ForumIAS

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Prelims Marathon

November, 2020

HISTORY
ECONOMICS
POLITY
SCIENCE AND TECHNOLOGY
GEOGRAPHY AND ENVIRONMENT

History

- Q.1) The term "shroffs" in 16th and 17th century is related to which of the following?
- a) Money exchangers
- b) Village headman
- c) Village protectors
- d) Village artisans

ANS: A

Explanation: Commercial institutions were also well-developed to promote such extensive trade.

- Because a variety of coins were in circulation, there were money-changers or shroffs to test coins for their purity and decide their value in current terms.
- They also served as local bankers.

Source: NCERT

- **Q.2)** With reference to European rulers/traders, the term "Batavia" is related to which of the following country?
- a) Myanmar
- b) Gulf of Siam
- c) Indonesia
- d) Ceylon

ANS: C

Explanation: In early 18th Century the Dutch had given up Pulicat and moved their headquarters further south to Nagapattinam.

They had decided to shift their focus to the spice-producing islands of Indonesia and established their capital at Jakarta (Batavia).

Source: NCERT

- **Q.3)** The "Cartaz system protection against piracy" was introduced by which of the following colonial power in India?
- a) Chinese
- b) Portuguese
- c) French
- d) English

ANS: B

Explanation: The Portuguese threatened disruption of trade by violence unless their protection, cartaz, was bought.

- Under the cartaz system, the Portuguese exacted money from the traders as price for protection against what they termed as piracy.
- But much of this was caused by Portuguese freebooters themselves and so the whole system was a blatant protection racket.

Source: NCERT

Q.4) Which of the following pair (s) is/are **NOT** correctly matched?

Freaty : Governor General

1. Treaty of Perpetual friendship : Lord Hastings

2. Treaty of Bassein : Lord Wellesley3. Treaty of Salbai : Warren Hastings

Select the correct answer using the code given below:

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

ANS: A

Explanation: Treaty of Salbai: It was signed on 17 May 1782, by representatives of the Maratha Empire and the British East India Company after long negotiations to settle the outcome of the First Anglo-Maratha War it was signed between Warren Hastings and Mahadaji Scindia.

Treaty of Bassein: It was a pact signed on December 31, 1802 between the British East India Company (Lord Wellesley) and Baji Rao II, the Maratha peshwa of Pune (Poona) in India after the Battle of Poona.

The treaty was a decisive step in the dissolution of the Maratha Confederacy, which led to the East India Company's usurpation of the peshwa's territories in western India in 1818.

Treaty of Perpetual friendship: Maharaja Ranjit Singh, also called Sher-i-Punjab was born November 1780 at Gujranwala. When he was 12 years old he became the chief of his own misl after the death of his father in 1792.

Ranjit Singh wanted to annex Sind but could not do so because of the English opposition. In 1831 he signed the treaty of perpetual friendship with the English (William Bentinck). Source: NCERT

Q.5) The "Zeliangrong or Haomei movement" was related to which of the following area?

- a) Chotanagpur plateau
- b) Mumbai presidemcy
- c) Mizo Hills
- d) Naga Hills

ANS: D

Explanation: The ongoing national movement influenced the tribal movements in the early decades of 20th century: The Tana Bhagat movement of Gumla in Ranchi district, and the **Zeliangrong movement in the Naga Hills** were two such instances.

- Jadonang (1905-193 I), who set up the Haraka religious cult with three basic objectives started the complex Zeliangrong or Haomei movement in 1925.
- The first aimed at reformation of the tribes, particularly the Zemi, Liangrnei and Rangmei, to enable them to face the onslaught of Christianity.
- Secondly, the overthrows of the exploitative colonial laws by attacking British rule.
- And third, establishment of the Naga Raj.
- The movement was also aimed against the Kuki tribe, the "outsider".
- From 1927 onwards, influenced by Gandhi, Jadonang began a civil disobedience movement in the area.
- On 13 June 1931, Jgdonang was arrested and sentenced to death, and finally hanged on 29 August 1931

Source: NCERT

Q.6) Which of the following pair (s) is/are **NOT** correctly matched?

Museum:State1. Calico Museum:Kerala

2. Janapadaloka Museum : Karnataka3. National Museum : New Delhi

Select the correct answer using the code given below:

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

ANS: A

Explanation: Chariots were primarily used in south Indian temples; in some, new chariots have been replaced old ones.

- If the chariots become very old and fragile, or caught with fire or even damaged beyond repair, they are not be drawn during Rathotsava but abandoned outside the town in an open field.
- They are acquired by the museums and private collectors, who restore and place them in museums.
- Today, we can see a massive chariot beautifully positioned in the newly built
 Manjusha Museum at Dharmasthala (Karnataka), Calico Museum at
 Ahemadabad, Janapadaloka at Ramnagar (Karnataka), and Government
 Museum at Kanyakumari and at the National Museum in New Delhi.

Source: The Hindu

Q.7) Consider the following statements regarding the Indian National Trust for Art and Cultural Heritage (INTACH):

- 1. It was founded in 1984 with the vision to spearhead heritage awareness and conservation in India.
- 2. It is an autonomous body under Ministry of Culture.

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

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

ANS: B

Explanation: The Indian National Trust for Art and Cultural Heritage (INTACH) was founded in 1984 in New Delhi with the vision to spearhead heritage awareness and conservation in India.

- Today INTACH is recognized as one of the world's largest heritage organizations, with over 190 Chapters across the Country.
- In the past 31 years INTACH has pioneered the conservation and preservation of not just our natural and built heritage but intangible heritage as well.
- Headquartered in New Delhi, it operates through various divisions such as Architectural Heritage, Natural Heritage, Material Heritage, Intangible Cultural Heritage, Heritage Education and Communication Services (HECS), Crafts and Community Cell, Chapters, INTACH Heritage Academy, Heritage Tourism, Listing Cell and Library, Archives and Documentation Centre.

Source: The Hindu

- Q.8) "Jogimara caves" of pre-historic paintings are located in which of the following state?
- a) Madhya Pradesh
- b) West Bengal

- c) Bihar
- d) None

ANS: D

Explanation: Some of the paintings from the later period can be seen in the Jogimara caves in the Ramgarh hills in Surguja district of Chhattisgarh. These are dated to be painted around 1000 BCE.

- Chhattisgarh is also home to the variety of caves in the district of Kanker like the shelter of Udkuda, Garagodi, Khairkheda, Gotitola, Kulgaon, etc.
- These shelters depict the human figurines, animals, palm prints, bullock carts, etc. which show a higher and sedentary type of living.

Source: Nitin Singhania

Q.9) In 1859, the British passed a **Limitation Law** that stated that the loan bonds signed between moneylenders and ryots would have validity for how many years?

- a) One year
- b) Three years
- c) Five years
- d) Seven years

ANS: B

Explanation: The ryots came to see the moneylender as devious and deceitful.

- They complained of moneylenders manipulating laws and forging accounts.
- In 1859 the British passed a Limitation Law that stated that the loan bonds signed between moneylenders and ryots would have validity for only three years.
- This law was meant to check the accumulation of interest over time.

Source: NCERT

Q.10) "New India and Commonweal" newspapers are started by whom among the following?

- a) Subhash Chandra Bose
- b) Gandhiji
- c) Bal Gangadhar Tilak
- d) Annie Besant

ANS: D

Explanation: By early 1915, Annie Besant had launched a campaign to demand self-government for India after the war on the lines of white colonies.

- She campaigned through her newspapers, New India and Commonweal, and through public meetings and conferences.
- At the annual session of the Congress in 1915, the efforts of Tilak and Besant met with some success. It was decided that the Extremists be admitted to the Congress.
- Although Besant failed to get the Congress to approve her scheme of Home Rule Leagues, the Congress did commit itself to a programme of educative propaganda and to a revival of local-level Congress committees.
- Not willing to wait for too long, Besant laid the condition that if the Congress did not implement its commitments, she would be free to set up her own league-which she finally had to, as there was no response from the Congress.

Source: NCERT

Q.11) In which of the following archaeological site found the presence of a three-fold Neolithic, Chalcolithic and Iron Age settlements?

- a) Mehrgarh
- b) Belan Valley
- c) Soan Valley
- d) Burzahom

ANS: B

Explanation: Koldihwa, in Belan valley (unique in terms of the presence of a three-fold Neolithic, Chalcolithic and Iron Age settlements), Koldihwa and Mahagara, south of Allahabad (many strata of circular huts along with crude hand-made pottery; earliest evidence of rice cultivation in the world).

Source: Poonam Dahiya (Ancient & Medieval India)

Q.12) Which of the following crops are grew in Harappan Civilization?

- 1. Rice
- 2. Cotton
- 3. Ground Nut
- 4. Barley

Select the correct answer using the code given below:

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

ANS: A

Explanation: The Harappan civilisation was the earliest known civilisation to produce cotton. Known as Sindon by the Greeks as from Sindh.

- In the Indus plain, people sowed seeds in the flood plains in November, when the flood water receded and reaped their harvests of wheat and barley in April, before the advent of the next flood.
- They produced sufficient food grains to feed themselves and the surplus food grains were stored in granaries.

The characteristic features pertaining to the agricultural practices of the Harappans are mentioned below:

- The Harappans grew wheat (especially in Mehrgarh), barley, horse gram, peas, melon, watermelon, sesame, dates, millets, grapes, henna (mehndi), garlic, mustard, rice (Lothal).
- They also exploited riverine and marine resources wherever possible. For example, molluscs were an important protein-rich food element in the coastal sites of Gujarat people.

Source: NCERT

Q.13) Consider the following statements regarding "Harappan Civilization":

- 1. Harappan Civilization is considered as a secular society.
- 2. Idolatry was practiced in Harappan cities.

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

ANS: C

Explanation: Harappan civilisation is considered as a secular society as not a single structure qualifying as temple has been found.

- Sacred ritual spots included the Great Bath at Mohenjo-Daro, where the elite in all likelihood undertook ritual activity that included ceremonial bathing.
- Idolatry was practiced.

Source: NCERT

Q.14) There is still no consensus on the original home of Aryans and different theories are postulated which further continue the debate. Which of the following personality propounded the European theory of Aryans?

- a) Max Mueller
- b) Sir William Zones
- c) Bal Gangadhar Tilak
- d) Alexander Cunningham

ANS: B

Explanation: Indo-Aryans are believed to be the composers of Vedic texts.

The term Indo-Aryans is basically a linguistic term and refers to speakers of a sub group of the Indo-Iranian branch of the Indo-European family of languages.

Rig Veda composers describe themselves as Arya (a cultural/ethnic term etymologically derived from ar meaning to cultivate, literally meaning kinsmen or companion, in Sanskrit it means favourably disposed new comers and later it implied men of good family noble).

There is still no consensus on the original home of Aryans and different theories are postulated which further continue the debate.

European theory was propounded by Sir William Zones.

Source: Poonam Dahiya

Q.15) Dhanur Veda is the Upveda of which of the following?

- a) Rig Veda
- b) Sama Veda
- c) Yajur Veda
- d) Atharva Veda

ANS: C

Explanation: The Yajur Veda deals with the procedure for the performance of sacrifices. The texts are further divided into:

- Shukla Yajur Veda/White Yajur Veda/Vajasaneya (contains only the Mantras) It contains the Madhyandina and Kanva recensions.
- Krishna Yajur Veda/Black Yajur Veda (contains mantras and prose explanations/ commentary). It contains the Kathaka, Maitrayani, Taittiriya, and Kapishthala recensions.
- The Upveda of the Yajur Veda is the Dhanur Veda.

Source: Poonam Dahiya

Q.16) Arrange the following dynasties in chronological order:

- 1. Haryanka Dynasty
- 2. Shishunga Dynasty
- 3. Mauryan Dynasty
- 4. Nanda Dynasty

Select the correct answer using the code given below:



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

ANS: B

Explanation: Haryanka Dynasty, Shishunga Dynasty, Nanda Dynasty followed by Mauryan

Dynasty.

Source: Poonam Dahiya

Q.17) Milindapanho is a dialogue on various philosophical issues between the Indo – Greek king Milinda and which of the following personality?

- a) Buddhaghosa
- b) Mahavsta
- c) Suddhodhana
- d) Nagasena

ANS: D

Explanation: Milindapanho (written in Pali, it consists of a dialogue on various philosophical issues between the Indo- Greek king Milinda/Menander and the monk Nagasena).

Source: Poonam Dahiya

Q.18) The terms, "rekha-prasada, phamsana, valabhi" is related to which of the following?

- a) Dravida style of architecture
- b) Nagara style of architecture
- c) Hoyasala style of architecture
- d) Panchayatan style of architecture

ANS: B

Explanation: There are many subdivisions of nagara temples depending on the shape of the shikhara.

- The most common name for the simple shikhara which is square at the base and whose walls curve or slope inward to a point on top is called the 'latina' or the rekha-prasada type of shikara.
- The second major type of architectural form in the nagara order is the **phamsana**. Phamsana buildings tend to be broader and shorter than latina ones.
- The third main sub-type of the nagara building is what is generally called the **valabhi type**. These are rectangular buildings with a roof that rises into a vaulted chamber. The edge of this vaulted chamber is rounded, like the bamboo or wooden wagons that would have been drawn by bullocks in ancient times. They are usually called 'wagon vaulted buildings'.

Source: NCERT

- Q.19) "Tasvir Khana"- a formal artistic studio is established by which of the following?
- a) Babar
- b) Aurangzeb
- c) Akbar
- d) Jahangir

ANS: C

Explanation: Tasvir Khana.

- Akbar was responsible for establishment of an entire department devoted to the paintings and scribing of his documents.
- He established a formal artistic studio called Tasvir Khana where the artists were hired on salary and they developed their own styles.
- Akbar looked upon paintings as a means of study and amusement. He believed that a painting could show the demeanor of the subject and regularly gave awards to those painters who created lifelike images.

Source: NCERT

Q.20) Consider the following statements regarding the *Uttarapatha* and *Dakshinapatha*:

- 1. Uttarapatha route stretches from North-west India to present day Gujarat coast.
- 2. Dakshinapatha route stretches from port city of Tamralipti to Arikamedu.

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

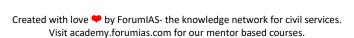
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: C

Explanation: Craft products like textile goods, ivory products, pots, etc., were exported over long distances by merchants. All the major cities were situated on river banks and trade routes, and were connected with each other.

