maquis is a distinctive of the climate zone, especially around the Mediterranean Basin. The aquatic communities of the climate zone are adapted to the yearly cycle of the environmental control by floods and biotic components. The vegetation of the Mediterranean climate zone must adapt to survive the hot summer and the prolonged wet winter.

Statement 2 is correct: The Mediterranean climate is characterized by dry and hot summer and cold and rainy winter. The regions are located in the western parts of the continent between 30 and 45 degrees north and south of the equator. The climate zone is linked to the five large subtropical high-pressure belts of the oceans. These pressure belts include Azore, South Atlantic, North Pacific, South Pacific, and Indian Ocean High.

18. Explanation: MacDonnell Ranges, mountain system in south central Northern Territory, Australia, a series of bare quartzite and sandstone parallel ridges that rise from a plateau 2,000 ft (600 m) above sea level and extend east and west of the town of Alice Springs for about 230 mi (380 km). They reach a maximum elevation of 4,954 ft at Mt. Ziel and are the source of the Finke, Todd, and Plenty rivers and Ellery Creek. Some streams have carved spectacular gorges (Simpson Gap, Standley Chasm) that contain luxuriant vegetation. One striking feature is the coloration of the stone, which constantly varies as the direction of the sun changes.

19. Explanation: Statement 1 is correct: "Beach Sand Minerals (BSM)" which include Ilmenite, Rutile, Zircon, Monazite, Leucosene, Sillimanite and Garnet are defined as "Atomic Minerals" under Part-B of First Schedule of the Mines and Minerals (Development & Regulations) Act, 1957.

Statement 2 is incorrect: India has almost 35 per cent of the world's total beach sand mineral deposits.

20. Explanation: Parasnath Hills are a range of hills located in Giridih district of Jharkhand. The highest peak is 1350 metres. It is one of the most important pilgrimage centre for Jains. They call it Sammed Sikhar. The hill is named after Parasnath, the 23rd Tirthankara. Twenty of the twenty-four Jain Tirthankaras attained salvation on this hill. According to some, nine Tirthankaras attained salvation on this hill. For each of them there is a shrine (gumti or tuk) on the hill. Some of the temples on the hill are believed to be more than 2,000 years old. However, although the place is habited from ancient times, the temples may be of more recent origin. The Santhals call it Marang Buru, the hill of the deity. They celebrate a hunting festival on the full moon day in Baisakh (mid April).

21. Explanation: Statement 1 is not correct. Mahi River is one of the major west flowing inter-state rivers of India, draining into the Gulf of Khambhat. The basin is bounded on the North and the North-West by Aravalli hills, on the East by the ridge separating it from the Chambal Basin, on the South by the Vindhya and on the West by the Gulf of Khambhat.

Statement 2 is not correct. The basin has a maximum width of about 250km. Mahi river originates on the Northern slope of Vindhya at latitude 22°35' N and longitude 74°58' E near the village of Sardarpur in the Dhar district of Madhya Pradesh at an elevation of

500m above mean sea level. It has a total length of 583 km and it traverses through the states of Madhya Pradesh, Rajasthan and Gujarat. The total drainage area of Mahi is 34,842 sq. km.

The principal tributaries of the Mahi River are Som, Jakham, Moran, Anas, and the Bhadar. Major projects are Jakham Reservoir, Panam Dam, Mahi Bajaj Sagar Project and Kadana Project.

22. Explanation: Okavango Delta is a delta in north-west Botswana comprises permanent marshlands and seasonally flooded plains. It is one of the very few major interior delta systems that do not flow into a sea or ocean, with a wetland system that is almost intact. One of the unique characteristics of the site is that the annual flooding from the River Okavango occurs during the dry season, with the result that the native plants and animals have synchronized their biological cycles with these seasonal rains and floods. It is an exceptional example of the interaction between climatic, hydrological and biological processes. The Okavango Delta is home to some of the world's most endangered species of large mammal, such as the cheetah, white rhinoceros, black rhinoceros, African wild dog and lion.

23. Explanation: Statement 1 is correct. The tundra is the coldest of the biomes. It also receives low amounts of precipitation, making the tundra similar to a desert. Tundra is found in the regions just below the ice caps of the Arctic, extending across North America, to Europe, and Siberia in Asia. Much of Alaska and about half of Canada are in the tundra biome. Tundra is also found at the tops of very high mountains elsewhere in the world. Tundra winters are long, dark, and cold, with mean temperatures below 0°C for six to 10 months of the year. The temperatures are so cold that there is a layer of permanently frozen ground below the surface, called permafrost. This permafrost is a defining characteristic of the tundra biome. In the tundra summers, the top layer of soil thaws only a few inches down, providing a growing surface for the roots of vegetation.

Statement 2 is correct. Precipitation in the tundra totals 150 to 250 mm a year, including melted snow. That's less than most of the world's greatest deserts. Thus it is sometimes also called as treeless polar desert. Much of the arctic has rain and fog in the summers, and water gathers in bogs and ponds.

24. Explanation: Karnataka has over 9,000 million tonnes of iron ore resources, of which the bulk is in the magnetite form. The production during the year 2007-08 crossed 47 million tons. The districts of Bellary and Hospet are the main districts, whereas Chitradurga, Bagalkot and Tumkur districts are also produce significant amounts of iron ore. The chunk of the iron ore is exported to be used in steel manufacture and pig iron and sponge iron plants.

25. Explanation: Both statements are correct.

Statement 1 is correct: Satpura Range, range of hills, part of the Deccan plateau, western India. The hills stretch for some 560 miles (900 km) across the widest part of peninsular India, through Maharashtra and Madhya Pradesh states.

Statement 2 is correct: The range, the name of which means "Seven Folds," forms the watershed between the Narmada (north) and Tapi (south) rivers.

Environment

Q.1) Which of the following is/are constitutes of “**photochemical smog**”?

1. Volatile organic compound (VOC)
2. Sunlight
3. Sulfur dioxide

Choose the correct code from below given options:

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

Q.2) Which of the following **convention** provides the mechanisms to develop the International Standards for Phytosanitary Measures (ISPMs), and to help countries to implement the ISPMs?

- a) Convention on Biological Diversity
- b) Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- c) World Heritage Convention (WHC)
- d) International Plant Protection Convention (IPPC)

Q.3) Which of the following projects is/are funded by “**World Heritage Fund**”?

1. Cultural sites
2. Natural sites
3. Archeological Sites

Choose the correct code from below given options:

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

Q.4) “**Pameda Wildlife Sanctuary**” is located in which of the following state?

- a) Jharkhand
- b) Odisha
- c) Chhattisgarh
- d) Maharashtra

Q.5) Consider the following statements with respect to **India Biodiversity Awards**:

1. It was launched in 2012 to recognise excellence in biodiversity governance across the country.
2. It was launched by Ministry of Environment with the help of UNESCO.

Which of the following above statements is/are correct?

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

Q.6) Consider the following statements with respect to “**Global Environment Outlook**”:

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1. Global Environment Outlook (GEO) is a series of reports on the environment issued periodically by the World Economic Forum.
 2. The report is based on integrated environmental assessment (IEA) methodology.
- Which of the following codes below given is/are correct?

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

Q.7) Which of the following is/are “**pioneer species**” of ecological succession?

1. Lichens
2. Fungi
3. Bacteria

Choose the correct code from below given options:

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

Q.8) “**Global Drylands Initiative**” is launched by which of the following?

- a) UNEP
- b) Global Environment Facility
- c) World Bank
- d) IUCN

Q.9) Consider the following statements with respect to **World Network of Biosphere Reserves (WNBR)**:

1. WNBR consists of 20 trans-boundary sites.
2. WNBR is the part of Man And Biosphere (MAB) programme.

Which of the following codes below given is/are **NOT** correct?

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

Q.10) “**Velavadar National Park**” is located in which of the following state?

- a) Maharashtra
- b) Rajasthan
- c) Gujarat
- d) Madhya Pradesh

Q.11) “**Appiko movement**” is started in which of the following state?

- a) Andhra Pradesh
- b) Uttarakhand
- c) Karnataka
- d) Maharashtra

Q.12) Consider the following statements with respect to “**Young Champions of the Earth**” award:

1. Individuals under 15 years of age are eligible to contest.
2. Award is given by UNDP.

Which of the following codes below given is/are correct?

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

Q.13) Which of the following is/are categories (performance indicators) of **climate change performance index**?

- 1. GHG emissions
- 2. Renewable energy
- 3. Energy use
- 4. Sustainable development

Choose the correct code from below given options:

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

Q.14) Consider the following statements with respect to **Carbon Pricing Leadership Coalition (CPLC)**:

- 1. CPLC is an initiative of World Bank that catalyzes action towards the successful implementation of carbon pricing around the world.
- 2. From India, Delhi Metro Rail Corporation and Indian Railways are the government level partners.