- The two major trans-regional routes of the time were known as Uttarapatha (of northern India, stretching from the north-west across the Indo-Gangetic plains to the port city of Tamralipti on the Bay of Bengal).
- Dakshinapatha (of southern India, stretching from Pataliputra in Magadha to Pratishthana on the Godavari, and connected to ports on the western coast).

Source: NCERT



Economy

- Q.1) Which of the following principle/reform is **NOT** part of "Washington Consensus"?
- a) Fiscal Discipline
- b) Fixed exchange rate
- c) Market determined interest rates
- d) Privatization

ANS: B

Explanation: The term 'Washington Consensus' was coined by the US economist John Williamson (in 1989) under which he had suggested a set of policy reforms which most of the official in Washington (i.e., International Monetary Fund countries of the time. The policy reforms included ten propositions:

- Fiscal discipline
- A redirection of public expenditure priorities toward fields offering both high economic returns and the potential to improve income distribution, such as primary health care, primary education, and infrastructure.
- Tax reform (to lower marginal rates and broaden the tax base)
- Interest rate liberalisation
- A competitive exchange rate
- Trade liberalisation
- Liberalisation of FDI inflows
- Privatisation
- Deregulation (in the sense of abolishing barriers to entry and exit)
- Secure property rights

Source: Ramesh Singh

- **Q.2)** The economic idea of "Interventionist state" was given by which of the following economist?
- a) Adam Smith
- b) David Ricardo
- c) Karl Marx
- d) J M Keynes

ANS: D

Explanation: In the aftermath of the Great Recession (after the 'US sub-prime' crisis) in the Western economies, it is believed that dependence on market to correct the growth and development may not sustain any longer—and the world might agree in favour of a development state, as in the case of the East Asian nations which never went for the Consensus for their robust growth.

The Keynesian idea of 'interventionist state' seems the ultimate alternative in the present times, as is suggested by the US Nobel economist Paul Krugman and being followed by the Japanese Prime Minister, Shinzo Abe (the Three Arrows of Abenomics).

Source: Ramesh Singh

- **Q.3)** Which of the following is/are the characteristic/s of Indian economy?
- 1. The contribution of primary sector in the GDP has fallen down regularly.
- 2. The dependency of population on the primary sector for employment is still high.

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

ANS: C

Explanation: Indian economy did show some traits which were unique:

- The contribution of primary sector in the GDP has fallen down regularly and today it stands at 14.1 %.
- The dependency of the population on the primary sector for employment is still high is a symptom of agrarian economy.
- The expansion of industries was not sufficient to attract labour from the primary sector activities.

Source: Ramesh Singh

Q.4) Consider the following statements regarding "World Development Report":

- 1. It was launched by United Nations along with lines of Human Development Report (HDR).
- 2. It is a biannual report.
- 3. It provides in-depth analysis of a specific aspect of economic development.

Which of the statements above given is/are correct?

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

ANS: D

Explanation: The World Development Report is an annual report published since 1978 by the International Bank for Reconstruction and Development or World Bank. Each WDR provides in-depth analysis of a specific aspect of economic development.

Source: World Bank

- **Q.5)** "SAMRUDHI is a new state agriculture policy (SAP)" is recently in news is launched by which of the following state?
- a) Kerala
- b) Andhra Pradesh
- c) Madhya Pradesh
- d) Odisha

ANS: D

Explanation: The Odisha government launched its new State Agricultural Policy (SAP) 2020-SAMRUDHI that focuses on profitability for farmers.

- Samrudhi is focused on the social and economic well-being of farmers, sharecroppers and landless agriculture households.
- It aims to actualise the untapped potential of agriculture, while ensuring growth process is environmentally, economically and technologically inclusive.
- It is based on an 8-pillar strategy focused on simultaneous reforms.

Source: The Hindu

Q.6) The "**Prompt Corrective Action (PCA)**" framework is seen in news is related to which of the following?

- a) Banking sector
- b) Insurance sector
- c) Disinvestment
- d) Foreign exchange

ANS: A

Explanation: Prompt Corrective Action or PCA is a framework under which banks with weak financial metrics are put under watch by the RBI.

- The PCA framework deems banks as risky if they slip below certain norms on three parameters capital ratios, asset quality and profitability.
- It has three risk threshold levels (1 being the lowest and 3 the highest) based on where a bank stands on these ratios.
- Banks with a capital to risk-weighted assets ratio (CRAR) of less than 10.25 per cent but more than 7.75 per cent fall under threshold 1.
- Those with CRAR of more than 6.25 per cent but less than 7.75 per cent fall in the second threshold.
- In case a bank's common equity Tier 1 (the bare minimum capital under CRAR) falls below 3.625 per cent, it gets categorized under the third threshold level.
- Banks that have a net NPA of 6 per cent or more but less than 9 per cent fall under threshold 1, and those with 12 per cent or more fall under the third threshold level.
- On profitability, banks with negative return on assets for two, three and four consecutive years fall under threshold 1, threshold 2 and threshold 3, respectively.

Source: Hindu - Business line

- Q.7) Which of the following is/are direct tax/taxes in India?
- 1. Minimum Alternate Tax
- 2. Dividend Distribution Tax
- 3. Securities Transactions Tax

Select the correct answer using the code given below:

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

ANS: D

Explanation: As the name suggests these taxes are directly paid by the assesse to the government. These are not paid on behalf of the taxpayers but are imposed directly by the regulator.

Furthermore, this liability is non-transferable to another taxpayer. Different types of direct taxes in India are:

- **Corporate tax:** Such tax is levied on domestic companies that are different from the shareholders. This tax is also payable by foreign corporations whose income arises or is deemed to arise in India. Income earned as interest, royalties, dividends, technical services fees, or gains through the sale of assets based in India is taxable. Corporate tax also includes the following:
- **Minimum Alternate Tax (MAT):** Levied on zero tax companies whose accounts are prepared as per the guidelines of the Companies Act.
- **Fringe Benefits Tax:** Such direct tax is paid by companies on fringe benefits (drivers, maids, etc.) provided to employees.

- **Dividend Distribution Tax (DDT):** This tax is levied on any amounts that are declared, distributed, or paid by domestic entities as dividends to the shareholders; foreign companies are exempt from DDT.
- **Securities Transaction Tax (STT):** This liability arises from income earned through taxable securities transactions.

Source: Financial Express

Q.8) The "Ricardian Equivalence" term is related to which of the following?

- a) International Trade
- b) Government Deficits (fiscal and revenue)
- c) Banking reforms
- d) Agriculture sector

ANS: B

Explanation: An idea which (generated too much controversies) originally suggested by David Ricardo (1772–1823) and more recently by Barro, that government deficits do not affect the overall level of demand in an economy.

- This is because tax-payers know that any deficit has to be paid later, and so they increase their savings in anticipation of a higher tax bill in future;
- Thus government attempts to stimulate an economy by increasing public spending or cutting taxes, will be rendered impotent by private sector reaction.
- The equivalence can be seen as part of a thread of economic thinking which holds that only decisions about real variables (e.g., consumption and production) matter, and that decision about financing will, in a perfectly functioning market, never have an effect.

Source: Ramesh Singh

Q.9) "Special Safeguard Mechanism" of WTO is related to which of the following?

- a) Agriculture sector
- b) Insurance sector
- c) Manufacturing sector
- d) Shipping sector

ANS: A

Explanation: In recent times, India has become more conscious towards protecting its agricultural trade interests at the international platforms. At the 10th Ministerial Conference of the WTO (Nairobi, December 2015), the Government of India adopted the following approach towards agri-trade policy:

- A Special Safeguard Mechanism (SSM) for developing countries.
- Public stockholding food for security purposes,
- A commitment to abolish export subsidies for farm exports, and
- Measures related to cotton.

Source: Ramesh Singh

Q.10) Consider the following statements regarding Government e-Market place (GeM):

- 1. It is an online marketplace for procurement of commonly used goods and services by government ministries, departments and CPSEs.
- 2. It functions under Directorate General of Supplies and Disposals (DGS&D), Ministry of Commerce

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

ANS: C

Explanation: Government e Marketplace is an online marketplace setup in 2016 for procurement of commonly used goods and services by government ministries, departments and CPSEs.

- It aims to enhance transparency, efficiency and speed in public procurement.
- It is a National Procurement Portal of India. It functions under Directorate General of Supplies and Disposals (DGS&D), Ministry of Commerce and Industry.

Source: The Hindu

Q.11) Which of the following are the indicators of "World Happiness Index"?

- 1. GDP per capita
- 2. Social support
- 3. Environmental sustainability
- 4. Healthy life expectancy
- 5. Generosity

Select the correct answer using the code given below:

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

ANS: B

Explanation: The Sustainable Development Solutions Network for the United Nations released the World Happiness Report on 20th March, 2020.

- The World Happiness Report ranks 156 countries by how happy their citizens perceive themselves to be.
- The rankings are based on polling (Gallup World Poll) which looks at six variables: GDP per capita, social support, healthy life expectancy, freedom, generosity, and absence of corruption.
- The 2020 Report for the first time ranked cities around the world by their subjective well-being and looked into how the social, urban and natural environments combine to affect happiness.

Source: The Hindu

Q.12) Which of the following countries is/are part of "East Asian Miracle 1993"?

- 1. China
- 2. Japan
- 3. South Korea
- 4. Thailand
- 5. Philippines

Select the correct answer using the code given below:

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

ANS: B

Explanation: Eight countries in East Asia-Japan, South Korea, Taiwan, Hong Kong, Singapore, Thailand, Malaysia, and Indonesia-have become known as the "East Asian miracle" because of their economies' dramatic growth.

- In these eight countries real per capita GDP rose twice as fast as in any other regional grouping between 1965 and 1990.
- Even more impressive is their simultaneous significant reduction in poverty and income inequality.

Source: Ramesh Singh

Q.13) Which of the following five year plan is based on the "Harrod - Domar model"?

- a) First five year plan
- b) Second five year plan
- c) Fifth five year plan
- d) Tenth five year plan

ANS: A Explanation:

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	It was based on Harrod-Domar Model .
(1951 - 56)	Influx of refugees, severe food shortage & mounting inflation confronted the country at the onset of the first five year Plan.
Target Growth	The Plan Focussed on agriculture , price stability, power and transport
Actual Growth	It was a successful plan primarily because of good harvests in the last two years of the plan. Objectives of rehabilitation of refugees, food self sufficiency & control of prices were more or less achieved.

Source: MoSPI

Q.14) "The Planned Economy of India" book was written by which of the following?

- a) Dr. B. R. Ambedkar
- b) Dadabhai Naoroji
- c) M. Visvesvaraya
- d) Jawaharlal Nehru

ANS: C

Explanation: The credit of proposing the first blueprint of Indian planning is given to the popular civil engineer and the ex-Dewan of the Mysore state, M. Visvesvaraya.

In his book The Planned Economy of India, published in 1934, he outlined the broad contours of his plan proposal.

Source: Ramesh Singh

Q.15) Consider the following statements regarding "Insolvency and bankruptcy code":

- 1. It was introduced in 2016.
- 2. Under IBC, either the creditor (banks) or the loaner (defaulter) can initiate insolvency proceedings.

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

ANS: C

Explanation: Insolvency and bankruptcy code 2016 was introduced to resolve the bankruptcy crisis in corporate sector.

- Under IBC, either the creditor (banks) or the loaner (defaulter) can initiate insolvency proceedings.
- It is done by submitting a plea to the adjudicating authority, the National Companies Law Tribunal (NCLT).
- According to IBC, a financial creditor holds an important role in the corporate insolvency process.
- The Committee of Creditors (CoC) under IBC includes all financial creditors of a corporate debtor.
- The CoC will appoint and supervise the Insolvency Professional.
- It has the power to either approve or reject the resolution plan to revive the debtor, or to proceed to liquidate the debtor.

Source: Ramesh Singh

Q.16) Consider the following statements regarding "Government e-Marketplace (GeM)":

- 1. It is the Commerce Ministry's online marketplace.
- 2. Recently government made it mandatory for sellers on the GeM portal to clarify the country of origin of their goods when registering new products.

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

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

ANS: D

Explanation: Government e-Marketplace (GeM) is the Commerce Ministry's online marketplace.

- It procures goods and services by various Ministries and government bodies.
- Products sold on the portal range from stationery used by government officials to medical products that are used on patients.
- The government made it mandatory for sellers on the GeM portal to clarify the country of origin of their goods when registering new products.

Source: The Hindu

Q.17) Consider the following statements regarding "Monetization of Deficit":

- 1. Indian government till now never resort to monetization of deficit.
- 2. FRBM Act as amended in 2017 contained an escape clause which permits monetization of the deficit under special circumstances.

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

ANS: B

Explanation: Monetization of fiscal deficits involves the financing of such extra expenses with money, instead of debt to be repaid at some future dates.

So, it is a form of "non-debt financing". As a result, under monetization, there is no increase in net (not gross) public debt.

It can occur only through one of two modalities:

- Direct Monetization (DM): Under this method, RBI prints new currency and purchases government bonds directly from the primary market (from the government) using this currency. As a result, this supports the spending needs of the government.
- Indirect monetization (IM): In this method, deficits are monetized as the government issues bonds in the primary market and the RBI purchases an equivalent amount of government bonds from the secondary market in the form of Open Market Operations (OMOs).

Monetization of deficit was in practice in India till 1997, whereby the central bank automatically monetized government deficit through the issuance of ad-hoc treasury bills.

- In 1994 and 1997, two agreements were signed between the government and RBI to completely phase out funding through ad-hoc treasury bills.
- Later on, with the enactment of Fiscal Responsibility and Budget Management (FRBM) Act, 2003, RBI was completely barred from subscribing to the primary issuances of the government.
- The FRBM Act as amended in 2017 contained an escape clause which permits monetization of the deficit under special circumstances.

Source: The Hindu

Q.18) Which of the following is called as "Broad Money"?

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

ANS: D

Explanation: Reserve Money (M0): also called High Powered money, monetary base, base money etc.

- M0= Currency in Circulation+ Bankers' Deposits with RBI + Other Deposits with RBI.
- Narrow Money (M1) = Currency with public + Demand deposits with the Banking system (current account, saving account) + other deposits with RBI.
- M2 = M1 + Savings deposits of post office savings banks.
- Broad Money (M3) = M1 + Time deposits with the banking system.
- M4 = M3 + All deposits with post office savings banks

Source: Ramesh Singh

Q.19) The "International Comparison Programme" is often seen in news is associated with which of the following?