Which of the following codes below given is/are **NOT** correct?

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

Q.15) Which of the following national parks is/are **NOT** located in the Kerala?

- 1. Eravikulam National Park
- 2. Silent Valley National Park
- 3. Pampadum Shola National Park
- 4. Bandipur National Park

Choose the correct code from below given options:

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

Q.16) Consider the following statements with respect to **“Tiger Reserves”** in India:

- 1. At present in India 50 tiger reserves spread out in 18 tiger range states.
- 2. The tiger reserves are constituted on core/buffer areas which don't have any legal status.
- 3. The buffer areas consist of forest land only.

Which of the following above statements is/are **NOT** correct?

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

Q.17) Consider the following statements with respect to **“Keystone Species”**:

1. Keystone species is an organism that helps hold the system together.
 2. Predators, ecosystem engineers and mutualists are three types of keystone Species.
- Which of the following codes below given is/are correct?

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

Q.18) **“Lawalong Wildlife Sanctuary”** is located in which of the following state?

- a) Kerala
- b) Arunachal Pradesh
- c) Jharkhand
- d) Chhattisgarh

Q.19) Which of the following is/are consists of **“River valleys”** of Arunachal Pradesh?

1. The Siang Valley
2. The Kameng Valley
3. The Tirap Valley

Choose the correct code from below given options:

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

Q.20) Consider the following statements with respect to **“The World Commission on Environmental Law (WCEL)”**:

1. It advances environmental law around the globe by providing specialized knowledge and assistance to strengthen the legal foundations of the conservation of nature and sustainable development.
2. WCEL functions as an integral part of the International Court of Justice (ICJ).

Which of the following codes below given is/are correct?

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

Q.21) Consider the following statements:

1. Bio-magnification is the process by which toxins enter the food web by building up in individual organisms.
2. Bio-accumulation is the process by which toxins are passed from one trophic level to the next.

Which of the following statements is/are correct?

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

Q.22) Which of the following is/are characteristics of **“Persistent organic pollutants (POPs)”**?

1. Highly toxic to humans and wildlife.

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2. Last for many years in the environment.
3. Long-range transport.

Which of the following codes below given is/are correct?

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

Q.23) “Nitrogen fixation” on earth is/are accomplished by which of the following ways?

1. Organic matter decomposition.
2. Thunder and lightning.
3. The Haber-Bosch process.

Choose the correct code from below given options:

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

Q.24) “Askot Wildlife Sanctuary” is located in which of the following state?

- a) Himachal Pradesh
- b) Gujarat
- c) Chhattisgarh
- d) Uttarakhand

Q.25) “The Commission on Ecosystem Management (CEM)” is related to which of the following?

- a) UNEP
- b) IUCN
- c) UNFCCC
- d) UNCBD

ANSWER KEY

Que.	Ans.	Que.	Ans.	Que.	Ans.
1	B	11	C	21	D
2	D	12	D	22	D
3	D	13	A	23	A
4	C	14	A	24	D
5	A	15	D	25	B
6	B	16	C		
7	D	17	C		
8	D	18	C		
9	C	19	D		
10	C	20	A		

EXPLANATION

1. Explanation: Today, most of the smog we see is photochemical smog. Photochemical smog is produced when sunlight reacts with nitrogen oxides and at least one volatile organic compound (VOC) in the atmosphere. Nitrogen oxides come from car exhaust, coal power plants, and factory emissions. VOCs are released from gasoline, paints, and many cleaning solvents. When sunlight hits these chemicals, they form airborne particles and ground-level ozone—or smog.

Ozone can be helpful or harmful. The ozone layer high up in the atmosphere protects us from the sun's dangerous ultraviolet radiation. But when ozone is close to the ground, it is bad for human health. Ozone can damage lung tissue, and it is especially dangerous to people with respiratory illnesses like asthma. Ozone can also cause itchy, burning eyes.

2. Explanation: The International Plant Protection Convention (IPPC) aims to protect world plant resources, including cultivated and wild plants by preventing the introduction and spread of plant pests and promoting the appropriate measures for their control. The convention provides the mechanisms to develop the International Standards for Phytosanitary Measures (ISPMs), and to help countries to implement the ISPMs and the other obligations under the IPPC, by facilitating the national capacity development, national reporting and dispute settlement.

The Secretariat of the IPPC is hosted by the Food and Agriculture Organization of the United Nations (FAO).

3. Explanation: The International assistance scheme under the World Heritage Fund deals with the protection of cultural sites (monuments, groups of buildings, historic cities, and archaeological sites) and natural sites inscribed on the World Heritage List. Priority is given to the most threatened properties, especially those inscribed on the List of World Heritage in Danger. Sites inscribed on national Tentative Lists may also receive assistance, but only for the preparation of a nomination file.

4. Explanation: Spread over a region of 262 sq km, Pamed is one of the essential wildlife sanctuaries in Bastar. Set up in 1983 to accommodate the overabundance population of the wild bison, this sanctuary is also home to the tiger, panther, chital and different types of fauna. Chhattisgarh is one of the essential places in the tourism guide of the nation. A major portion of the state is covered with forests. A considerable measure of rare trees is to be found in the forests. You can also find some of the rare types of creatures in the national parks and the wildlife Sanctuaries. Pameda Wildlife Sanctuary, Chhattisgarh is one of the vital sanctuaries and attracts the travelers who have an adventurous blend of mind. Pameda wildlife Sanctuary in Chhattisgarh in India is located in Dantewada District of Chhattisgarh. Andhra Pradesh border is close to the sanctuary. The aggregate area is 260 sq km and there is a mixed deciduous forest.

5. Explanation: India is one of the mega-diverse countries in the world and home to nearly eight percent of the world's total recorded species of plants and animals. Across the country, people, communities and governments have played an outstanding and innovative role in conserving India's rich heritage. Government of India, Ministry of Environment, Forest and Climate Change in association with UNDP India, therefore, started the India Biodiversity Awards in 2012, to recognise excellence in biodiversity governance across the country. The first round of Awards was launched in 2012 during India's Presidency of the Eleventh Meeting of Conference of Parties to the Convention on Biological Diversity. The award selection process is conducted in partnership with the National Biodiversity Authority of India.

6. Explanation: Global Environment Outlook (GEO) is a series of reports on the environment issued periodically by the United Nations Environment Programme (UNEP). The sixth edition of the Global Environment Outlook (GEO-6) provides a clear assessment of the current state of the environment, the challenges that we face and how well we have dealt with them, with due consideration given to gender, indigenous knowledge and cultural dimensions. The assessment lays the foundation for continued socio-environmental

assessments across relevant scales, with a thematic as well as an integrated focus, enabling and informing societal transitions and the tracking of Sustainable Development Goal targets and goals as well as previously agreed internationally environmental goals. Using the integrated environmental assessment (IEA) methodology, UNEP has produced five GEO reports thus far, and the first edition of regional assessments which have analyzed environmental state and trends at the global and regional scales, described plausible outlooks for various time frames and formulated policy options.

7. Explanation: Ecological succession is a series of progressive changes in the species that make up a community over time. Primary succession occurs when new land is formed or bare rock is exposed, providing a habitat that can be colonized for the first time. What happens to this land during primary succession? First, weathering and other natural forces break down the substrate, rock, enough for the establishment of certain hearty plants and lichens with few soil requirements, known as pioneer species. Algae, fungi, bacteria, lichens colonize on the bare rocks and provide organic materials for further higher level of colonization, while the planktons i.e., phytoplankton's, zooplanktons provide base at the shallow water for further higher levels of succession in hydro sere.

8. Explanation: Drylands are found in tropical and temperate latitudes and account for 41.3% of the global terrestrial area. They can be classified into four types - dry sub-humid, semi-arid, arid and hyper-arid lands - encompassing a variety of ecosystems. The goal of the Global Drylands Initiative is to restore, sustainably manage and protect dryland ecosystems for multiple environmental, economic and social benefits. The Initiative supports countries to adapt ecosystem management policy and practice to the unique conditions of the drylands and to the evolving challenges that the drylands face. Further, as the IUCN Focal Point to the United Nations Convention to Combat Desertification, the Global Drylands Initiative leads IUCN's efforts to influence the global discourse on Land Degradation and Sustainable Land Management. In this case, the Initiative supports countries to implement their commitments to the Convention by demonstrating good practices on the ground, influencing the science-policy interaction of the Convention itself and working with other stakeholders to achieve Land Degradation Neutrality.

9. Explanation: Composed of 686 biosphere reserves in 122 countries, including 20 transboundary sites, the WNBR of the MAB Programme promotes North-South and South-South collaboration and represents a unique tool for international co-operation through sharing knowledge, exchanging experiences, building capacity and promoting best practices. The World Network of Biosphere Reserves of the MAB Programme consists of a dynamic and interactive network of sites of excellence. It fosters the harmonious integration of people and nature for sustainable development through participatory dialogue; knowledge sharing; poverty reduction and human well-being improvements; respect for cultural values and society's ability to cope with change - thus contributing to the Millenium Development Goals. Accordingly, the WNBR is one of the main international tools to develop and implement sustainable development approaches in a wide array of contexts.

10. Explanation: Velavadar is situated in the Bhal region of Saurashtra in Gujarat. It is a unique grassland ecosystem and perhaps the only tropical grasslands in India to be deemed a National Park. It is most renowned for its enchanting blackbuck population. The elegant blackbuck is endemic to India and Velavadar is one of its prime home territories. Wolves are the main predators of blackbuck in the park. It is highly recommended for any birdwatcher, with several birds like the Lesser Florican visiting the area. Besides, Velavadar has also earned fame as the world's largest roosting site of the harrier.

11. Explanation: The famous Chipko Andolan (Hug the Trees Movement) of Uttarakhand in the Himalayas inspired the villagers of the Uttara Kannada district of Karnataka Province in southern India to launch a similar movement to save their forests. In September 1983, men, women and children of Salkani "hugged the trees" in Kalase forest. (The local term for "hugging" in Kannada is appiko.) Appiko Andolan gave birth to a new awareness all over southern India.

12. Explanation: Young Champions of the Earth aims to celebrate and support individuals aged between 18 and 30 who have outstanding potential to create a positive environmental impact. In 2020, seven young people – selected from every global region – will be named Young Champions of the Earth. These winners receive seed funding, intensive training and tailored mentoring to bring their big environmental ideas to life. We're looking for artists, scientists, economists, communicators and entrepreneurs from all walks of life who have big, bold ideas – for the environment, for humanity, for a greener future. Shortlisted finalists from every region will be selected following an open call for applications. A Global Jury will then choose seven winners. Each winner is expected to implement their big idea and keep UNEP updated on their progress by producing videos and blogs that we will share on our website. Winners will also be given funding to support their communication efforts throughout the year, so that they can produce high-quality materials to share with our audiences.

13. Explanation: Climate Change Performance Index (CCPI) is published by Germanwatch, Climate Action Network International and the NewClimate Institute, annually. It aims to enhance transparency in international climate politics and enables comparison of climate protection efforts and progress made by individual countries. The ranking results are defined by a country's aggregated performance in 14 indicators within the four categories:

- GHG Emission- 40%
- Renewable Energy – 20%
- Energy Use- 20%
- Climate Policy- 20%

14. Explanation: The Carbon Pricing Leadership Coalition (CPLC) is a voluntary initiative that catalyzes action towards the successful implementation of carbon pricing around the world. The CPLC brings together leaders from government, business, civil society and academia to support carbon pricing, share experiences and enhance the global, regional, national and sub-national understanding of carbon pricing implementation. The CPLC Secretariat is administered by The World Bank Group. From India, Delhi Metro Rail Corporation and Indian Railways are the government level partners.

15. Explanation: National park is an area which is strictly reserved for the betterment of wildlife & biodiversity. Activities like developmental, forestry, poaching, hunting and grazing on cultivation are not permitted. Even private ownership rights are not allowed in these parks. Their boundaries are well marked and restricted. There are 6 national parks in Kerala and are as follows:

- Anamudi Shola National Park which is located in Idukki.
- Eravikulam National Park in Munnar
- Mathikettan Shola National Park at Udumbanchola taluk in Idukki.
- Pampadum Shola National Park at Marayoor Village in Idukki.
- Periyar National Park in Thekkady.
- Silent Valley National Park in Palakkad

16. Explanation: Statement 1 is correct: The Government of India has launched the 'Project Tiger' in 1973. From 9 tiger reserves since its formative years, the Project Tiger coverage has increased to 50 at present, spread out in 18 of our tiger range states.

Statement 2 is incorrect: The tiger reserves are constituted on a core/buffer strategy. The core areas have the legal status of a national park or a sanctuary.

Statement 3 is incorrect: The buffer or peripheral areas are a mix of forest and non-forest land, managed as a multiple use area. The Project Tiger aims to foster an exclusive tiger agenda in the core areas of tiger reserves, with an inclusive people oriented agenda in the buffer.

17. Explanation: Both statements are correct.

Statement 1 is correct: In any arrangement or community, the "keystone" is considered one of the most vital parts. In a marine ecosystem, or any type of ecosystem, a keystone species is an organism that helps hold the system together.

Statement 2 is correct: There are three types of keystone species cited by many scientists: predators, ecosystem engineers, and mutualists.

- Predators help control the populations of prey species, which in turn affects the quantity of plants and animals further along the food web.
- An ecosystem engineer is an organism that creates, changes, or destroys a habitat.
- When two or more species in an ecosystem interact for each other's benefit, they are called mutualists.

18. Explanation: Lawalong Wildlife Sanctuary was set up in 1978 to the southwest of Hazaribagh in the Chhotanagpur plateau area. It covers an area of about 211 sq. kms. The terrain is undulating and dissected by rivers and streams. Located in the south-west part of Chatra district, Lawalong sanctuary has a rich wildlife, including tiger and bison. Different species of birds and serpents are also found here. A variety of wildlife including Tiger, Panther, Hyena, Spotted Deer, Wild Boar, Nilgai are available in this sanctuary.

19. Explanation: All three valleys are located in Arunachal Pradesh.

Rivers constitute an important part of the topography of the state. Arunachal Pradesh is divided into five major river valleys: 1. The Siang Valley 2. The Kameng Valley 3. The Subansiri Valley 4. The Lohit Valley 5. The Tirap Valley.

These valleys are named after the important rivers of the state. The major rivers and their tributaries traversing the state are Siang, Kameng, Subansiri, Lohit, Tirap etc. All these and other countless rivers and rivulets are fed by snow from the Himalayas. Therefore, mostly these small rivulets are perennial in nature.

20. Explanation: Statement 1 is correct: The World Commission on Environmental Law (WCEL) advances environmental law around the globe by providing specialized knowledge and assistance to strengthen the legal foundations of the conservation of nature and sustainable development through the conceptual advancement of environmental principles, norms, and laws, and by building the capacity of communities to benefit from the environmental rule of law.

Statement 2 is incorrect: WCEL functions as an integral part of the IUCN Environmental Law Programme (ELP) that includes close collaboration with the Environmental Law Centre (ELC).

21. Explanation: Both statements are incorrect.

Statement 1 is incorrect: Bioaccumulation is the process by which toxins enter the food web by building up in individual organisms. Bioaccumulation occurs at the base of a food

web, usually within primary producers like phytoplankton. These microscopic photosynthetic organisms absorb POPs directly from the seawater and accumulate them in their bodies over time. The toxins build up in their tissues because they are absorbed from the water at a rate faster than they can be metabolized.

Statement 2 is incorrect: Bio-magnification is the process by which toxins are passed from one trophic level to the next (and thereby increase in concentration) within a food web. Bio-magnification occurs when slightly larger organisms called zooplankton feed upon the contaminated phytoplankton and in turn absorb POPs into their own tissues at a higher concentration. The more contaminated phytoplankton a zooplankton eats the more pollutants it will have in its body. In other words, the POPs can be passed from producer to consumer (to consumer, to consumer, and so on...) Bio-magnification can continue all the way up the food web or chain.

22. Explanation: Persistent organic pollutants (POPs) are a group of chemicals possessing the following characteristics:

- They are highly toxic to humans and wildlife (harmfulness);
- They can last for many years in the environment before degrading into less dangerous forms (persistence);
- They bio-accumulate in the food chain (bio-accumulation);
- They are transported over large distances through air and water and can be found worldwide (long-range transport).