- a) IMF
- b) World Bank
- c) World Economic Forum
- d) UNDP

ANS: B

Explanation: ICP is worldwide data-collection initiative that is managed by World Bank under auspices of UN Statistical Commission.

- The main objective of the ICP is to produce comparable volume measures of GDP and its expenditure components based on Purchasing Power Parities (PPPs).
- India has participated in ICP rounds since its inception in 1970.

- Ministry of Statistics and Programme Implementation is National Implementing Agency for ICP in India.
- India was co-Chair of the ICP Governing Board along with Austria for the ICP 2017 cycle.
- Next ICP comparison will be conducted for reference year 2021.

Source: The Hindu

Q.20) The term "Side Pocketing" often seen in news is related to which of the following?

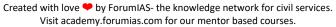
- a) Non-Banking Finance Corporations
- b) Mutual Funds
- c) Insurance Sector
- d) Viability Gap Funding

ANS: B

Explanation: Simply put, side pocketing is a framework that allows mutual funds to segregate the bad assets in a separate portfolio within their debt schemes.

- The Securities and Exchange Board of India (SEBI) introduced the framework in December primarily triggered by the IL&FS fiasco after it emerged that many fund houses have huge exposure to the beleaguered entity and could potentially take a huge hit on their net asset value thereby affecting investor returns.
- If a debt instrument is downgraded to default rating by credit rating agencies, then the fund house has the option to create a side pocket so that good assets can be ring-fenced.
- Side pocketing segregates the bad assets from the good ones.
- All existing investors in the scheme are allotted equal number of units in the segregated portfolio as held in the main portfolio and no redemption or subscription is allowed in the segregated portfolio.
- Thereafter, the units have to be listed on a stock exchange within 10 days to facilitate exit of the unit holders.
- Effectively, this makes the price discovery of the bad assets a transparent procedure with investors having the freedom of either selling it at prevailing price or holding it if they expect the value to recover in future.

Source: The Hindu



Polity

- **Q.1)** "Forced labour or beggar" is a violation of which one of the following article of the Constitution of India?
- a) Article 16
- b) Article 17
- c) Article 19
- d) Article 23

ANS: Article 23 of Indian constitution: Prohibition of traffic in human beings and forced labour.

- Traffic in human beings and begar and other similar forms of forced labour are prohibited and any contravention of this provision shall be an offence punishable in accordance with law.
- Nothing in this article shall prevent the State from imposing compulsory service for public purposes, and in imposing such service the State shall not make any discrimination on grounds only of religion, race, caste or class or any of them.

Source: Laxmikanth

- Q.2) Which one of the following is **NOT** a constitutional body?
- a) Finance Commission
- b) Election Commission of India
- c) State Public Service Commission
- d) National Commission for Women

ANS: D

Explanation: The National Commission for Women was set up as statutory body in January 1992 under the National Commission for Women Act, 1990 (Act No. 20 of 1990 of Govt.of India) to:

- review the Constitutional and Legal safeguards for women;
- recommend remedial legislative measures;
- · facilitate redressal of grievances and
- advise the Government on all policy matters affecting women.

In keeping with its mandate, the Commission initiated various steps to improve the status of women and worked for their economic empowerment during the year under report.

- The Commission completed its visits to all the States / UTs except Lakshdweep and prepared Gender Profiles to assess the status of women and their empowerment.
- It received a large number of complaints and acted suo-moto in several cases to provide speedy justice.
- It took up the issue of child marriage, sponsored legal awareness programmes, Parivarik Mahila Lok Adalats and reviewed laws such as Dowry Prohibition Act, 1961, PNDT Act 1994, Indian Penal Code 1860 and the National Commission for Women Act, 1990 to make them more stringent and effective.
- It organized workshops / consultations, constituted expert committees on economic empowerment of women, conducted workshops / seminars for gender awareness and took up publicity campaign against female feticide, violence against women etc. in order to generate awareness in the society against these social evils.

Source: NCW

- **Q.3)** Consider the following statements regarding "regulating act of 1773":
- 1. It was the first step of the British Government to control and regulate the affairs of the East India Company in India.
- 2. It was created an Executive Council of three members to assist Governor General of Bengal.

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

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

ANS: B

Explanation: Regulating act of 1773was of great constitutional importance as

- it was the first step taken by the British Government to control and regulate the affairs of the East India Company in India;
- it recognised, for the first time, the political and administrative functions of the Company; and
- it laid the foundations of central administration in India.

The features of this Act were as follows:

- It designated the Governor of Bengal as the 'Governor- General of Bengal' and created an Executive Council of four members to assist him. The first such Governor General was Lord Warren Hastings.
- It made the governors of Bombay and Madras presidencies subordinate to the governor-general of Bengal, unlike earlier, when the three presidencies were independent of one another.
- It provided for the establishment of a Supreme Court at Calcutta (1774) comprising one chief justice and three other judges.
- It prohibited the servants of the Company from engaging in any private trade or accepting presents or bribes from the 'natives'.

Source: Laxmikanth

- **Q.4)** Which of the following act was granted one lakh rupees for the development of education in British India?
- a) Pitts India Act of 1784
- b) Regulating Act of 1793
- c) Charter Act of 1813
- d) Charter Act of 1833

ANS: C

Explanation: Charter Act of 1813 was an act that continued the British East India Company's rule in India by the Parliament of Britain.

- There was a provision that Company should invest Rs. 1 Lakh every year on the education of Indians.
- The State system of education began with the Charter Act.

Source: NCERT

- Q.5) Which of the following statement is NOT correct about Constituent Assembly?
- a) It was constituted under the scheme formulated by the Cripps Mission.
- b) The total strength of the Constituent Assembly was to be 389.
- c) Each province and princely state was to be allotted seats in proportion to their respective population.

d) Seats allocated to each British province were to be divided among the three principal communities–Muslims, Sikhs and General.

ANS: A

Explanation: The Constituent Assembly was constituted in November 1946 under the scheme formulated by the Cabinet Mission Plan.

The features of the scheme were:

- The total strength of the Constituent Assembly was to be 389. Of these, 296 seats were to be allotted to British India and 93 seats to the princely states. Out of 296 seats allotted to the British India, 292 members were to be drawn from the eleven governors' provinces and four from the four Chief Commissioners' provinces, one from each.
- Each province and princely state (or groups of states in case of small states) were to be allotted seats in proportion to their respective population. Roughly, one seat was to be allotted for every million population.
- Seats allocated to each British province were to be divided among the three principal communities–Muslims, Sikhs and General (all except Muslims and Sikhs), in proportion to their population.
- The representatives of each community were to be elected by members of that community in the provincial legislative assembly and voting was to be by the method of proportional representation by means of single transferable vote.
- The representatives of the princely states were to be nominated by the heads of the princely states.

Source: Laxmikanth

Q.6) The Constituent Assembly appointed a number of committees to deal with different tasks of constitution-making. Which of the following is/are correctly matched?

Committee : Headed by

Provincial Constitution Committee
 Jawaharlal Nehru
 Drafting Committee
 Dr. B. R. Ambedkar
 Rules of Procedures Committee
 Dr. Rajendra Prasad

Select the correct answer using the code given below:

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

ANS: D

Explanation: The Constituent Assembly appointed a number of committees to deal with different tasks of constitution-making. Out of these, eight were major committees and the others were minor committees. The names of these committees and their Chairman are given below:

Major Committees:

- 1. Union Powers Committee Jawaharlal Nehru
- 2. Union Constitution Committee -Jawaharlal Nehru
- 3. Provincial Constitution Committee -Sardar Patel
- 4. Drafting Committee Dr. B.R. Ambedkar
- 5. Advisory Committee on Fundamental Rights, Minorities and Tribal and Excluded Areas Sardar Patel. This committee had the following five sub-committees:
- (a) Fundamental Rights Sub-Committee J.B. Kripalani
- (b) Minorities Sub-Committee H.C. Mukherjee

- (c) North-East Frontier Tribal Areas and Assam Excluded & Partially Excluded Areas Sub-Committee –Gopinath Bardoloi
- (d) Excluded and Partially Excluded Areas (other than those in Assam) Sub-Committee A.V. Thakkar
- (e) North-West Frontier Tribal Areas Sub-Committee
- 6. Rules of Procedure Committee Dr. Rajendra Prasad
- 7. States Committee (Committee for Negotiating with States) Jawaharlal Nehru
- 8. Steering Committee Dr. Rajendra Prasad

Source: Laxmikanth

- Q.7) Which of the following statement is **NOT** correct about enactment of Constitution?
- a) Dr. B.R. Ambedkar introduced the final draft of the Constitution in the Assembly on November 4, 1948.
- b) All members of Constituent Assembly were present on November 26th 1949 and signed the Constitution.
- c) Date of 26th November 1949 mentioned in the Preamble as the date on which the people of India in the Constituent Assembly adopted, enacted and gave to them-selves Indian Constitution.
- d) The Constitution as adopted on November 26, 1949, contained a Preamble, 395 Articles and 8 Schedules.

ANS: B

Explanation: Dr. B.R. Ambedkar introduced the final draft of the Constitution in the Assembly on November 4, 1948 (first reading). The Assembly had a general discussion on it for five days (till November 9, 1948).

- The second reading (clause by clause consideration) started on November 15, 1948, and ended on October 17, 1949.
- During this stage, as many as 7653 amendments were proposed and 2473 were actually discussed in the Assembly.
- The third reading of the draft started on November 14, 1949. Dr. B.R. Ambedkar moved a motion—'the Constitution as settled by the Assembly be passed'.
- The motion on Draft Constitution was declared as passed on November 26, 1949, and received the signatures of the members and the president.
- Out of a total 299 members of the Assembly, only 284 were actually present on that day and signed the Constitution.
- This is also the date mentioned in the Preamble as the date on which the people of India in the Constituent Assembly adopted, enacted and gave to them-selves this Constitution.
- The Constitution as adopted on November 26, 1949, contained a Preamble, 395 Articles and 8 Schedules. The Preamble was enacted after the entire Constitution was already enacted.

Source: Laxmikanth

- **Q.8)** The **Eleventh Schedule** was introduced in the Constitution of India during the prime ministership of?
- a) Rajiv Gandhi
- b) Charan Singh
- c) P V Narasimha Rao
- d) Atal Bihari Vajpayee

ANS: C

Explanation: Mahatma Gandhi had first championed the idea of little village republics but it was under P.V. Narasimha Rao that the 73rd Constitutional Amendment Act, better known as the Panchayati Raj Act, became effective.

Source: Indian Express

- **Q.9)** The "**Article 256**" of Indian constitution is often seen in news is related to which of the following?
- a) Jurisdiction of Union in relation to territories outside India.
- b) The state government to ensure implementation of the laws made by Parliament.
- c) Legislation for giving effect to international agreements.
- d) Power of Parliament to legislate for two or more states by consent.

ANS: B

Explanation: Article 256 of the Constitution obligates the State government to ensure implementation of the laws made by Parliament.

- If the State government fails to do so, the Government of India is empowered to give "such directions to a State as may appear... to be necessary".
- The refusal to enforce the law even after the Centre issues directions would empower the President to impose President's Rule in those States under Articles 356 and 365.
- The Supreme Court of India has also confirmed this reading of the law in S.R. Bommai v. Union of India.

Source: The Hindu

- **Q.10)** Which of the following language is **NOT** in the list of scheduled languages of eighth schedule of Indian Constitution?
- a) Bhojpuri
- b) Sindhi
- c) Nepali
- d) Maithili

ANS: A

Explanation: The Eighth Schedule to the Indian Constitution contains a list of 22 scheduled languages viz. Assamese, Bengali, Gujarati, Hindi, Kannada, Kashmiri, Malayalam, Marathi, Odia, Punjabi, Sanskrit, Tamil, Telugu, Urdu, Sindhi(added by 21st Amendment Act, 1967) Konkani, Manipuri, Nepali (added by 71st Amendment Act, 1992), Bodo, Dogri, Maithili, Santal (added by 92nd Amendment 2003). The list had originally 14 languages only but subsequently through amendments 8 new languages were added.

Source: Laxmikanth

- Q.11) Which of the following treaty is also called as "Zero Yield Treaty"?
- a) Comprehensive Nuclear-Test-Ban Treaty (CTBT)
- b) Nuclear Non Proliferation Treaty (NPT)
- c) START Treaty
- d) Pelindaba Treaty

ANS: A

Explanation: The Comprehensive Nuclear-Test-Ban Treaty (CTBT) is the Treaty banning all nuclear explosions - everywhere, by everyone.

• The Treaty was negotiated at the Conference on Disarmament in Geneva and adopted by the United Nations General Assembly.

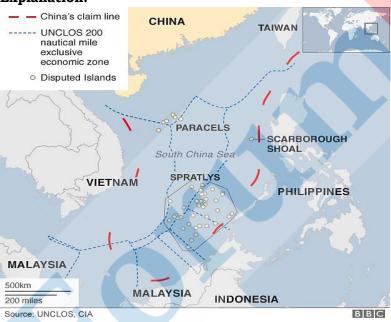
- It was opened for signature on 24 September 1996. The Treaty has not entered into force yet.
- The signature to a treaty indicates that the country accepts the treaty.
- The ratification symbolizes the official sanction of a treaty to make it legally binding for the government of a country.
- The CTBT is essentially a "zero-yield" treaty.
- This means that the agreement prohibits all nuclear explosions that produce a selfsustaining, supercritical chain reaction of any kind whether for weapons or peaceful purposes.

Source: The Hindu

Q.12) Spratly and Paracel Islands are often seen in news is located in which of the following sea?

- a) Japan Sea
- b) Coral Sea
- c) South China Sea
- d) Andaman Sea

ANS: C Explanation:



Source: The Hindu

- Q.13) Consider the following statements regarding "World Health Organization (WHO)":
- 1. It was established after First World War.
- 2. It is funded through a system of assessed and voluntary contributions.

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

ANS: B

Explanation: The WHO was established in 1948 as a United Nations (UN) specialised agency. The WHO has a three-tiered structure, comprising:



- The World Health Assembly- It is the supreme decision making body comprising all member states to determine policy direction.
- The Executive Board- It comprises of technical experts to oversee the implementation of WHA's decisions.
- The Secretariat- It is headed by the Director General and functions as WHO's administrative and technical organ with the overall responsibility for implementing its activities.