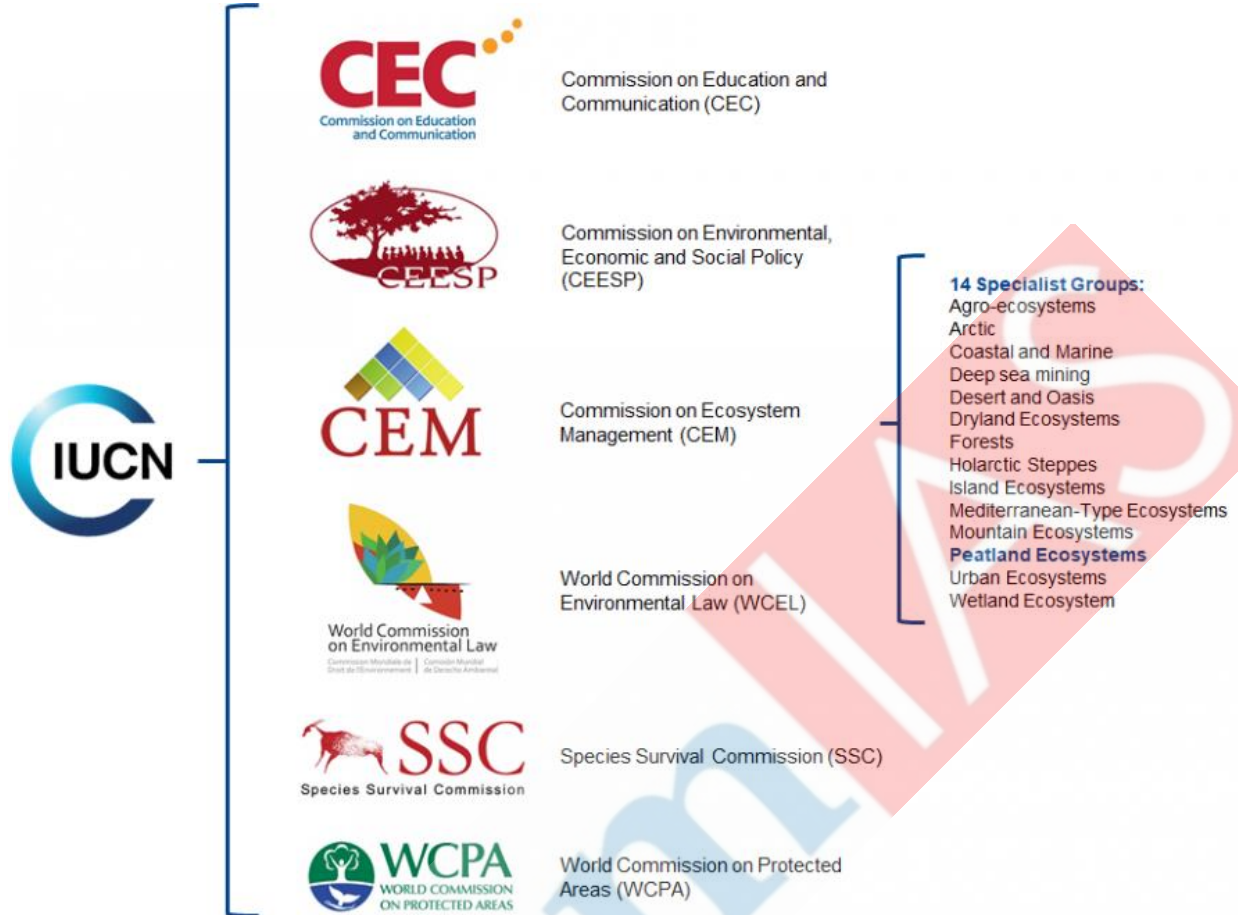
23. Explanation: Nitrogen is a critical limiting element for plant growth and production. It is a major component of chlorophyll, the most important pigment needed for photosynthesis, as well as amino acids, the key building blocks of proteins. It is also found in other important bio-molecules, such as ATP and nucleic acids. Even though it is one of the most abundant elements (predominately in the form of nitrogen gas (N₂) in the Earth's atmosphere), plants can only utilize reduced forms of this element. Plants acquire these forms of "combined" nitrogen by: 1) the addition of ammonia and/or nitrate fertilizer (from the Haber-Bosch process) or manure to soil, 2) the release of these compounds during organic matter decomposition, 3) the conversion of atmospheric nitrogen into the compounds by natural processes, such as lightning, and 4) biological nitrogen fixation.

24. Explanation: Himalayan tailless bush blue, *Arhopala ganessa ganessa*, is a butterfly that is usually present in the elevation between 1200 meters and 2400 meters in the states of Jammu & Kashmir and Uttarakhand. It later recorded an altitude 3577 meters in Askot Wildlife Sanctuary in Uttarakhand. Researchers believe that these butterflies have migrated in search of a suitable climate where the climates in several Himalayan mountain ranges have already noticed significant changes.

25. Explanation: The Commission on Ecosystem Management (CEM) is one of the six expert commissions of IUCN. CEM provides expert guidance on integrated approaches to the management of natural and modified ecosystems to promote biodiversity conservation and sustainable development. The commission promotes the adoption of and provides guidance for ecosystem-based approaches to the management of landscapes and seascapes

PRELIMS MARATHON COMPILATION FOR THE MONTH OF APRIL, 2020

and builds resilience of socio-ecological systems to address global challenges.



History

Q.1) “He who does what is beneficial to the people of this country, be he a Muhammedan or an Englishman, is not alien. ‘Alienness’ has to do with interests. Alienness is certainly not concerned with white or black skin or religion”- which of the following **freedom fighter** said the above statement?

- a) Mahatma Gandhi
- b) Bala Gangadhar Tilak
- c) Jawaharlal Nehru
- d) Rajendra Prasad

Q.2) The “**Pakistan Resolution**” passed in which of the following session of Muslim League?

- a) Lahore
- b) Karachi
- c) Dhaka
- d) None

Q.3) Consider the following statements with respect to “**Pitts India Act of 1784**”:

- 1. It gave the British government a large measure of control over the Company’s affairs.
- 2. The presidencies of Bombay and Madras were made subordinate to the governor-general.
- 3. No prohibition was placed on aggressive wars and treaties.

Which of the following codes below given is/are **NOT** correct?

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

Q.4) Consider the following statements with respect to “Sikh style of Architecture”:

- 1. The use of multiple Chhatris or kiosks on the top of the construction.
- 2. The buildings had fluted domes, which were generally covered by brass and copper guilds for decoration and support.

Which of the following codes below given is/are correct?

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

Q.5) “**Kanaganahalli**”- ancient Buddhist site located in which of the following state?

- a) Kerala
- b) Andhra Pradesh
- c) Tamil Nadu
- d) None

Q.6) Consider the following statements with respect to “**Treaty of Allahabad**”:

- 1. Treaty is concluded between Shah Alam II and Clive.
- 2. Balwant singh, Zamindar of Banaras, will have total rights to possession of his estate.

Which of the following codes below given is/are correct?

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

Q.7) The famous “**trial of Raja Nand Kumar**” is related to which of the following Governor General?

- a) Robert Clive
- b) Lord Hastings
- c) Warren Hastings
- d) Lord Cornwallis

Q.8) Consider the following statements with respect to “**Cornwallis Code**”:

- 1. Permanent settlement is the main subject of the Cornwallis Code.
- 2. New code is based on the principle of separation of powers.
- 3. A gradation of civil courts setup.

Which of the following above statements is/are correct?

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

Q.9) Consider the following statements with respect to difference between **Greek and Roman styles of Art**:

- 1. The Greek style is realistic in nature and Roman is Idealistic in nature.
- 2. Greeks used Concrete and Romans used marble as raw material for building the art.
- 3. Gandhara School integrates both the styles.

Which of the following above statements is/are **NOT** correct?

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

Q.10) Which of the following is/are criteria to select UNESCO list of tangible world heritage sites in India?

- 1. It should represent a masterpiece of human creative genius.
- 2. It should exhibit an important interchange of human values over a span of time.
- 3. It is an outstanding example of a traditional human settlement, land-use or sea-use which is representative of a culture.

Which of the following codes below given is/are correct?

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

Q.11) “**Tana Bhagat Movement**” is related to which of the tribe?

- a) Asur
- b) Koya
- c) Oraon
- d) Toda

Q.12) Consider the following statements with respect to **“Indian Railways”**:

1. The first railway line was from Bombay to Thane.
2. The first passenger railway line was the Red Hill Railroad line, Madras.

Which of the following codes below given is/are correct?

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

Q.13) Which of the following **Charter Act** were sanctioned one lakh rupees to promoting **“western sciences”** in India?

- a) Charter Act 1803
- b) Charter Act 1813
- c) Charter Act 1833
- d) Charter Act 1853

Q.14) “The tips of the thumb and index finger touch each other, forming a circle, the right hand is positioned at shoulder level and the left hand at the hip level, in the lap, with palm facing upwards”- describes which of the following **Mudra**?

- a) Vitarka Mudra
- b) Dhyana Mudra
- c) Bhumisparsha Mudra
- d) Anjali Mudra

Q.15) **“Kuchipudi”**, a pre-eminent Indian classical dance form counted among ten leading classical dance forms of India, originated in which of the following state?

- a) Karnataka
- b) Andhra Pradesh
- c) Odisha
- d) Tamil Nadu

Q.16) **“Vellore Mutiny”** is related to which of the following?

- a) Lord Amherst
- b) Lord Cornwallis
- c) Lord Minto
- d) Lord William Bentinck

Q.17) Which of the following is/are recommendations of **“Wood’s Despatch”**?

1. Creation of a Department of Public Instruction.
2. Continuation of the Downward Filtration Theory.
3. Establishment of universities in the three Presidency towns of Calcutta, Bombay and Madras.

Choose the correct code from below given options:

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

Q.18) Consider the following statements with respect to **“Administration of Satavahanas”**:

1. King is divine and he carried administration in accordance with divine rights.

2. There was a council of ministers to aid and advice him for carrying out the administration properly.

Which of the following above statements is/are **NOT** correct?

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

Q.19) “Manjusri Mulakalpa” is related to which of the following?

- a) King Ashoka
- b) King Kanishka
- c) King Harsha
- d) King Chandra Gupta Maurya

Q.20) “Pandav leni” is related to which of the following caves?

- a) Ajanta caves
- b) Ellora caves
- c) Nasik caves
- d) Bagh caves

Q.21) “Borno Porichoy’ (Introduction to the letter)” is written by which of the following social reformer?

- a) Ishwar Chandra Vidyasagar.
- b) Debendranath Tagore.
- c) Raja Ram Mohan Roy.
- d) Vasudev Balwant Phadke.

Q.22) “Presidency of Agra” created by which of the following **Charter Act**?

- a) Charter Act, 1803.
- b) Charter Act, 1813.
- c) Charter Act, 1833.
- d) Charter Act, 1853.

Q.23) Consider the following statements with respect to **“Vittala Temple”**:

- 1. It was built during the Pallava Empire.
- 2. The Vittala Temple is dedicated to Lord Vitthala, an avatar of Lord Shiva.

Which of the following above statements is/are correct?

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

Q.24) Which of the following **“foreigner visitors”** is/are visited **“Vijayanagara Empire”**?

- 1. Nicolo De Conti.
- 2. Abdul Razaq.
- 3. Athanasius Nikitin.

Choose the correct code from below given options:

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

Q.25) “Social Service League” founded which of the following below given person?

- a) M G Ranade
- b) Keshab Chandra Sen
- c) Gopal Ganesh Agarkar
- d) Narayan Malhar Joshi

ANSWER KEY

Que.	Ans.	Que.	Ans.	Que.	Ans.
1	B	11	C	21	A
2	A	12	D	22	C
3	D	13	B	23	D
4	C	14	A	24	D
5	D	15	B	25	D
6	B	16	D		
7	C	17	B		
8	D	18	A		
9	B	19	A		
10	D	20	C		

EXPLANATION

1. Explanation: He who does what is beneficial to the people of this country, be he a Muhammedan or an Englishman, is not alien. ‘Alienness’ has to do with interests. Alienness is certainly not concerned with white or black skin or religion- Bal Gangadhar Tilak.

2. Explanation: The ‘Pakistan Resolution’ was passed at the Lahore session of the Muslim League calling for “grouping of all geographically contiguous Muslim majority areas (mainly north-western and eastern India) into independent states in which the constituent units shall be autonomous and sovereign, and adequate safeguards to Muslims in other areas where they are in a minority”.

3. Explanation:

- The Pitt’s India Act gave the British government a large measure of control over the Company’s affairs. In fact, the Company became a subordinate department of the State. The Company’s territories in India were termed ‘British possessions’.
- The government’s control over the Company’s affairs was greatly extended. A Board of Control consisting of the chancellor of exchequer, a secretary of state and four members of the Privy Council (to be appointed by the Crown) were to exercise control over the Company’s civil, military and revenue affairs. All dispatches were to be approved by the board. Thus a dual system of control was set up.
- In India, the governor-general was to have a council of three (including the commander-in-chief), and the presidencies of Bombay and Madras were made subordinate to the governor-general.
- A general prohibition was placed on aggressive wars and treaties (breached often).

4. Explanation: Sikh style of architecture developed in the region of modern day Punjab. It was heavily influenced by the Mughal style of architecture. Some of the features of the Sikh school are:

- The use of multiple Chhatris or kiosks on the top of the construction.
- Use of shallow cornices. The buildings had fluted domes, which were generally covered by brass and copper guilds for decoration and support.

- The arches were decorated by the use of numerous foliations.
- Example: Shri Harmandir Sahib or Golden temple. It was initiated in 1585 and completed by Arjan Dev in 1604.

5. Explanation: Early Buddhist art in India expanded exponentially when, in 1994, archaeologists unearthed a spectacular ancient stupa outside the hamlet of Kanaganahalli in modern Karnataka State, in India's southwest. As if by magic, a lost Buddhist monastic center from the early first millennium emerged from a shapeless mound. By virtue of its remarkable stone sculpture and hundreds of ancient stone inscriptions, Kanaganahalli instantly took its place among the most celebrated early Buddhist sites in India. One location mentioned in the inscriptions even turns up in Ptolemy's Geographia of the 2nd century CE, a reminder of how small the world was becoming even at the beginning of the first millennium.

6. Explanation: Clive proceeded Oudh and concluded with Shuja-ud-Daula, the Nawab Wazir of Oudh, the Treaty of Allahabad (16 August, 1765). By this treaty, Shuja-ud-Daula was confirmed in his possessions on the following conditions:

1. That the Nawab surrenders Allahabad and Kara to Emperor Shah Alam;
2. That he agrees to pay Rs. 50 lakhs to Company as war indemnity;
3. That he confirms Balwant singh, Zamindar of Banaras, in full possession of his estate.

By the second treaty of Allahabad (August 1765) the Emperor Shah Alam was taken under the Company's protection and was to reside at Allahabad. He was assigned Allahabad and Kara ceded by the Nawab of Oudh. The Emperor in turn issued a Farman dated 12 August 1765 granting to the Company in perpetuity the Diwani of Bengal, Bihar and Orissa in return for the Company making an annual payment of Rs. 26 lakhs to him and providing for the expenses of the Nizamat. Thus, the friendly treaty with Oudh made the Nawab a friend of the Company and created Oudh into a buffer state. The Emperor's Farman legalised the political gains of the Company in Bengal.

7. Explanation: The trial of Raja Nand Kumar is an example of how arbitrary and capricious the justice of administration was in British India. This trial is popularly known as the judicial murder of Raja Nand Kumar. This is a historically significant trial because later on this trial became a major ground for the impeachment of Governor General Warren Hastings and Chief Justice Impey of the Supreme Court of Calcutta, by the House of Commons, after they returned to England.

8. Explanation: Lord Cornwallis, the British Governor General of India, introduced 48 regulations in 1793 which are generally known as the Cornwallis Code. This Code originated from a number of earlier regulations, viz, the orders and regulations introduced between 1772 and 1790, Hindu and Muslim laws, traditional institutions, the regulations of permanent settlement, and the British laws. The aim of the Cornwallis Code was to introduce an institutional code of law and an administrative system suitable for British colonial state. On 1 May 1793, Cornwallis announced his Code. Permanent settlement is the main subject of the Cornwallis Code. Earlier, the District Collector was at the same time the tax administrator, judge and magistrate. Now, a judge is appointed for every district and by separating the judiciary from the administration, judicial and magisterial power is vested with the judge. A gradation of civil courts was set up.

9. Explanation: There exists some difference between Greek and Roman styles and Gandhara School integrates both the styles. The idealistic style of Greeks is reflected in the muscular depictions of Gods and other men showing strength and beauty. Lots of Greek

mythological figures from the Greek Parthenon have been sculpted using marble. On the other hand, Romans used art for ornamentation and decoration and is realistic in nature as opposed to Greek idealism. The Roman art projects realism and depicts real people and major historical events. The Romans used concrete in their sculptures. They were also famous for their mural paintings.

10. Explanation: The nominated sites must be of “outstanding universal value” and should meet at least one of the ten mentioned criteria:

- Represents a masterpiece of human creative genius.
- Exhibits an important interchange of human values over a span of time, or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design.
- Bears a unique or exceptional testimony to a cultural tradition or to a civilisation which is living or which has disappeared.
- Is an outstanding example of a type of building, architectural, or technological ensemble or landscape which illustrates a significant stage in human history.
- Is an outstanding example of a traditional human settlement, land-use or sea-use which is representative of a culture or human-interaction with the environment especially when it has become vulnerable under the impact of irreversible change,
- Is directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance.

11. Explanation: Tana Bhagat Movements among the Mundas and Oraon tribes led by Jatra Bhagat, Balram Bhagat who preached that God’s benevolent delegate would arrive to free the tribals (1914-1915; Chottanagpur); against interference of outsiders; began as Sanskritisation movement.