Funding- The WHO is funded through a system of assessed and voluntary contributions.

- Assessed contributions are paid by all member states, and are calculated on the basis of a country's gross national product and population.
- Voluntary contributions are amounts voluntarily paid by other UN organisations, private companies, individuals, NGOs as well as member states.
- The US was the WHO's largest contributor and paid a total of \$893 million in both assessed and voluntary contributions in 2019.

Source: WHO

Q.14) The "Global Report on Internal Displacement, 2020" is published by which of the following organization?

- a) World Economic Forum
- b) UNESCO
- c) The Internal Displacement Monitoring Centre (IDMC)
- d) UNDP

ANS: C

Explanation: The Internal Displacement Monitoring Centre (IDMC) recently published the Global Report on Internal Displacement, 2020 (GRID, 2020).

- Globally, 33.4 million new displacements took place in 2019 which is the highest figure since 2012.
- South Asia region has the highest share of new displacements.
- Total number of internally displaced people (IDPs) reached 50.8 million.
- 18.3 million IDPs are children under 15 and 3.7 million are over 60.
- India had the highest number of new disaster displacements (five million) in the world in 2019.

Source: Indian Express

- Q.15) Which of the following provision (s) is/are NOT comes under union list?
- 1. Sanctioning of cinematograph films for exhibition.
- 2. Money lending.
- 3. Preventive detention for maintenance of public order.

Select the correct answer using the code given below:

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

ANS: C

Explanation: Sanctioning of cinematograph films for exhibition – comes under union list.

- Money lending and money lenders, relief of agriculture indebtedness comes under state list.
- Preventive detention for the reasons connected with the security of a state, the maintenance of public order, or the maintenance of supplies and services essential to the community comes under concurrent list.

Source: Laxmikanth

Q.16) Which of the following feature of Indian constitution is called as "**Instrument of Instructions**"?

- a) Fundamental Rights
- b) Constitutional Bodies
- c) Directive Principles of State Policy
- d) Fundamental Duties

ANS: C

Explanation: The Directive Principles resemble the 'Instrument of Instructions' enumerated in the Government of India Act of 1935.

- In the words of Dr B R Ambedkar, 'the Directive Principles are like the instrument of instructions, which were issued to the Governor-General and to the Governors of the colonies of India by the British Government under the Government of India Act of 1935.
- What is called Directive Principles is merely another name for the instrument of instructions.
- The only difference is that they are instructions to the legislature and the executive'.

Source: Laxmikanth

- **Q.17)** Which of the following are the member countries of Regional Comprehensive Economic Partnership (RCEP)?
- a) Laos, Cambodia, Australia and Russia
- b) Vietnam, Thailand, Japan and United States
- c) New Zealand, North Korea, Japan and China
- d) China, Philippines, South Korea and Japan

ANS: D Explanation:



Source: BBC

Q.18) The "**Tenth Schedule**" of Indian Constitution is often seen in news is related to which of the following?

- a) Impeachment procedure of Chairman/Speaker of Rajya/Lok Sabha.
- b) Disqualification of MP's of Parliament and MLA's of State Legislative Assembly.
- c) Impeachment procedure of Vice President of India.
- d) Impeachment procedure of President of India.

ANS: B

Explanation: The 10th Schedule of the Indian Constitution (which talks about the antidefection law) is designed to prevent political defections prompted by the lure of office or material benefits or other like considerations.

- The Anti-defection law was passed by Parliament in 1985 and reinforced in 2002.
- The 10th Schedule of the Indian Constitution popularly referred to as the 'Anti-Defection Law' was inserted by the 52nd Amendment (1985) to the Constitution.
- The anti-defection law was enacted to ensure that a party member does not violate the mandate of the party and in case he does so, he will lose his membership of the House
- The law applies to both Parliament and state assemblies.

Source: Laxmikanth

Q.19) Which of the following pairs is/are correctly matched?

Article : State

1. Article 371 (D) : Andhra Pradesh

2. Article 371 (E) : Goa

3. Article 371 (F) : Karnataka

Select the correct answer using the code given below:

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

ANS: A

Explanation: As the government abrogated Article 370 that gave special status to Jammu and Kashmir, Article 371, which has special provisions for other States, mostly from the Northeast, has invited some attention.

- Article 371(A) states that no act of Parliament shall apply to the State of Nagaland in respect of the religious or social practices of the Nagas, its customary law and procedure, administration of civil and criminal justice involving decisions according to Naga customary law and ownership and transfer of land and its resources.
- Article 371B deals with special provision with respect to the State of Assam.
- The main objective of inserting Article 371B was to facilitate the creation of the sub-State 'Meghalaya'.
- Article 371C deals with special provisions with respect to Manipur which became a State in 1972.
- Articles 371F, 371H talk about special provisions with respect to States of Sikkim and Arunachal Pradesh, respectively.
- Article 371 gives the power to the President of India to establish separate development boards for Vidarbha, Marathwada regions of Maharashtra and the rest of the State and Saurashtra, Kutch and rest of Gujarat.

Special provisions with respect to Andhra Pradesh, Karnataka, and Goa are dealt in Articles 371D and 371E, 371J, 371I respectively.

Source: Laxmikanth

Q.20) Which Constitutional Amendment Act reduced the voting age from 21 to 18?

- a) 61st Constitutional Amendment
- b) 65th Constitutional Amendment
- c) 67th Constitutional Amendment
- d) 69th Constitutional Amendment

ANS: A

Explanation: The Indian Constitution adopts universal adult franchise as a basis of elections to the Lok Sabha and the state legislative assemblies.

- Every citizen who is not less than 18 years of age has a right to vote without any discrimination of caste, race, religion, sex, literacy, wealth and so on.
- The voting age was reduced to 18 years from 21 years in 1989 by the 61st Constitutional Amendment Act of 1988.

Source: Laxmikanth

Q.21) Consider the following statements regarding "Regulating Act, 1833":

- 1. It made the Governor-General of Bengal as the Governor General of India and vested in him military powers and civil powers.
- 2. The Governor-General of India was given exclusive legislative powers for the entire British India.

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

ANS: C

Explanation: Regulating Act, 1833 was the final step towards centralization in British India.

The features of this Act were as follows:

- It made the Governor-General of Bengal as the Governor General of India and vested in him all civil and military powers. Thus, the act created, for the first time, Government of India having authority over the entire territorial area possessed by the British in India. Lord William Bentick was the first Governor-General of India.
- It deprived the Governor of Bombay and Madras of their legislative powers. The Governor-General of India was given exclusive legislative powers for the entire British India. The laws made under the previous acts were called as Regulations, while laws made under this act were called as Acts.
- It ended the activities of the East India Company as a commercial body, which became a purely administrative body. It provided that the Company's territories in India were held by it 'in trust for His Majesty, His heirs and successors'.

Source: Laxmikanth

Q.22) Which of the following words are found in the Objectives Resolution of 1946?

- 1. Sovereign
- 2. Justice
- 3. Equality

- 4. Integrity
- 5. Fraternity

Select the correct answer using the code given below:

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

ANS: B

Explanation: On December 13, 1946, Jawaharlal Nehru moved the historic 'Objectives Resolution' in the Assembly. It laid down the fundamentals and philosophy of the constitutional structure. It read:

- "This Constituent Assembly declares its firm and solemn resolve to proclaim India as an Independent Sovereign Republic and to draw up for her future governance a Constitution".
- Where in shall be guaranteed and secured to all the people of India justice, social, economic and political; equality of status of opportunity, and before the law; freedom of thought, expression, belief, faith, worship, vocation, association and action, subject to law and public morality; and
- Where by shall be maintained the integrity of the territory of the Republic and its sovereign rights on land, sea and air according to justice and the law of civilized nations.

Source: Laxmikanth

Q.23) Which of the following amendment process (s) is/are come (s) under Article 368?

- 1. Simple Majority.
- 2. Special majority of the Parliament.
- 3. Special majority of the Parliament and with the ratification by half of the total states. Select the correct answer using the code given below:
- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

ANS: C

Explanation: The Constitution of India is neither rigid nor flexible, but a synthesis of both. Article 368 provides for two types of amendments:

- Some provisions can be amended by a special majority of the Parliament, i.e., a two-third majority of the members of each House present and voting, and a majority of the total membership of each House.
- Some other provisions can be amended by a special majority of the Parliament and with the ratification by half of the total states.

At the same time, some provisions of the Constitution can be amended by a simple majority of the Parliament in the manner of ordinary legislative process. Notably, these amendments do not come under Article 368.

Source: Laxmikanth

Q.24) Which of the following states in India follow the Inner Line Permit (ILP)?

- 1. Arunachal Pradesh
- 2. Mizoram
- 3. Tripura

4. Manipur

Select the correct answer using the code given below:

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

ANS: C

Explanation: Inner Line Permit is a concept drawn by colonial rulers; the Inner Line separated the tribal-populated hill areas in the Northeast from the plains.

- To enter and stay for any period in these areas, Indian citizens from other areas need an Inner Line Permit (ILP).
- The Inner Line protects Arunachal Pradesh, Nagaland and Mizoram, and Manipur was added lately.

Source: Indian Express

Q.25) Alma Ata Declaration is often seen in news is related to which of the following?

- a) Health
- b) Education
- c) Vaccination
- d) Sustainable Development

ANS: A

Explanation: The Declaration of Alma-Ata was adopted at the International Conference on Primary Health Care, Almaty, Kazakhstan, 6–12 September 1978.

It expressed the need for urgent action by all governments, all health and development workers, and the world community to protect and promote the health of all people.

Source: WHO

Q.26) Consider the following statements regarding the "Atal Bhujal Yojana":

- 1. It is a Central Sector Scheme aims to improve ground water management through community participation in identified priority areas in seven States.
- 2. It is funded by Asian Development Bank.
- 3. It pays special attention to those areas where groundwater was very low.

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

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

ANS: B

Explanation: Prime Minister Narendra Modi launched the Atal Bhujal scheme to strengthen the institutional framework for participatory groundwater management and bringing about behavioral changes at the community level for sustainable groundwater resource management in seven States.

- The scheme will be implemented in about 8,350 gram panchayats in 78 districts of Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh.
- Of the total outlay of ₹6,000 crore to be provided from 2020-21 to 2024-25, 50% will be in the form of World Bank loan to be repaid by the Central government.

- The remaining part will be made available via Central assistance from regular budgetary support.
- The entire World Bank's loan component and the Central assistance will be passed on to the States as grants.
- The Prime Minister said the scheme, or the guidelines related to the Jal Jeevan Mission, were big steps in proving the resolve to deliver water to every household in the country by 2024.
- He said the Jal Jeevan Mission would work towards delivering piped water supply to
 every house and Atal Bhujal scheme would pay special attention to those areas
 where groundwater was very low.

Source: The Hindu

Q.27) Consider the following statements regarding the "Cyber Shiksha":

- 1. It is launched by Facebook & Data Security Council of India (DSCI) in association with Ministry of Electronics & IT (MeitY).
- 2. It is exclusively for women and making them Industry ready by imparting the requisite technical skills in the domain of Cyber Security.

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

ANS: B

Explanation: Microsoft & Data Security Council of India (DSCI) in association with ISEA of Ministry of Electronics & IT (MeitY) have launched Project Cyber Shikshaa for skilling women engineering graduates in the niche field of Cyber Security in September 2018.

As part of this program, C-DAC, NIELIT and other noted training partners are conducting training exclusively for women and making them Industry ready by imparting the requisite technical skills in the domain of Cyber Security.

Source: Indian Express

Q.28) Which of the following states are covered under the provisions of the Sixth Schedule of Indian Constitution?

- 1. Assam
- 2. Sikkim
- 3. Tripura
- 4. Nagaland
- 5. Mizoram

Select the correct answer using the code given below:

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

ANS: C

Explanation: The Sixth Schedule consists of provisions for the administration of tribal areas in Assam, Meghalaya, Tripura and Mizoram, according to Article 244a of the Indian Constitution.

• Passed by the Constituent Assembly in 1949, it seeks to safeguard the rights of tribal population through the formation of Autonomous District Councils (ADC).

- ADCs are bodies representing a district to which the Constitution has given varying degrees of autonomy within the state legislature.
- The governors of these states are empowered to reorganize boundaries of the tribal areas. In simpler terms, she or he can choose to include or exclude any area, increase or decrease the boundaries and unite two or more autonomous districts into one.

They can also alter or change the names of autonomous regions without a separate legislation.

Source: Laxmikanth

Q.29) The provisions of the "Part XVI" of the Indian Constitution are related to which of the following?

- a) Mother Tongue.
- b) Finance, Property, Contract and Suits.
- c) Political parties.
- d) Special provisions relating to certain classes.

ANS: D

Explanation: In order to realize the objectives of equality and justice as laid down in the Preamble, the Constitution makes special provisions for the scheduled castes (SCs), the scheduled tribes (STs), the backward classes (BCs) and the Anglo-Indians.

These special provisions are contained in Part XVI of the Constitution from Articles 330 to 342.

Source: Laxmikanth

Q.30) Consider the following statements regarding "writs":

- 1. The Supreme Court and the high courts can issue the writs.
- 2. Parliament can empower any other court to issue writs.

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

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

ANS: D

Explanation: The Supreme Court (under Article 32) and the high courts (under Article 226) can issue the writs of habeas corpus, mandamus, prohibition, certiorari and quo-warranto.

- Further, the Parliament (under Article 32) can empower any other court to issue these writs.
- Since no such provision has been made so far, only the Supreme Court and the high courts can issue the writs and not any other court.

Source: Laxmikanth

Science and technology

- **Q.1)** Major Atmospheric Cerenkov Experiment Telescope (MACE) is recently seen in news is located in which of the following place?
- a) Siberia
- b) Alaska
- c) Ladakh
- d) Swiss Alps

ANS: C

Explanation: Major Atmospheric Cerenkov Experiment Telescope (MACE) is an Imaging Atmospheric Cerenkov telescope (IACT) located at Hanle, Ladakh, India.

- It is the highest (in altitude) Cerenkov telescope in the World and was built by Electronics Corporation of India, Hyderabad, for the Bhabha Atomic Research Centre.
- It was assembled at the campus of Indian Astronomical Observatory at Hanle.
- Operational since 2016, it is remotely operated and runs on solar power.

Source: The Hindu

- Q.2) Consider the following statements regarding the "X-ray Polarimeter Satellite (XPoSat)":
- 1. It is a planned space observatory to study polarization of cosmic X-rays.
- 2. It is being developed by NASA and European Space Agency.

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

ANS: A

Explanation: The X-ray Polarimeter Satellite (XPoSat) is a planned space observatory to study polarization of cosmic Xrays.

- It is planned to be launched in 2021, and to provide a service time of at least five years.
- The telescope is being developed by the Indian Space Research Organization (ISRO) and the Raman Research Institute.
- Studying how radiation is polarized gives away the nature of its source, including the strength and distribution of its magnetic fields and the nature of other radiation around it.
- XPoSat will study the 50 brightest known sources in the universe, including pulsars, black hole X-ray binaries, active galactic nuclei, and non-thermal supernova remnants.

Source: Indian Express

- Q.3) Red Flag Exercise is recently seen in news is related to which of the following?
- a) Unites States of America
- b) Russia
- c) China
- d) United Kingdom

ANS: A

Explanation: Red Flag is USA's flagship multilateral air exercise.

- It is a Pacific Air Forces-sponsored exercise meant to provide realistic training in a simulated combat environment over the Joint Pacific Alaska range complex.
- The Red Flag Alaska 20-1 was scheduled to be held in Alaska from 30th April to 15th May, 2020.
- Recently, the U.S. Air Force has cancelled the Phase-I of Red Flag due to the COVID-19 outbreak.
- The Indian Air Force (IAF) was also to take part in the exercise with its Sukhoi Su-30 fighter jets.
- The IAF joined Red Flag for the first time in 2008 in Nevada.

Source: The Hindu

- **Q.4)** Under Operation Sanjeevani an Indian Air Force (IAF) C-130J transport aircraft delivered 6.2 tons of essential medicines and hospital consumables to which of the following country?
- a) Myanmar
- b) Sri Lanka
- c) Maldives
- d) Madagascar

ANS: C

Explanation: Under Operation Sanjeevani an Indian Air Force (IAF) C-130J transport aircraft delivered 6.2 tons of essential medicines and hospital consumables to Maldives.

- These medicines and consumables were procured from eight suppliers in India but couldn't be transported through any other means due to the 21-day lockdown imposed to contain the spread of COVID-19.
- At the request of the government of Maldives, the IAF aircraft activated Operation Sanjeevani and lifted these medicines from airports in New Delhi, Mumbai, Chennai and Madurai before flying to the Maldives.
- Among other things, these medicines include influenza vaccines, anti-viral drugs such as lopinavir and ritonavir which have been used to treat patients with COVID-19 in other countries.

Source: Indian Express

- Q.5) Consider the following statements regarding "project praana":
- 1. It was launched by ministry of health and family welfare.
- 2. Prototype indigenous ventilators are developed under project praana.

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

ANS: B

Explanation: IISc Bengaluru has developed an indigenous ventilator prototype under project Praana in view of COVID-19 crisis.

- The project is a voluntary effort to help the nation at the time of crisis. The ventilator has been developed using materials readily available in India.
- The prototype has mass flow sensors and controllers which accurately tell how much oxygen is flowing and what volume the patient is inhaling in one breath.

- Pneumatics is built around mass produced water filter hardware. The control system is built around open source industrial controller.
- In a large country like India, the biggest challenge is the manufacturing of such ventilators on a mass-scale due to limited access to pneumatic and electronic hardware, sensors and actuators in the global marketplace.
- The indigenous ventilator prototype build under Project Praana will address the issue.

Source: The Hindu

Q.6) Consider the following statements regarding the "CollabCAD":

- 1. It is an indigenous three dimensional computer aided design system which helps the used to build models in virtual 3d space and create and engineering drawings.
- 2. It is jointly launched by Atal Innovation Mission, NITI Aayog and National Informatics Centre (NIC).

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

ANS: C

Explanation: CollabCAD is an indigenous three dimensional computer aided design system which helps the used to build models in virtual 3d space and create and engineering drawings for shop floor which makes it a complete package for smart manufacturing.

- It is jointly launched by Atal Innovation Mission, NITI Aayog and National Informatics Centre (NIC).
- CollabCAD initiative aims to provide a great platform to students of Atal Tinkering Labs (ATLs) across country to create and modify 3d designs with free flow of creativity and imagination.
- · This software would also enable students to create data across the network and concurrently access the same design data for storage and visualization.
- NIC is playing a crucial role in pushing the online module to reach to the students all across the country by providing a huge source of data through this software CAD system.
- CollabCAD will be used by around 5000 schools where Atal Tinkering Labs are established.

Source: The Hindu

Q.7) In which of the following areas geo-fencing can be used?

- 1. Social Networking
- 2. Marketing
- 3. Smart appliances
- 4. Telematics

Select the correct answer using the code given below:

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

ANS: D

Explanation: Geo-fencing is a location-based service in which an app or other software uses GPS, RFID, Wi-Fi or cellular data to trigger a pre-programmed action when a mobile



device or RFID tag enters or exits a virtual boundary set up around a geographical location, known as a geo-fence.

- The —geo-fencing is accurate by up to 300 m.
- Depending on how a geo-fence is configured it can prompt mobile push notifications, trigger text messages or alerts, send targeted advertisements on social media, allow tracking on vehicle fleets, disable certain technology or deliver location-based marketing data.
- To make use of geo-fencing, an administrator or developer must first establish a virtual boundary around a specified location in GPS- or RFID-enabled software.
- This virtual defense will then trigger a response when an authorized device enters or exits that area, as specified by the administrator or developer.
- Other applications of geo-fence Social networking, Marketing, Audience engagement, Smart appliances, Human Resource management, Telematics, Security.

Source: The Hindu

- Q.8) Consider the following statements regarding the "Prime Minister National Relief Fund":
- 1. It was instituted by Narendra Modi in 2016.
- 2. It is currently used primarily to tackle natural calamities like floods, cyclones and earthquakes.

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

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

ANS: A

Explanation: PMNRF was instituted in 1948 by then Prime Minister Jawaharlal Nehru, to assist displaced persons from Pakistan.

- The fund is currently used primarily to tackle natural calamities like floods, cyclones and earthquakes.
- The fund is also used to help with medical treatment like kidney transplantation, cancer treatment and acid attack.
- The fund consists entirely of public contributions and does not get any budgetary support.
- It accepts voluntary contributions from Individuals, Organizations, Trusts, Companies and Institutions etc.
- The corpus of the fund is also invested in various forms with scheduled commercial banks and other agencies.
- Disbursements are made with the approval of the Prime Minister.
- The fund is recognized as a Trust under the Income Tax Act and the same is managed by the Prime Minister or multiple delegates for national causes.
- Contributions towards PMNRF are notified for 100% deduction from taxable income under section 80(G) of the Income Tax Act, 1961.

Source: The Hindu

Q.9) The "**SIPRI report**" is often seen in news is related to which of the following?

- a) Weapons and arms
- b) Nutrition
- c) Food Security
- d) Primary health



ANS: A

Explanation: Stockholm International Peace Research Institute (SIPRI) is an international institute based in Sweden, dedicated to research into conflict, armaments, arms control and disarmament.

- Established in 1966, SIPRI provides data, analysis and recommendations, based on open sources, to policymakers, researchers, media and the interested public.
- SIPRI has released its annual report "Trends in World Military Expenditure, 2019".
- Recent report of SIPRI showcases an increase of 5.5 per cent in the volume of international arms transfers during 2015–19, compared with the previous five-year period.

Source: The Hindu

Q.10) Migration and Development Briefs is often seen in news is published by which of the following international organization?

- a) UNESCO
- b) World Economic Forum
- c) World Bank
- d) UNICEF

ANS: C

Explanation: Migration and Development Briefs are prepared by the Migration and Remittances Unit, Development Economics (DEC), World Bank.

- The brief aims to provide an update on key developments in the area of migration and remittance flows and related policies over the past six months.
- India, the country that received the most remittances in the world, \$79 billion in 2018, according to the World Bank's Migration and Development Brief.

Source: The Hindu

- **Q.11)** Consider the following statements regarding "Indian National Space Promotion and Authorisation Centre (IN-SPACe)":
- 1. It will act as an interface between ISRO and private parties.
- 2. IN-SPACe is to be a facilitator and not a regulator.

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

ANS: A

Explanation: The Government of India has announced the creation of a new "Indian National Space Promotion and Authorisation Centre (IN-SPACe)".

- IN-SPACe will be an autonomous nodal agency under the Department of Space.
- It is expected to be functional within 6 months (from June 2020). IN-SPACe is supposed to be a facilitator and a regulator.
- It will act as an interface between ISRO and private parties. It will provide the necessary support for the private space industry to conduct its activities.
- IN-SPACe will assess the needs and demands of private players including educational and research institutions.
- It will explore ways to accommodate these requirements in consultation with ISRO.
- It will also assess how best to utilise India's space resources and increase space-based activities

Source: The Hindu

Q.12) Which of the following factors is/are responsible for nascent growth of Indian Space Sector in tapping global space industry?

- 1. Indian space industry's role has been mainly that of suppliers of components and subsystems.
- 2. Indian industries do not have the resources or the technology to undertake independent space projects or provide space-based services.
- 3. The demand for space-based applications and services is growing even within India. Select the correct answer using the code given below:
- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

ANS: D

Explanation: Currently, there does exist private industry involvement in India's space sector. In fact, a large part of manufacturing and fabrication of rockets and satellites now happens in the private sector.

- There is an increasing participation of research institutions as well. However, Indian industry had a barely 3% share in a rapidly growing global space economy.
- Currently, the value of the global space industry is estimated to be \$360 billion. Only 2% of this market goes for rocket and satellite launch services, which require fairly large infrastructure and heavy investment.

Reasons for lagging behind:

Till now, Indian space industry's role has been mainly that of suppliers of components and sub-systems.

- Indian industries do not have the resources or the technology to undertake independent space projects or provide space-based services.
- Additionally, the demand for space-based applications and services is growing even within India.
- The need for satellite data, imageries and space technology now cuts across sectors. It ranges from weather to agriculture to transport to urban development, and more.
- But, ISRO is unable to cater to this. ISRO would have to be expanded 10 times the current level to meet all the demand that is arising.

Source: The Hindu

Q.13) Recently which of the following institution collaborated with International Transport Forum (ITF) to launch a new online project called "De-carbonizing Transport in India"?

- a) Ministry of Road and Transport
- b) Ministry of Railways
- c) NITI Aayog
- d) Department of Space

ANS: C

Explanation: NITI Aayog and International Transport Forum (ITF) will collaborate to launch a new online project called "Decarbonizing Transport in India".

• It is to chart out a path for a low-carbon transport system in the country. It will offer an opportunity to provide inputs for transport challenges and their relation to CO2 reduction in the country.

- The project will include designing a transport emissions assessment framework for India, providing the government with a detailed understanding of transport activities and CO2 emissions as a basis for decision making.
- It is a part of the ITF's DTEE (De-carbonizing Transport in Emerging Economies) series of projects.
- DTEEs aimed at lowering carbon emissions across different regions in the world. The current participants in the initiative are India, Argentina, Azerbaijan, and Morocco.

Source: Indian Express

Q.14) Recently, Government of India was launched "SATYABHAMA Portal" is related to which of the following?

- a) Mines and minerals
- b) Food processing
- c) Space goods
- d) Automobiles

ANS: A

Explanation: Union Ministry of Mines has launched a portal "SATYABHAMA (Science and Technology Yojana for Atmanirbhar Bharat in Mining Advancement)".

- Its aim is to promote research and development in the mining and minerals sector.
- It has been launched to increase efficiency and effectiveness of the Science and Technology Programme Scheme.
- Under the Science and Technology Programme Scheme, the Ministry of Mines promotes research in applied geosciences, mineral exploration, mining and allied areas, mineral processing, optimum utilization and conservation of the mineral resources of the country.
- The portal has been designed, developed and implemented by the National Informatics Centre (NIC). The portal is also integrated with NGO Darpan Portal of NITI Aayog.

Source: The Hindu

- **Q.15)** Consider the following statements regarding "Scheme for Promotion of Academic and Research Collaboration (SPARC) Initiative":
- 1. It aims at improving the research ecosystem of India's higher educational institutions by facilitating academic and research collaborations between Indian institutions and the best institutions in the world.
- 2. IIT Kanpur is the National Coordinating Institute to implement the SPARC programme. 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

ANS: A

Explanation: Scheme for Promotion of Academic and Research Collaboration (SPARC) is an initiative of the Ministry of Human Resource Development.

• IIT, Kharagpur is the National Coordinating Institute to implement the SPARC programme.

• It aims at improving the research ecosystem of India's higher educational institutions by facilitating academic and research collaborations between Indian institutions and the best institutions in the world.

Source: Indian Express

Q.16) Consider the following statements regarding "UN Arms Trade treaty":

- 1. It is a multilateral treaty that regulates the international trade in conventional weapons.
- 2. India is not a member of treaty.

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

ANS: C

Explanation: The Arms Trade Treaty (ATT) is a multilateral treaty that regulates the international trade in conventional weapons.

- The treaty was negotiated in New York City at a global conference under the auspices of the UN in 2012. UN General Assembly adopted the ATT in 2013.
- It entered into force on 4th December 2014. 105 states have ratified the treaty, and a further 32 states have signed but not ratified it. [India is not a member to this treaty]
- It requires member countries to keep records of international transfers of weapons and to prohibit cross border shipments that could be used in human rights violations or attacks on civilians.
- Recently China's efforts to join the treaty has been rejected by the United States.
- It comes after US President Donald Trump announced plans last year to pull the United States out of the agreement which entered into force in 2014.
- The US Senate never ratified the 2013 Arms Trade Treaty, even after former president Barack Obama endorsed it.

Source: The Hindu

- Q.17) "Seabed 2030" project often seen in news is launched by which of the following?
- a) National Oceanic and Atmospheric Administration
- b) Nippon foundation
- c) UNCLOS
- d) International Seabed Authority

ANS: B

Explanation: Announcing a new milestone in the history of marine exploration, an international collaboration of researchers said on June 21 that it had finished mapping nearly one-fifth of the world's ocean floor.

- The Nippon Foundation-GEBCO Seabed 2030 Project, which is coordinating efforts to complete the mapping of the entire ocean floor by 2030, said on World Hydrography Day (June 21) that it had added 1.45 crore square kilometres of new bathymetric data to its latest grid.
- Since the launch of the project in 2017, the surveying of the ocean bed as per modern standards has gone up from around 6 per cent to 19 per cent.