12. Explanation: The first railway line was the Red Hill Railroad line, Madras. It opened in 1837 and was use for the carriage of granite stone. While the first passenger railway line ran from Bombay to Thane in 1853.

13. Explanation: The British Parliament issued the Charter Act of 1813 by which a sum of Rupees One lakh was sanctioned for promoting western sciences in India. But a controversy soon arose. Some wanted the money to be spent on advocating western ideas only. There were others who placed more emphasis on traditional Indian learning. Some recommended use of vernaculars (regional languages) as the medium of instruction, others were for English.

14. Explanation: Vitarka Mudra: It indicates teaching and discussion or intellectual debate. The tips of the thumb and index finger touch each other, forming a circle. The right hand is positioned at shoulder level and the left hand at the hip level, in the lap, with palm facing upwards. It signifies the teaching phase of preaching in Buddhism. The circle formed by the thumb and index finger maintains the constant flow of energy, as there is no beginning or end, only perfection.

15. Explanation: Kuchipudi, a pre-eminent Indian classical dance form counted among ten leading classical dance forms of India, is a dance-drama performance art that originated in a village of Krishna district of Andhra Pradesh, India. Similar to all leading Indian classical dance forms, Kuchipudi too evolved as a religious art rooting back to the age-old Hindu Sanskrit text ‘Natya Shastra’ and connects traditionally with temples, spiritual faiths and travelling bards. This ancient dance form finds place in the 10th century copper

inscriptions and in 15th century texts like 'Machupalli Kaifat'. Traditionally it is regarded that the sanyassin of Advaita Vedanta sect, Tirtha Narayana Yati, and his disciple Siddhendra Yogi initiated, methodized and arranged the present day version of the dance form in 17th century. Usually performance repertoire of Kuchipudi that is broadly oriented on Lord Krishna and the tradition of Vaishnavism include an invocation, dharavu – short dance, nritta – pure dance and nritya – expressive dance respectively.

16. Explanation: Lord William Bentinck, governor-general of India. In May 1799 he was attached to the headquarters of Marshal Suwarroff's army in the north of Italy, and remained in that country throughout the campaign of 1799, and subsequently until 1801 with the Austrian forces, being present at the battles of the Trebbia, Novi, Savigliano, and Marengo, the passages of the Mincio and the Adige, the sieges of Alessandria and Coni, and various other affairs. In 1803 he was nominated governor of Madras, where he quarrelled with the chief justice, Sir Henry Gwillim, and several members of his council. The event which led to his removal from the government was the mutiny at Vellore, when the sepoys of the native regiments quartered at that station rose upon their European officers and upon the British part of the garrison, killing thirteen officers and a considerable number of men.

17. Explanation: Statement 1 is correct: The Wood's Despatch, for the first time, recommended the creation of a Department of Public Instruction in each of the five provinces of Bengal, Bombay, Madras, the Punjab and the North Western provinces.

Statement 2 is incorrect: The Downward Filtration Theory as proposed earlier was discarded and in its place importance to primary education was given. Elementary education was considered to be the foundation of the education system.

Statement 3 is correct: The Despatch recommended the establishment of universities in the three Presidency towns of Calcutta, Bombay and Madras. The universities were to be modeled after the London University and these were to have a senate comprising of a Chancellor, a Vice-Chancellor, and fellows who were nominated by the Government.

18. Explanation: Statement 1 is incorrect: The Satavahana rulers did not believe in divine rights of a king and they carried administration in accordance with the directives of the Dharma Shastras and the social customs.

Statement 2 is correct: There was also a council of ministers to aid and advise him for carrying out the administration properly. The king was the head of the Government as well as the protector to his people. The Satavahana kings regarded their subjects as their own children and always looked after their welfare.

19. Explanation: Literary sources such as the Divyavadana, Avadana, Manjusri Mulakalpa and Puranas contain references to Ashoka and his religious policy.

20. Explanation: Nasik caves are a group of 24 Buddhist caves, also known as "Pandav Leni". They were developed during 1st century A.D. and belong to the Hinayana period. However, later, the influence of Mahayana sect can also be found in these caves. Under hinayana sect, his presence is indicated through the use of motifs and symbols like throne and footprints. And later, the idols of Buddha were also carved inside these caves representing influence of Mahayana Buddhism. The site also depicts an excellent system of water management indicated through presence of water tanks carved out of solid rocks.

21. Explanation: Ishwar Chandra Vidyasagar (1820-1891) was as one of the pillars of Bengal renaissance who managed to continue the social reforms movement that was started

by Raja Rammohan Roy in the early 1800s. He brought about a revolution in the Bengali education system and refined the way Bengali language was written and taught. His book, 'Borno Porichoy' (Introduction to the letter), is still used as the introductory text to learn Bengali alphabets. The title 'Vidyasagar' (ocean of knowledge) was given to him due to his vast knowledge in several subjects. Poet Michael Madhusudan Dutta while writing about Ishwar Chandra said: "The genius and wisdom of an ancient sage, the energy of an Englishman and the heart of a Bengali mother".

22. Explanation: Of all the Acts passed by the British Parliament to regulate the affairs of the East India Company, the Charter Act of 1833 stands out as the most comprehensive and far reaching in effect. A new Presidency was created under the Act, namely, the Presidency of Agra.

23. Explanation: Both statements are incorrect.

Statement 1 is incorrect: Vittala Temple was built in the 15th century during the reign of King Devaraya II (1422- 1446 A.D.) of the Vijayanagara Empire. Several sections of the temple were expanded and renovated during the reign of Krishnadevaraya (1509- 1529 A.D.), the illustrious ruler of the Vijayanagara dynasty.

Statement 2 is incorrect: The Vittala Temple is dedicated to Lord Vitthala, an avatar of Lord Vishnu. An idol of Vitthala-Vishnu was enshrined in the temple but lost in ravages of time. Legends narrate that the temple was built as a residence for Lord Vishnu in his Vitthala form. However, the Lord had found the temple to be too ostentatious and returned to live in his own modest home.

24. Explanation: Famous travellers who visited India during reign of different rulers of Vijayanagar Empire:

- Abu Abdullah/Ibn Batuta: He was from Morocco, who travel thirty years of his life from North Africa, West Africa, Southern Europe and Eastern Europe in the West, to the Middle East, Indian subcontinent, Central Asia, Southeast Asia and East China. He left an account of Harihara I's reign in his book Rehla (Tuhfat-un- Nuzzar fi Gharaib UL-Amsar WA Ajaib-UL-Assar).
- Nicolo de Conti: He was Italian merchant, scholar, and a traveller who visited the Vijaynagar Kingdom during the time of Dev Raya II. He left an account in the Travels of Nicolo Conti.
- Abdur Razzaq: He was a Persian, Timurid chronicler and a scholar who visited the Vijaynagar Kingdom at the time of Dev Raya II as an ambassador of Shah Rukh, the Timurid dynasty ruler of Persia. He gives an account of the reign of Devaraya II in his Matla as Sadain Wa Majma ul Bahrain.
- Athanasius Nikitin: He was a first Russian traveller and merchant who visited India. He described the conditions of the Bahamani kingdom under Muhammad III in his Voyage to India.

25. Explanation: A follower of Gokhale, Narayan Malhar Joshi founded the Social Service League in Bombay with an aim to secure for the masses better and reasonable conditions of life and work. They organised many schools, libraries, reading rooms, day nurseries and cooperative societies. Their activities also included police court agents' work, legal aid and advice to the poor and illiterate, excursions for slum dwellers, facilities for gymnasias and theatrical performances, sanitary work, medical relief and boys' clubs and scout corps.

Economy

Q.1) Which of the following is/are part of “**revenue expenditure**”?

1. Interest payments on loans raised by government.
2. Subsidies forwarded to all sectors by the government.
3. Grants given by the government to Indian states and foreign countries.

Choose the correct code from below given options?

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

Q.2) Consider the following statements with respect to measures to achieve “**Fiscal Consolidation**” in India:

1. Cutting down the burden of salaries and pensions.
2. Cutting down the administrative prices.
3. Higher education declared as priority sector.

Which of the following codes below given is/are **NOT** correct?

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

Q.3) Which of the following is **NOT** part of Mundell’s “**impossible trinity**”?

- a) Environmental Issues
- b) Free capital flows
- c) Fixed exchange rate
- d) Independent monetary policy

Q.4) Consider the following statements with respect to “**Expenditure Management Commission (EMC)**”:

1. It is created by Expenditure management Act, 2014.
2. Ranga rajan is the first chairman of EMC.

Which of the following codes below given is/are correct?

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

Q.5) In economics “**Dutch disease**” is related to which of the following?