Source: Indian Express

Q.8) Which of the following space agencies is part of "International Space Station (ISS)"?

- 1. NASA
- 2. Roscosmos
- 3. China National Space Administration
- 4. JAXA
- 5. European Space Agency
- 6. ISRO

Select the correct answer using the code given below:

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

ANS: B

Explanation: International Space Station (ISS) is a modular space station (habitable artificial satellite) in low Earth orbit.

- The ISS programme is a multi-national collaborative project between five participating space agencies: 1. NASA (United States), 2. Roscosmos (Russia), 3. JAXA (Japan), 4. ESA (Europe), 5. CSA (Canada).
- The ownership and use of the space station are established by intergovernmental treaties and agreements.
- It is suited for testing the spacecraft systems and equipment required for possible future long-duration missions to the Moon and Mars.
- It is the largest artificial object in space and the largest satellite in low Earth orbit, regularly visible to the naked eye from Earth's surface.
- It circles the Earth in roughly 93 minutes, completing 15.5 orbits per day.

Source: NASA

- Q.19) The "Helsinki Declaration" is often seen in news is related to which of the following?
- a) It is related to ethical principles for medical research involving human subjects, including research on identifiable human material and data.
- b) It is related to development of indigenous methods of farming and agriculture system.
- c) It is related to promote efficiency of multiple types of renewable.
- d) None.

ANS: A

Explanation: The World Medical Association (WMA) has developed the Declaration of Helsinki as a statement of ethical principles for medical research involving human subjects, including research on identifiable human material and data.

- The Declaration of Geneva of the WMA binds the physician with the words, "The health of my patient will be my first consideration," and the International Code of Medical Ethics declares that, "A physician shall act in the patient's best interest when providing medical care."
- It is the duty of the physician to promote and safeguard the health, well-being and rights of patients, including those who are involved in medical research.
- The physician's knowledge and conscience are dedicated to the fulfillment of this duty.
- Medical progress is based on research that ultimately must include studies involving human subjects.

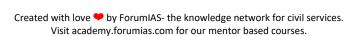
Q.20) The term "HELINA" is often seen in news is related to which of the following?

- a) It is sonar radar to measure depth of the deep sea.
- b) It is a Helicopter Launched Nag missile.
- c) It is a surface to Air missile.
- d) Stealth Frigate.

ANS: B

Explanation: HELINA is an acronym for Helicopter Launched Nag missile.

- Nag is a third generation Anti-Tank guided missile indigenously developed under
 —Integrated Guided Missile Development Programme (IGMDP) of DRDO.
- Anti-Tank Guided Missiles are primarily designed to hit and destroy heavily armored military vehicles.
- Helina is the helicopter launch variant of Nag, which can be fired from Dhruv advanced light helicopter and HAL Rudra attack helicopter.



Geography

Q.1) Consider the following statements regarding "Physical geography of India":

- 1. The distance between east to west extension is greater than north to south.
- 2. Gujarat has the longest coastline.

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

ANS: B

Explanation: India is the seventh largest country in the world.

- It has land boundaries of 15,200 km and 6100 km long coast line. Gujarat has the longest coastline in comparison to other coastal states followed by Andhra Pradesh.
- India's landmass covers 3.28 million square kilometer of area.
- This accounts for nearly 2.42 percent of the total geographical area of the world. It is surrounded by ocean.
- The shape of India is not totally triangular but quadrangular. It measures 2,933 km from east to west and 3,214 km from north to south.

Source: Periyar Geography

Q.2) Which of the following statement is **NOT** correct about India?

- a) India is the largest country in terms of area and population in South-Asia.
- b) The main India-Tibet trade route that connects Kalimpong near Darjeeling with Lhasa in Tibet passes through Jelepa La.
- c) Meghalaya plateau is part of Purvanchal hills.
- d) The average elevation of the Western Ghats is 2000 metres.

ANS: D

Explanation: Western Ghats or Sahyadris lie on the Western edge of the Deccan plateau.

- It runs parallel to the western coast for about 1600 km. The average elevation of the Western Ghats is 1000 metres.
- The famous peaks in this area are Doda Betta, Anaimudi amd Makurti. The highest peak in this region is Anaimudi (2695m.).
- Western ghats are continuous and can be crossed through passes like Pal Ghat, Thal Ghot and Bhor Ghat.
- The rivers like Godavari, Bhima and Krishna flow eastward while the river Tapti flows westward.
- The streams form rapids & water falls before entering the Arabian Sea. The famous waterfalls are Jog falls on Sharavati, Shiva Samudram falls on Kaveri etc.

Source: NCERT

Q.3) Consider the following statements regarding "Peninsular Plateau":

- 1. It is part of ancient land mass called Gondwana land.
- 2. The Deccan plateau is separated by a fault from Chota Nagpur plateau.
- 3. The Central highlands extend from Narmada River and the northern plains.

Which of the statements given above is/are correct?

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

ANS: D

Explanation: Peninsular plateau is a triangular shaped table land. It is part of ancient land mass called Gondwana land.

- It covers an area of nearly 5 lakh sq.km.
- It is spread over the states of Gujarat, Maharashtra, Bihar, Karnataka and Andhra Pradesh.
- River Narmada divides the peninsular plateau into two parts: The central highlands and Deccan Plateau.
- The central Highlands: It extends from Narmada River and the northern plains. Aravallis is the important mountain which extends from Gujrat through Rajasthan to Delhi.
- The Deccan plateau is separated by a fault (A fracture in the rock along which rocks have been relatively replaced), from Chota Nagpur plateau.
- The black soil area in the Deccan plateau is known as Deccan trap. It is formed due to volcanic eruptions.

Source: NCERT

Q.4) Consider the following statements regarding "Indian Desert":

- 1. The Indian Desert lies towards the western margin of Aravali Hills.
- 2. It is the ninth largest desert in the world.
- 3. It spreads over the states of Gujarat, Rajasthan, Haryana and Punjab.

Which of the statements given above is/are correct?

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

ANS: B

Explanation: The Indian Desert lies towards the western margin of Aravali Hills.

- It is also called Thar Desert. It is the ninth largest desert in the world.
- It spreads over the states of Gujarat and Rajasthan. This region has semi-arid and arid weather conditions. It receives less than 150 mm of rainfall per year.
- The vegetation cover is low with thorny bushes. Luni is the main river in this area.
- All other streams appear only at the time of rainfall otherwise they disappear into the sand.

Source: NCERT

Q.5) Consider the following statements regarding "Dharwar Rock System":

- 1. They are the oldest metamorphosed rocks.
- 2. They possess valuable minerals like high grade iron-ore, high grade coal manganese, copper, lead, gold, etc.

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

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

ANS: B

Explanation: Formation period of dharwar rock system ranges from 4 billion years ago to – 1 billion years ago.

- Highly metamorphosed sedimentary rock-system. [Formed due to metamorphosis of sediments of Archaean gneisses and schists].
- They are the oldest metamorphosed rocks.
- Found in abundance in the Dharwar district of Karnataka.
- Economically the most important rocks because they possess valuable minerals like high grade iron-ore, manganese, copper, lead, gold, etc.

Source: NCERT

Q.6) "Rohtang Pass" is often seen in news is located in which of the following state?

- a) Himachal Pradesh
- b) Uttarakhand
- c) Sikkim
- d) Arunachal Pradesh

ANS: A

Explanation: Rohtang Pass (elevation 3,978 m) is located in the state of Himachal Pradesh, It is present on the Pir Panjal Range of Himalayas.

- It connects the Kullu Valley with Lahaul and Spiti Valleys of Himachal Pradesh.
- The Ravi River rises west of the Rohtang pass in the Kullu hills of Himachal Pradesh.
- The world's longest tunnel (8.8km) above 10,000 feet -Rohtang Tunnel (Atal Tunnel) is under construction to connect villages in Lahaul-Spiti (Himachal Pradesh) to the rest of the country even during winters.

Source: NCERT and Indian Express

Q.7) Mekong River is NOT flows through which of the following country?

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

ANS: D

Explanation: From the Tibetan Plateau the river runs through China, Myanmar, Laos, Thailand, Cambodia, and Vietnam.



Source: The Hindu

Q.8) The "Kasowal Bridge" is often seen in news is constructed on which river?

- a) Ravi
- b) Beas
- c) Sutlej
- d) Jhelum

ANS: A

Explanation: BRO has constructed and opened a 484- metre long permanent bridge on the river Ravi to connect the Kasowal enclave of Punjab along the Pakistan border to the rest of the country.

- Kasowal enclave is around 35 square km, It was connected through a pontoon bridge of limited load capacity.
- The enclave was formed because it has the Ravi behind it and the International Border ahead of it.
- There are similar enclaves of Pakistani territory too, which lie ahead of Ravi and face Indian Territory.
- These Pakistani enclaves Dera Baba Nanak enclave and Jassar enclave were occupied by the Indian Army in the 1965 and 1971 wars.

Source: Indian Express

Q.9) Consider the following statements regarding the "altitude of the midday sun":

- 1. The sun is vertically overhead at the equator only.
- 2. Beyond the tropics the sun is never overhead at any time of the year.

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

ANS: B

Explanation: In the course of a year, the earth's revolution round the sun with its axis inclined at 66 ½ to the plane of the ecliptic changes the apparent altitude of the midday sun.

- The sun is vertically overhead at the equator on two days each year. These are usually 21st march and 21st September.
- After the March equinox the sun appears at move north and is vertically overhead at the tropic of cancer on about 21st June.
- By about 22nd December, the sun will be overhead at the tropic of Capricorn.
- The tropics thus mark the limits of the overhead sun, for beyond these, the sun is never overhead at any time of the year.

Source: NCERT

Q.10) Consider the following statements regarding the "igneous rocks":

- 1. The acid igneous rocks are highly dense and darker in colour.
- 2. The basic igneous rocks are less dense and lighter in colour.

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

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

d) Neither 1 nor 2

ANS: C

Explanation: Igneous rocks may be subdivided on the basis of mineral composition.

- When they contain a high proportion of silica they are said to be acid.
- Acid igneous rocks, such as granite, are less dense and are lighter in colour than basic rocks.

These contain a greater proportion of basic oxides, e.g. of iron, aluminum or magnesium, and are thus denser and darker in colour.

Source: NCERT

Q.11) Consider the following statements:

- 1. The Union Territory Puducherry is spread in three states.
- 2. All territories of Puducherry were French enclaves before independence.

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

ANS: C

Explanation: The Union Territory of Puducherry comprises of four coastal regions namely Puducherry, Karaikal, Mahe and Yanam.

- Puducherry and Karaikal are situated on the East Coast of Tamil Nadu, Yanam in Andhra Pradesh and Mahe on the West Coast in Kerala.
- The city of Puducherry is the Capital of this Union Territory. It lies on the east coast about 162 kms south of Chennai (Madras) located on the Coromandel Coast of the Bay of Bengal.
- There are no hills or forests in this region. The major soil types found here are red ferralitic, black clay and coastal alluvial.
- The main spoken language is Tamil; though Telugu, Malayalam, English and French are spoken by a considerable number of people.
- Although the majority of the population is Hindu, there are quite a number of Christians and Muslims, whereas Jains, Sikhs and Buddhists are few in comparison.
- It is to be noted here that all four territories coming under Puducherry Union Territory were French exclaves before Independence.

Source: Periyar Geography

Q.12) Which of the following states of India share border with Bangladesh?

- 1. West Bengal
- 2. Assam
- 3. Meghalaya
- 4. Manipur
- 5. Tripura

Select the correct answer using the code given below:

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

ANS: B

Explanation: Bangladesh shares border with West Bengal, Assam, Meghalaya, Tripura and

Mizoram.

Source: NCERT

Q.13) Which of the following pair (s) is/are NOT correctly matched?

Commission:Boundary line between1. Radcliffe line:India and Bangladesh2. Mc Mohan line:India and Myanmar3. Durand line:India and AfghanistanSelect the correct answer using the code given below:

a) 1 only

b) 1 and 2 only

c) 1 and 3 only

d) 2 only

ANS: D

Explanation: Radcliffe Line: Border line between India and Pakistan, and India and Bangladesh. The border between India and Pakistan was decided by Sir Cyril Radcliffe in 1947.

Mc Mohan Line: Border line between India and China. This line was decided by Sir Henry Mc Mohan in 1914.

Durand Line: Border line between India and Afghanistan. This line was decided by Sir Henry Mortimer Durand in 1896.

Source: Periyar Geography

Q.14) Consider the following statements regarding mountain peaks:

- 1. The highest mountain peak in India is Mount Godwin Austin is situated in Karakoram mountain range.
- 2. The highest mountain peak of Himalayas is Mount Everest.

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

ANS: C

Explanation: The highest mountain peak of the Himalayas is Mount Everest. It is also the highest mountain peak of the world.

The highest mountain peak in India is Mount Godwin Austin is situated in Karakoram mountain range. At present it is a part of the POK.

Source: Periyar Geography

Q.15) Which of the following hills are located in Arunachal Pradesh?

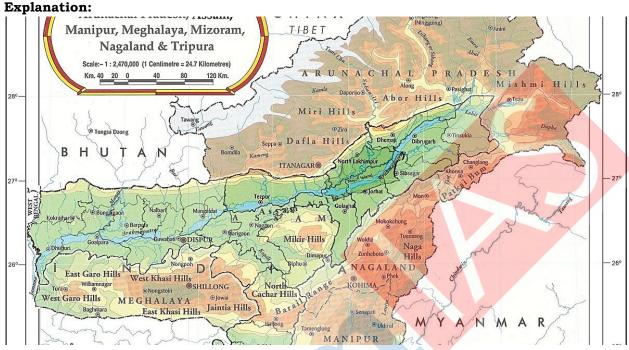
- 1. Daffla Hills
- 2. Miri Hills
- 3. Abor Hills
- 4. Mikir Hills

Select the correct answer using the code given below:

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

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

ANS: A



Source: Maps of India

Q.16) "Mana pass and Niti Pass" is located in which of the following state?

- a) Himachal Pradesh
- b) Uttarakhand
- c) Sikkim
- d) Arunachal Pradesh

ANS: B

Explanation: Mana Pass and Niti Pass- It is in Uttarakhand. The road to the kailash and the Manasarovar passes through it.