- a) Sustainable Development
- b) Animal rearing
- c) Banking provisions
- d) Exports

Q.6) Consider the following statements with respect to “**Social Progress Index**”:

1. It is compiled and released by World Economic Forum.

2. The index is based on three dimensions of social progress, basic Human Needs, foundations of Wellbeing, and opportunity.

Which of the following codes below given is/are correct?

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

Q.7) Consider the following statements with respect to **“Effective Revenue Deficit” (ERD)**:

- 1. It is the difference between revenue deficit and grants for creation of capital assets.
- 2. It is suggested by the Rangarajan Committee on Public Expenditure.
- 3. The ERD target for 2020-21 has been set under 1% of GDP.

Which of the following codes below given is/are **NOT** correct?

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

Q.8) Which of the following is/are recommendations of **“N K Singh committee”** to review the implementation of FRBM?

- 1. The combined debt-to-GDP ratio of the centre and states should be brought down to 60 per cent by 2023.
- 2. The Committee advocated Primary Deficit as the operating target to bring down public debt.
- 3. The Committee also recommends that centre reduce its revenue deficit steadily by 0.5% GDP points each year.

Choose the correct code from below given options:

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

Q.9) “It is an economic situation where people hoard financial capital instead of investing or spending it”- is related to which of the following?

- a) Multiplier effect
- b) Liquidity trap
- c) Thrift
- d) Fiscal trap

Q.10) Which of the following **“Monetary Aggregates of RBI”** is compiled on weekly basis?

- a) M0
- b) M1
- c) M2
- d) M3

Q.11) Consider the following statements with respect to **“Perfect Competition”** market:

- 1. Price Makers are generally found in perfect competition market.
- 2. Agriculture is the good example for perfect competition market.

Which of the following above statements is/are correct?

- a) 1 only
- b) 2 only

- c) Both 1 and 2
- d) Neither 1 nor 2

Q.12) "It is the point at which a country's economy is most efficiently producing its various goods and services and, therefore, allocating its resources in the best way possible"- defines which of the following?

- a) Production Possibility Frontier
- b) Indifference Curve
- c) Supply Curve
- d) Demand Curve

Q.13) Which of the following subsidies is/are covered under "**Green Box of WTO**"?

- 1. Public storage for food security.
- 2. Pest and disease control.
- 3. Government policies of Minimum Support Prices.

Choose the correct code from below given options:

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

Q.14) Consider the following statements with respect to "**Development Banks**":

- 1. It is established on the recommendation of Sukomay Chakravarthi committee.
- 2. IDBI is the first All India Development Bank (AIDB).

Which of the following codes below given is/are correct?

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

Q.15) "**Assets Reconstruction Companies (ARCs)**" is the product of which of the following act?

- a) Recovery of Debts Due to Banks and Financial Institutions (RDDBFI Act), 1993.
- b) SARFAESI Act, 2002.
- c) Financial Regulation Act, 2018.
- d) Banking Regulations Act, 1949.

Q.16) "The market that has only a handful of buyers and sellers that offer close substitutes to the end users"- defines which of the following?

- a) Monopoly.
- b) Perfect Competition.
- c) Monopolistic Competition.
- d) Oligopolistic Competition.

Q.17) Which of the following is/are **NOT** covered under "**Reserve Bank of India Act, 1934**"?

- 1. Bank Rate
- 2. Statutory Liquidity Ratio
- 3. Cash Reserve Ratio

Choose the correct code from below given options:

- a) 1 only

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

Q.18) “LERMS” is related to which of the following?

- a) Trade Practices.
- b) Exchange Rate.
- c) Banking Reforms.
- d) Insurance Sector.

Q.19) Which of the following “currencies” is/are considered for Reference rate of RBI?

- 1. US Dollar
- 2. Japan Yen
- 3. EURO
- 4. Britain Pound
- 5. Chinese Renminbi

Choose the correct code from below given options:

- a) 1, 2 and 3 only
- b) 2, 3, 4 and 5 only
- c) 1, 2, 3, and 4 only
- d) 1, 2, 3, 4, and 5

Q.20) Consider the following statements with respect to “National Payments Corporation of India (NPCI)”:

- 1. NPCI is an initiative of RBI and Indian Banks’ Association (IBA).
- 2. NPCI has launched RuPay, a card payment scheme.

Which of the following statements given above is/are **NOT** correct?

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

ANSWER KEY

Que.	Ans.	Que.	Ans.
1	D	11	B
2	C	12	A
3	A	13	B
4	D	14	D
5	D	15	B
6	B	16	C
7	D	17	D
8	A	18	B
9	B	19	C
10	A	20	D

EXPLANATION

1. Explanation: All expenditures incurred by the government are either of revenue kind or current kind or compulsive kind. The basic identity of such expenditures is that they are of consumptive kind and do not involve creation of productive assets. They are either used in running of a productive process or running a government. A broad category of things that fall under such expenditures in India are:

PRELIMS MARATHON COMPILATION FOR THE MONTH OF APRIL, 2020

- Interest payment by the government on the internal and external loans;
- Salaries, Pension and Provident Fund paid by the government to government employees;
- Subsidies forwarded to all sectors by the government;
- Defense expenditures by the government;
- Postal Deficits of the government;
- Law and order expenditures (i.e., police & paramilitary);
- Expenditures on social services (includes all social sector expenditures as education, health care, social security, poverty alleviation, etc.) and general services (tax collection, etc.);
- Grants given by the government to Indian states and foreign countries.

2. Explanation: India started the politically and socially painful process of fiscal reforms, a step towards fiscal consolidation. A number of steps were taken by the government at the Centre in this direction and there had been incessant attempts to do the same in the states' public finances too. Major highlights in this direction can be summed up as given below:

Policy initiatives towards cutting revenue deficits:

- Cutting down the burden of salaries, pensions and the PFs (downsizing/ right-sizing of the government, out of every 3 vacancies 1 to be filled up, interest cut on the PF, pension reforms-PFRDA, etc.);
- Cutting down the subsidies (Administered Price Mechanism in petroleum, fertilizers, sugar, drugs to be rationalised, it was done with mixed successes);
- Interest burden to be cut down (by going for lesser and lesser borrowings, pre-payment of external debts, debt swaps, promoting external lending, minimal dependence on costlier external borrowings, etc.);
- General Services to be motivated towards profit with subsidized services to the needy only (railways, power, water, etc.);
- Postal deficits to be checked by involving the post offices in other areas of profit;
- Higher education declared as non-priority sector; fees of institutions of professional courses revised upward; etc.

3. Explanation: More recent trilemmas in economics, the prima donna of all of them is Mundell's 'impossible trinity'. This old trilemma asserts that a country cannot maintain, simultaneously, all three policy goals of —

- free capital flows,
- a fixed exchange rate, and
- an independent monetary policy.

The impossible trinity has seen enough waters flowing down the time since it were articulated almost five decades ago which a strong theoretical foundation in the Mundell-Fleming Model has developed in the 1960s.

4. Explanation: By early September 2014, the GoI constituted an Expenditure Management Commission (EMC) through a Resolution. The EMC will look into various aspects of expenditure reforms to be undertaken by the government and other issues concerning Public Expenditure Management. The Commission has one full time, one part time and one ex-officio members other than Chairman of (Cabinet rank). Dr. Bimal Jalan is its first Chairman.

5. Explanation: When an increase in one form of net exports drives up a country's exchange rate, it is called the Dutch Disease. Such instances make other exports noncompetitive in the world market and impair the ability of domestic products to compete

with imports. The term originated from the supposed effect of natural gas discoveries on the Netherlands economy.

6. Explanation: The ("SPI"), compiled by the Social Progress Imperative, a US-based non-profit, ranks 149 countries' social performance over six years (2014-2019). It uses 51 indicators including: nutrition, shelter, safety, education, health, personal rights and inclusiveness. The Social Progress Index is the first holistic measure of a country's social performance that is independent of economic factors. The index is based on a range of social and environmental indicators that capture three dimensions of social progress: Basic Human Needs, Foundations of Wellbeing, and Opportunity. The 2019 Social Progress Index includes data from 149 countries on 51 indicators. The index captures outcomes related to all 17 Sustainable Development Goals and is a comprehensive snapshot of a country's overall progress towards the achievement of the goals.

7. Explanation: Effective Revenue Deficit is the difference between revenue deficit and grants for creation of capital assets. The concept of effective revenue deficit has been suggested by the Rangarajan Committee on Public Expenditure. It is aimed to deduct the money used out of borrowing to finance capital expenditure. The concept has been introduced to ascertain the actual deficit in the revenue account after adjusting for expenditure of capital nature. Focusing on this will help in reducing the consumptive component of revenue deficit and create space for increased capital spending. Though the Budget documents have given targets for revenue deficit, the amendments to the Fiscal Responsibility and Budget Management Act 2003 has proposed to substitute the definitions of "effective revenue deficit" and "revenue deficit" with those of "Central government debt" and "general government debt" respectively.