Source: NCERT

Q.17) Which of the following are the evidences in support of the Continental Drift?

- 1. Jig Saw Fit.
- 2. Tillite.
- 3. Placer deposits.

Select the correct answer using the code given below:

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

ANS: D

Explanation: A variety of evidence was offered in support of the continental drift. Some of these are given below.

The Matching of Continents (Jig-Saw-Fit): The shorelines of Africa and South America facing each other have a remarkable and unmistakable match.

- It may be noted that a map produced using a computer programme to find the best fit of the Atlantic margin was presented by Bullard in 1964.
- It proved to be quite perfect. The match was tried at 1,000- fathom line instead of the present shoreline.

Tillite: It is the sedimentary rock formed out of deposits of glaciers.

- The Gondawana system of sediments from India is known to have its counterparts in six different landmasses of the Southern Hemisphere.
- At the base, the system has thick tillite indicating extensive and prolonged glaciation.
- The glacial tillite provides unambiguous evidence of palaeo-climates and also of drifting of continents.

Placer Deposits: The occurrence of rich placer deposits of gold in the Ghana coast and the absolute absence of source rock in the region is an amazing fact.

The gold bearing veins are in Brazil and it is obvious that the gold deposits of the Ghana are derived from the Brazil plateau when the two continents lay side by side.

Source: NCERT

Q.18) Which of the following pair (s) is/are correctly matched?

Minor plate : Location

Philippine plate : Between Asiatic and Pacific plates
 Cocos plate : Between Asiatic and Pacific plate

3. Caroline plate : Between Central America and Pacific plate

Select the correct answer using the code given below:

a) 1 only

b) 1 and 2 only

c) 2 and 3 only

d) 1, 2 and 3

ANS: A

Explanation: Some important minor plates are listed below:

- Cocos plate: Between Central America and Pacific plate
- Nazca plate: Between South America and Pacific plate
- Arabian plate: Mostly the Saudi Arabian landmass
- Philippine plate: Between the Asiatic and Pacific plate
- Caroline plate: Between the Philippine and Indian plate (North of New Guinea)
- Fuji plate: North-east of Australia.

Source: National Geographic Channel

Q.19) Which of the following Ocean Current is **NOT** a cold ocean current?

- a) Kuroshio Current
- b) Oyashio Current
- c) Canaries Current
- d) Labrador Current

ANS: A

Explanation: The Kuroshio, also known as the Black or Japan Current or the Black Stream, is a north-flowing, warm ocean current on the west side of the North Pacific Ocean.

Source: NCERT

Q.20) "Lake Pampulha" is recently in news is located in which of the following country?

a) Brazil



- b) Australia
- c) Russia
- d) Iran

ANS: A

Explanation: In a lake in Brazil, researchers have discovered a virus that they find unusual and intriguing called Yaravirus, it has a "puzzling origin and phylogeny", they report in a study on the pre-print server bioRxiv.

- The Yaravirus infects amoeba and has genes that have not been described before, something that could challenge how DNA viruses are classified.
- The researchers found the Yaravirus while looking in the lake for giant viruses that infect amoeba.
- Because of the Yaravirus's small size, it was unlike other viruses that infect amoeba and they named it as a tribute to Yara, the "mother of waters" in the mythological stories of the Tupi-Guarani indigenous tribes.

Source: Indian Express



Environment

- **Q.1)** Consider the following statements regarding "Green Bonds":
- 1. The proceeds from green bonds are ear-marked to finance green projects.
- 2. India's First Green Bond was issued by SEBI in 2015.

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

ANS: A

Explanation: Green bonds are debt instruments issued by financial, non-financial or public entities where the proceeds are 'ear-marked' for use towards financing 'green' projects.

- India's First Green Bond was issued by Yes Bank Ltd in 2015.
- In 2016, India became second country (after China) to provide national level guidelines for Green bonds, issued by SEBI.
- According to the 2019-20 Economic Survey, India has the second largest green bond market among emerging economies after China.
- India has issued \$10.2 billion of green bonds in the first half of 2019.
- India's first listed Green Bond on 'India INX' issued by Indian Railway Finance Corporation.

Source: The Hindu

- **Q.2)** "Selective Catalytic Reduction" is often seen in news is related to which of the following?
- a) Thermal power stations
- b) Bharat Stage VI norms
- c) Nuclear power plants
- d) Stubble burning

ANS: B

Explanation: Diesel Particulate Filter (DPF) and Selective Catalytic Reduction (SCR) are being introduced with the roll-out of BS VI norms, which were not a part of BS IV.

- Real Driving Emission (RDE) will be introduced in India for the first time with the implementation of Bharat Stage VI emission norms.
- It will measure a vehicle's emission in real-time conditions against laboratory conditions.
- Onboard Diagnostics (OD) has been made mandatory for all vehicles which will give
 the vehicle owner or repair technician access to the status of the various vehicle
 sub-systems.

Source: MOEFCC

- **Q.3)** Which of the following is/are the characteristics of "Petcoke"?
- 1. It is a by-product of oil refinery process.
- 2. It is a high grade fuel with high calorific value.
- 3. Low ash with low sulphur content.

Select the correct answer using the code given below:

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

ANS: B

Explanation: Petcoke is a by-product (carbonaceous solid) of the oil refinery process mainly "the bottom of the barrel."

It is characterized as a high grade fuel with high calorific value of more than 8,000 Kcal per kg, having low ash content and low volatile matter but high sulphur content, up to 7%. Source: Indian Express

Q.4) Consider the following statements regarding "uranium contamination in India":

- 1. The permissible limit according to the World Health Organization (WHO) is 30 microgram per litre.
- 2. There is no limit maintained for uranium under Bureau of Indian Standards' Drinking Water Specifications.

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

ANS: C

Explanation: The permissible limit according to the World Health Organization (WHO) is 30 microgram per litre.

- However, unlike the limits for arsenic and other toxic or heavy metals specified in the under Bureau of Indian Standards' Drinking Water Specifications, there is no limit maintained for uranium.
- Earlier, a report brought by Central Ground Water Board noted widespread uranium contamination in groundwater from aquifers across 16 states in India including Punjab, Rajasthan, Andhra Pradesh, Chhattisgarh, Gujarat, Haryana, etc.

Uranium can cause serious ailments such as:

- If uranium-laced water, more than permissible level, is consumed for long, it can cause thyroid cancer, blood cancer, depression and other serious ailments.
- Some studies have also linked the excessive ingestion of uranium to chronic kidneys disease.

Source: Down to Earth

- Q.5) "Dobson Unit" is the measurement unit for which of the following?
- a) Ocean depth
- b) Solar concentration
- c) Ozone concentration
- d) None

ANS: C

Explanation: Dobson Unit is the most common unit for measuring ozone concentration. One Dobson Unit is the number of molecules of ozone that would be required to create a layer of pure ozone 0.01 millimeters thick at a temperature of 0 degrees Celsius and a pressure of 1 atmosphere.

Source: NOAA

- Q.6) Consider the following statements regarding "Petersburg Dialogue":
- 1. It was started in 2010 by Russia.
- 2. It is a formal annual meeting of the high-level ministers and representatives of various countries that enables them to have constructive exchanges on the issues of international climate actions.

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

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

ANS: C

Explanation: Petersburg Dialogue was launched in 2010 by Germany after failed climate negotiations at the 2009 Copenhagen Summit.

- It is an informal annual meeting of the high-level ministers and representatives of various countries that enables them to have constructive exchanges on the issues of international climate actions.
- The co-chair of the Climate Dialogue is the country presiding over the next conference of United Nations Framework Convention on Climate Change (UNFCCC).

Source: The Hindu

- **Q.7)** The term "Southern Annular Mode" is often seen on news is associated with which of the following?
- a) Arctic Ocean
- b) Antarctic Oscillation
- c) Pacific Gyres
- d) None

ANS: B

Explanation: The Southern Annular Mode (SAM), also known as the Antarctic Oscillation (AAO), refers to the (non-seasonal) north-south movement of the strong westerly winds that blow almost continuously in the mid- to high latitudes of the southern hemisphere.

- **Q.8)** "Agasthyavanam biological Park" is recently seen in news is located in which of the following state?
- a) Kerala
- b) Tamil Nadu
- c) Telangana
- d) Karnataka

ANS: A

Explanation: Agasthyavanam was established in 1997, Agasthyavanam Biological Park is a wildlife sanctuary in Kerala.

- The park is located near Thiruvananthapuram, the capital city of Kerala.
- Agasthyavanam Biological Park is spread over an area of 23 sq. km., of which 17.5 sq. km. of the park has been dedicated for natural regeneration to develop into a dense forest.
- It is contiguous to Neyyar Wildlife Sanctuary and Peppara Wildlife Sanctuary.
- The rest area of the park is left for systematic conservation programs.
- The park has been named after the Agasthyamalai Agasthyakoodam Peak, which can be seen at a distance from the park.

• Forest Department is procuring forest produce collected by the tribes people of the Agasthyavanam Biological Park (ABP) and surrounding forest ranges to be sold to commercial establishments and various collectives to deal with the lockdown necessitated by the COVID-19 pandemic

Source: The Hindu

Q.9) The "Task Force on Climate-Related Financial Disclosures (TCFD)" is sometimes seen in news is related to which of the following?

- a) UNEP Finance Initiative
- b) Global Environment Facility
- c) UNFCCC
- d) World Economic Forum

ANS: A

Explanation: The Task Force on Climate-Related Financial Disclosures (TCFD) was created in 2015 by the Financial Stability Board (FSB) to develop consistent climate-related financial risk disclosures for use by companies, banks, and investors in providing information to stakeholders.

- Increasing the amount of reliable information on financial institutions' exposure to climate-related risks and opportunities will strengthen the stability of the financial system, contribute to greater understanding of climate risks and facilitate financing the transition to a more stable and sustainable economy.
- Following the publication of the final recommendations by FSB's TCFD in June 2017, **UNEP FI** began a series of 'TCFD Pilot Projects' for banks, investors, and insurers. Participants in these pilots have worked to pioneer practical approaches for the assessment and disclosure of climate risks and opportunities.

Source: World Bank

Q.10) Recently researchers have found a **dragon tree species** for the first time in which of the following state?

- a) Karnataka
- b) Andhra Pradesh
- c) Tripura
- d) Assam

ANS: D

Explanation: Assam has added to India's botanical wealth a plant that yields dragon's blood — a bright red resin used since ancient times as medicine, body oil, varnish, incense and dye.

- A trio of researchers led by Assam forest officials has discovered Dracaena cambodiana, a dragon tree species in the Dongka Sarpo area of West Karbi Anglong.
- This is for the first time that a dragon tree species has been reported from India.
- Dracaena cambodiana is an important medicinal plant as well as an ornamental tree.
- It is a major source of dragon's blood, a precious traditional medicine in China.

Several antifungal and antibacterial compounds, antioxidants, flavonoids, etc., have been extracted from various parts of the plant.

- **Q.11)** Consider the following statements regarding "Tiger estimation":
- 1. It is conducted for every five years by National Tiger Conservation Authority.
- 2. It is technically supported by World Wide Fund for Nature.

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

ANS: D

Explanation: The All India Tiger Estimation done every four year once, it is

- Steered by the National Tiger Conservation Authority
- Technically supported by Wildlife Institute of India
- Implemented by State Forest Departments and partners.

Source: The Hindu

Q.12) Consider the following statements regarding "Climate Investment Funds":

- 1. They are implemented by the Multilateral Development Banks (MDBs) to bridge the financing and learning gap between international climate change agreements.
- 2. They were designed by developed and developing countries.

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

ANS: C

Explanation: The Climate Investment Funds (CIFs) are implemented by the Multilateral Development Banks (MDBs) to bridge the financing and learning gap between international climate change agreements.

- They were designed by developed and developing countries. The World Bank is the Trustee of the CIFs.
- It includes a "sunset clause" to ensure that the Fund's activities do not prejudice the outcome on the UNFCCC negotiations.

CIFs are two distinct funds

- Clean Technology Fund
- Strategic Climate Fund.

The CTF promotes scaled-up financing for demonstration, deployment and transfer of low carbon technologies with a significant potential for long-term greenhouse gas emissions savings.

Source: World Bank

- **Q.13)** Recently, which of the following African country planted more than 200 million trees in a single day?
- a) Nigeria
- b) Egypt
- c) Ethiopia
- d) Botswana

ANS: C

Explanation: Ethiopians planted more than 200 million trees on July 29, 2019 which officials stated will be a world record.

- The ambitious initiative of Prime Minister Abiy Ahmed aims to help restore the country's landscape which experts say is fast being eroded by deforestation and climate change.
- The state-affiliated Fana Broadcasting Corporate announced more than 224 million trees were planted on Monday, surpassing the initial goal of 200 million trees planted in one day.
- Ethiopia is in the midst of a tree planting campaign in which it aims to plant 4 billion trees between May and October.

Agriculture officials stated that so far more than 2.6 billion trees have been planted in almost all parts of the East African nation.

Source: The Hindu

Q.14) With reference to conservation of biodiversity in India, which of the following Central Acts deals with conservation of Biodiversity?

- 1. Fisheries Act 1897.
- 2. Indian Forests Act 1927.
- 3. Water (prevention and control of pollution) act 1974.

Select the correct answer using the code given below:

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

ANS: D

Explanation: Conservation of biodiversity includes the preservation of all species, flora and fauna, the enhancement of wildlife habitat, the control of wildlife problems and the sustainable use of forests and wildlife.

- The rapid rate of extinction of many species of animals is an increasing concern. Habitat preservation and enhancement are critical to existence of wildlife in an area.
- Animals cannot live in an area that does not provide proper food, cover, water and special needs.
- People's activities alter many habitats, which acts as a detriment to wildlife.
 Conservation and sustainable use of biological resources based on local knowledge systems and practices is ingrained in the Indian ethos and way of life.

Legislation Relevant To Biodiversity Conservation:

- Fisheries Act 1897.
- Indian Forests Act 1927.
- Mining and Mineral Development Regulation Act 1957.
- Prevention of cruelty to animals 1960.
- Wildlife protection act 1972.
- Water (prevention and control of pollution) act 1974.
- Forest Conservation Act 1980.
- Air (prevention and control of pollution) act 1981.
- Environment Protection Act 1986.
- Biological Diversity Act 2002.

• Scheduled Tribes and other traditional forest dwellers (recognition of rights) act 2006.