8. Explanation: The FRBM Review Committee headed by former Revenue Secretary, NK Singh was appointed by the government to review the implementation of FRBM. In its report submitted in January 2017, titled, 'The Committee in its Responsible Growth: A Debt and Fiscal Framework for 21st Century India', the Committee suggested that a rule based fiscal policy by limiting government debt, fiscal deficit and revenue deficits to certain targets is good for fiscal consolidation in India. Following are the main recommendations of the NK Singh Committee.

1. Public debt to GDP ratio should be considered as a medium-term anchor for fiscal policy in India. The combined debt-to-GDP ratio of the centre and states should be brought down to 60 per cent by 2023 (comprising of 40 per cent for the Centre and 20% for states) as against the existing 49.4 per cent, and 21per cent respectively.
2. Fiscal deficit as the operating target: The Committee advocated fiscal deficit as the operating target to bring down public debt. For fiscal consolidation, the centre should reduce its fiscal deficit from the current 3.5% (2017) to 2.5% by 2023.
3. Revenue deficit target: The Committee also recommends that the central government should reduce its revenue deficit steadily by 0.25 percentage (of GDP) points each year, to reach 0.8% by 2023, from a projected value of 2.3% in 2017.
4. Formation of Fiscal Council to advice the government: The Committee advocated formation of institutions to ensure fiscal prudence in accordance with the FRBM spirit. It recommended setting up an independent Fiscal Council. The Council will provide several advisory functions.
5. Escape Clause to accommodate counter cyclical issues.

9. Explanation: A liquidity trap is an economic situation where people hoard financial capital instead of investing or spending it. As a result, the nation's central bank can't

use expansionary monetary policy to boost economic growth. It often occurs when short-term interest rates are zero.

10. Explanation: The RBI has started publishing a set of new monetary aggregates following the recommendations of the Working Group on Money Supply: Analytics and Methodology of Compilation (Chairman: Dr. Y.V. Reddy) which submitted its report in June 1998. The Working Group recommended compilation of four monetary aggregates on the basis of the balance sheet of the banking sector in conformity with the norms of progressive liquidity: M0 (monetary base), M1 (narrow money), M2 and M3 (broad money). In addition to the monetary aggregates, the Working Group had recommended compilation of three liquidity aggregates namely, L1, L2 and L3, which include select items of financial liabilities of non-depository financial corporations such as development financial institutions and non-banking financial companies accepting deposits from the public, apart from post office savings banks.

Weekly Compilation: $M0 = \text{Currency in Circulation} + \text{Bankers' Deposits with RBI} + \text{'Other' Deposits with RBI}^*$.

11. Explanation: Statement 1 is incorrect: Price makers are able to influence the market price and enjoy pricing power. Price makers are found in imperfectly competitive markets such as a monopoly or oligopoly market.

Statement 2 is correct: An example of a perfectly competitive market is the agricultural market. Companies operating in an agricultural market are price takers because:

- The goods are homogenous – A bushel produced by one farmer is essentially identical to the bushel produced by another farmer. Therefore, there is no brand loyalty.
- There are a large number of buyers and sellers – There are a large number of sellers, such that none of them is able to influence the market price. A farmer cannot deviate from the market price of a product without running the risk of losing significant revenue.
- Buyers can access perfect information – Buyers can easily obtain price information and therefore would seek out the lowest price.
- Ease of entry and exit – Although agricultural production offers some barriers to entry, it is not difficult to enter the market.

12. Explanation: An allocation of the scarce resource of the economy gives rise to a particular combination of different goods and services. Given the total amount of resources, it is possible to allocate the resources in many different ways and, thereby achieving different mixes of all possible goods and services. The collection of all possible combinations of the goods and services that can be produced from a given amount of resources and a given stock of technological knowledge is called the production possibility set/frontier of the economy.

13. Explanation: The agricultural subsidies which cause minimal or no distortions to trade are put under the green box. They must not involve price support. This box basically includes all forms of government expenses, which are not targeted at a particular product, and all direct income support programmes to farmers, which are not related to current levels of production or prices. This is a very wide box and includes all government subsidies like—public storage for food security, pest and disease control, research and extension, and some direct payments to farmers that do not stimulate production like restructuring of agriculture, environmental protection, regional development, crop and income insurance, etc.

14. Explanation: Both statements are incorrect.

Statement 1 is incorrect: The era of economic reforms had given the same option to the PSUs to tap new capital. As the AIFIs had more or less fixed rate of interest as compared to the banks which could mobilise cheaper deposits to lend cheaper—the AIFIs seemed to become irrelevant. The AIFIs witnessed a sharp decline in recent years. At this juncture the government decided to convert them into Development Banks (suggested by the Narasimhan Committee-I) to be known as the All India Development Banks (AIDBs).

Statement 2 is incorrect: In 2000, the government allowed ICICI to go for a reverse merger (when an elder enterprise is merged with a younger one) with the ICICI Bank—the first AIDB emerged with no obligation of project financing—such entities in coming times will be known as the universal banks.

15. Explanation: Assets Reconstruction Companies (ARCs) acquire non-performing assets (NPAs) from banks or financial institutions along with the underlying securities mortgaged and/or hypothecated by the borrowers to the lenders. The ARCs then try and manage or resolve these NPAs acquired from banks. It can even infuse more funds in order to reconstruct the asset. If reconstruction is not possible and the borrower is unwilling to repay the loan, the ARCs even sell the secured assets. ARCs acquire NPAs by way of 'true sale', i.e., once an NPA has been sold, the seller has no further interest in that asset. ARCs are a product of the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 (SARFAESI Act).

16. Explanation: Monopolistic competition is a competitive market that has only a handful of buyers and sellers that offer close substitutes to the end users. In the ideal markets, most consumer products are a part of monopolistic competition. We can consider examples of day to day needs like cosmetics, grocery products, garments or medicines. There are a handful of sellers and hence there is elasticity in demand-supply-price patterns.

17. Explanation: Bank Rate: Under Section 49 of the Reserve Bank of India Act, 1934, the Bank Rate has been defined as "the standard rate at which the Reserve Bank is prepared to buy or re-discount bills of exchange or other commercial paper eligible for purchase under the Act. On introduction of LAF, discounting/rediscounting of bills of exchange by the Reserve Bank has been discontinued. As a result, the Bank Rate became dormant as an instrument of monetary management. It is now aligned to MSF rate and used for calculating penalty on default in the cash reserve ratio (CRR) and the statutory liquidity ratio (SLR).

Statutory Liquidity Ratio: In terms of Section 24 of the Banking Regulations Act, 1949, scheduled commercial banks have to invest in unencumbered government and approved securities certain minimum amount as statutory liquidity ratio (SLR) on a daily basis.

Cash Reserve Ratio: According to Section 42 of the Reserve Bank of India Act, 1934, each scheduled commercial bank has to maintain a minimum cash balance with the Reserve Bank as cash reserve ratio (CRR) which is prescribed by the Reserve Bank from time to time as certain percentage of its net demand and time liabilities (NDTL) relating to the second preceding fortnight. Banks have to maintain minimum 95 per cent of the required CRR on a daily basis and 100 per cent on an average basis during the fortnight.

18. Explanation: Liberalized Exchange Rate Management System (LERMS) was a new system of exchange rate management. According to this system, forty percent of the proceeds of exports and inward remittances were purchased at the official exchange rate by the (RBI) Reserve Bank of India for official use. Receipts and Payments on capital account continued to be subject to controls.

19. Explanation: The Reserve Bank of India compiles on a daily basis and publishes reference rates for four major currencies i.e. USD, GBP, YEN and EUR. The rates are arrived at by averaging the mean of the bid/offer rates polled from a few select banks around 12 noon every week day (excluding Saturdays). The contributing banks are selected on the basis of their standing, market-share in the domestic foreign exchange market and representative character. The Reserve Bank periodically reviews the procedure for selecting the banks and the methodology of polling so as to ensure that the reference rate is a true reflection of the market activity.

20. Explanation: Both statements are correct.

Statement 1 is correct: National Payments Corporation of India (NPCI), an umbrella organisation for operating retail payments and settlement systems in India, is an initiative of Reserve Bank of India (RBI) and Indian Banks' Association (IBA) under the provisions of the Payment and Settlement Systems Act, 2007, for creating a robust Payment & Settlement Infrastructure in India.

Statement 2 is correct: NPCI launched RuPay is an indigenously developed Payment System – designed to meet the expectation and needs of the Indian consumer, banks and merchant eco-system. RuPay supports the issuance of debit, credit and prepaid cards by banks in India and thereby supporting the growth of retail electronic payments in India.