Source: Vikaspedia

Q.15) Consider the following statements:

- 1. Nilgiri Tahr is endemic to North East Himalayas.
- 2. The "big four" snakes the common cobra, common krait, Russell's viper, and saw-scaled viper are found in India.

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

ANS: B

Explanation: The Nilgiri Tahr (Nilgiritragus hylocrius, former name is Hemitragus hylocrius) is an endangered mountain ungulate endemic to the southern part of the Western Ghats.

- The species is found in a roughly 400 km stretch in the Western Ghats which falls in the states of Kerala and Tamil Nadu.
- The Eravikulam National Park has the highest density and largest surviving population of Nilgiri tahr.

"Big Four" refers to the four most common venomous snake species in India—spectacled cobra (Naja naja), saw-scaled viper (Echis carinatus), Russell's viper (Daboia russelii) and common krait (Bungarus caeruleus).

Source: The Hindu

- **Q.16)** Recently, which of the following country forests are affected by beetle infestation and which has turned climate-stressed woodlands into brown ecological graveyards?
- a) Canada
- b) Serbia
- c) Argentina
- d) Germany

ANS: D

Explanation: Germany's forests have long been treasured by its people, so the country has reacted with alarm and dismay as a beetle infestation has turned climate-stressed woodlands into brown ecological graveyards.

- After two unusually hot summers in a row, vast patches of the forests mythologised by medieval fairytales, Goethe's writings and Romantic painters have turned into tinder-dry dead zones.
- Given the scale of the threat to the one third of German territory covered by trees, Chancellor Angela Merkel's government convened a "national forest summit" on September 2019.

- **Q.17)** The "Nandankanan Zoological Park" is often seen in news is located in which of the following state?
- a) Andhra Pradesh
- b) Kerala
- c) Pondicherry
- d) None

ANS: D

Explanation: Nandankanan Zoological Park is a premier large zoo of India.

- Unlike other zoos in the country, Nandankanan is built right inside the forest and set in a completely natural environment.
- The animals are housed in enclosures with greenery with a feel of real forest and live with no fear or apprehension of becoming the hunter's prey.
- Nandankanan is 15 kms from Odisha's capital, Bhubaneswar.
- The Bhubaneswar railway station is at a distance of 18 kms and the Biju Patnaik International Airport is at a distance of 20 kms.

Source: The Hindu

Q.18) Consider the following statements regarding the "Wildlife Protection Act, 1972":

- 1. It has six schedules which give varying degrees of protection.
- 2. Blue Whale falls in Schedule II of the Wildlife (Protection) Act, 1972.

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

ANS: A

Explanation: The Wildlife Protection Act, 1972 provides for the protection of wild animals, birds and plants; and for matters connected there with or ancillary or incidental thereto.

- It extends to the whole of India.
- It has six schedules which give varying degrees of protection.
- The blue whale falls in Schedule I of the Wildlife (Protection) Act, 1972.

Source: The Hindu

Q.19) Which of the following place is known for "Salt water crocodile"?

- a) Gulf of Mannar
- b) Bhitarkanika
- c) Chilika Lake
- d) Sundarbans

ANS: B & D

Explanation: Crocodiles are ambush hunters and apex predator of river systems of the India.

- There are three crocodilians species found in India, Mugger crocodile, the Gharial and the Saltwater Crocodile.
- Mugger crocodile and the gharial are found throughout the Indian subcontinent and they are ambush hunters, mostly prey on fish, reptiles, birds and mammals.
- Saltwater Crocodiles are the largest species of crocodilians family and largest of all living reptiles in the world.
- The apex predator found in saline and brackish mangrove swamp forest of Bhitarkanika and Sunderbans.
- Bhitarkanika National Park in Kendrapara district of Odisha is a separates swamp region and mangroves forest.
- The park is home to largest Saltwater Crocodiles in India and many other species of reptiles such as White Crocodile, Indian Python and King Cobra.

Q.20) The "Management Effectiveness Evaluation (MEE)" is often seen in news is related to which of the following?

- a) Protected areas
- b) Solar Energy
- c) Organic Farming
- d) None

ANS: A

Explanation: Management Effectiveness Evaluation (MEE) is the assessment of how well protected areas such as national parks, wildlife sanctuaries, conservation reserves, community reserves and tiger reserves are being managed and their effectiveness in conserving target flora and fauna.

Environment & Ecology

- **Q.1)** Which of the following is/are the abiotic components of Environment?
- 1. Symbionts
- 2. Radiation
- 3. Gravity

Select the correct answer using the code given below:

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

ANS: C

Explanation: The environment is not static. Both biotic and abiotic factors are in a flux and keep changing continuously.

Components of Environment	
Abiotic	Biotic
Energy	Green plants
Radiation	Non-green plants
Temperature & heat flow	Decomposers
Water	Parasites
Atmospheric gases and wind	Symbionts
Fire	Animals
Gravity	Man
Topography	
Soil	
Geologic substratum	

Source: Shankar

- **Q.2)** In ecosystem, the organisms which are incapable of producing their own food are called as?
- a) Autotrophs
- b) Phagotrophs
- c) Saprotrophs
- d) All of the above

ANS: B

Explanation: Consumers – Heterotrophs or phagotrophs (other nourishing): Consumers are incapable of producing their own food (photosynthesis). They depend on organic food derived from plants, animals or both.

Source: NCERT

- **Q.3)** Ecosystems are capable of maintaining their state of equilibrium. They can regulate their own species structure and functional processes is called as?
- a) Homeostasis
- b) Testacy
- c) Isostatic equilibrium
- d) None

ANS: A

Explanation: Ecosystems are capable of maintaining their state of equilibrium. They can regulate their own species structure and functional processes. This capacity of ecosystem of self-regulation is known as homeostasis.

Source: NCERT

Q.4) Which of the following is/are the examples of ecotone?

- 1. Grassland
- 2. Mangrove
- 3. Estuary

Select the correct answer using the code given below:

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

ANS: D

Explanation: Ecotone is a zone of junction between two or more diverse ecosystems. For e.g. the mangrove forests represent an ecotone between marine and terrestrial ecosystem. Other examples are – grassland, estuary and river bank.

Source: Shankar

- **Q.5)** "It is a description of all the biological, physical and chemical factors that a species needs to survive, stay healthy and reproduce" describes which of the following?
- a) Ecotone
- b) Ecotope
- c) Ecological Niche
- d) Food chain

ANS: C

Explanation: A niche is the unique functional role or place of a species in an ecosystem.

- It is a description of all the biological, physical and chemical factors that a species needs to survive, stay healthy and reproduce.
- A niche is unique for a species, which means no two species have exact identical niches.
- Niche plays an important role in conservation of organisms.

Source: NCERT

- Q.6) Consider the following statements regarding "Seagrass Meadows" in India:
- 1. It is found along the southeast coast and in the lagoons of islands of Lakshadweep and Andaman and Nicobar.
- 2. It is one of the most productive ecosystems of the world.

Which of the statements given above is/are correct?

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

ANS: C

Explanation: The major seagrass meadows in India exist along the southeast coast (Gulf of Mannar and Palk Bay) and in the lagoons of islands from Lakshadweep in the Arabian Sea to Andaman and Nicobar in the Bay of Bengal.

• The Tamil Nadu (southeast) coast harbours all 14 species, while 8 and 9 species have been reported from Lakshadweep and Andaman-Nicobar groups of islands,

respectively. The mainland east coast supports more species than the west coast of India.

- Dense seagrass growth traps flowing sediment and nutrients, and creates a world where life can thrive.
- Seagrasses form the basis of one of the most productive ecosystems of the world, providing food and shelter to a diverse community of animals.
- The leafy canopies support a bewildering diversity of tiny plants that grow as epiphytes (like moss on trees) and small marine invertebrates, which in turn attract sea anemones and fish, and mega herbivores like green sea turtles and dugongs.
- The seagrass meadows with their extensive rhizome and root systems, and leaf growth and epiphytic growth together accumulate a huge amount of biomass.

Source: The Hindu

- Q.7) Which of the following plant/plants is/are "Predator plants"?
- 1. Venus flytrap
- 2. Sarracenia
- 3. Pitcher plants

Select the correct answer using the codes given below:

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

ANS: D

Explanation: Carnivorous plants are usually categorized based on the way they catch the insects. There are wide varieties of common predator plants — pitcher plants, sundews, sarracenia, Venus fly trap and butterworts.

Source: The Hindu

- Q.8) The term "Archaea" is related to which of the following?
- a) Rocks
- b) Paleolithic channel
- c) Primitive group of microorganisms
- d) Primary succession

ANS: C

Explanation: Archaea.

- Archaea (singular archaeon) are a **primitive group of microorganisms** that thrive in extreme habitats such as hot springs, cold deserts and hyper-saline lakes.
- These slow-growing organisms are also present in the human gut, and have a potential relationship with human health.
- They are known for producing antimicrobial molecules, and for anti-oxidant activity with applications in eco-friendly waste-water treatment.

Source: Indian Express

- **Q.9)** "The dominating vegetation is coniferous evergreen mostly spruce, with some pine and firs" describes which of the following Biome?
- a) Tundra
- b) Savannah
- c) Temperate deciduous forest
- d) Taiga

ANS: D

Explanation: The dominating vegetation of taiga is coniferous evergreen mostly spruce, with some pine and firs. The fauna consists of birds, hawks, fur bearing carnivores, little mink, elks, puma, Siberian tiger, wolverine, wolves etc.

Source: NCERT

Q.10) Which of the following is/are the functions of ecosystem?

- 1. Energy flow
- 2. Biogeochemical cycles
- 3. Ecological succession

Select the correct answer using the code given below:

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

ANS: D

Explanation: The function of an ecosystem is a broad, vast and complete dynamic system. It can be studied under the following three heads.

- Energy flow
- Nutrient cycling (biogeochemical cycles)
- Ecological succession or ecosystem development

Source: Shankar

Q.11) "Lichens" is a peculiar combination between which of the following?

- a) Algae and fungi
- b) Virus and bacteria
- c) Algae and bacteria
- d) Fungi and virus

ANS: A

Explanation: Lichen is a peculiar combination of an alga and a fungus- the two live deriving mutual benefits.

- They are group of greyish green plants which grow on rocks, tree-trunks, dead wood, etc.
- The algae manufactures food which becomes available to the fungus, they absorbs and retains water and thus keeps the algal cells moist.
- An example of symbiosis. They are most common in wetlands, rare in rivers and streams and are not found in ground water.

Source: Shankar

Q.12) Which of the following species are under schedule 6 of the "Wildlife protection act, 1972"?

- 1. Red vanda
- 2. Pitcher plant
- 3. Eucalyptus
- 4. Ladies slipper orchids

Select the correct answer using the code given below:

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



d) 1, 2, 3 and 4

ANS: C

Explanation: Red Vanda, blue Vanda, kuth, pitcher plant, beddomes cycad and ladies

slipper orchid are the list of plants listed in schedule 6.

Source: Shankar

Q.13) Consider the following statements regarding "Malabar Civet":

- 1. It is endemic to India and was first reported from Travancore, Kerala.
- 2. It is nocturnal in nature and found exclusively in the Western Ghats. 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

ANS: C

Explanation: Malabar Civet is considered to be one of the world's rarest mammals.

- It is endemic to India and was first reported from Travancore, Kerala.
- It is nocturnal in nature and found exclusively in the Western Ghats.
- Habitat: Wooded plains and hill slopes of evergreen rainforests.

Source: Shankar

Q.14) The white – bellied heron, sociable lapwing and Himalayan Quail are belongs to which of the following?

- a) Amphibians
- b) Birds
- c) Reptiles
- d) None

ANS: B

Explanation: White – bellied heron extremely rare bird found in five or six sites in Assam and Arunachal Pradesh, one or two sites in Bhutan, and a few in Myanmar.

- Himalayan Quail is presumed to be extinct since no reliable records of sightings of this species exist after 1876. Intensive surveys are required as this species is hard to detect due to its reluctance to fly and its preference for dense grass habitats. Possible sighting of this species was reported in Nainital in 2003.
- Sociable lapwing is a winter migrant to India. This species has suffered a sudden and rapid population decline due to which it has been listed as critically endangered.

Source: Shankar

- **Q.15)** Consider the following statements regarding "fire corals":
- 1. They are more closely related to jellyfish than corals.
- 2. Generally found in murky inshore waters and display a tolerance for siltation.

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

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

ANS: D

Explanation: Fire corals are more closely related to jellyfish than corals. On contact, one usually feels a burning sensation similar to a sting from a jellyfish.

- Habitat: Generally found in murky inshore waters and display a tolerance for siltation. They often are found in clear offshore sites.
- Distribution: Indonesia, Gulf of Chiriquí, Panama Pacific Province. Possibly extinct from Australia, India, Indonesia, Malaysia, Panama, Singapore and Thailand.

Source: Shankar

Q.16) Which of the following invasive species (fauna) found in India?

- 1. Myna
- 2. Crazy ant
- 3. Pigeon

Select the correct answer using the code given below:

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

ANS: D

Explanation: Purposely or accidentally, people often bring non-native species into new areas where the species have few or no natural predators to keep their populations in check.

- A new invasive gall forming insect of Eucalyptus in Southern India. Leptocybe invasa - a new insect pest detected from few pockets of coastal Tamil Nadu and it has spread to peninsular India. It is a tiny wasp that forms leaf and stem galls in Eucalyptus.
- Crazy ant
- Giant African snail
- Myna
- Gold Fish
- Pigeon
- Donkey
- House Gecko
- Tilapia

Source: Shankar

Q.17) The "Nalabana Bird Sanctuary" is often seen in news is located in which of the following state?

- a) Assam
- b) Odisha
- c) Karnataka
- d) Tamil Nadu

ANS: B

Explanation: The Nalabana bird sanctuary is located on Nalabana Island in the Chilika lagoon area in Odisha.

- The Nalabana Bird Sanctuary is the core area of Chilika.
- The large Nalabana Island (Forest of Reeds) covering about 16 sq km was declared a bird sanctuary in 1987.
- Chilika Lake gets heavy inflow of water from rivers Bhargavi and Daya.



• Chilika Lake is Asia's largest and world's second-largest lagoon after the New Caledonian barrier reef in New Caledonia.

Source: The Hindu

Q.18) The "abohar wildlife sanctuary" is seen in news is located in which of the following state?

- a) Punjab
- b) Himachal Pradesh
- c) Madhya Pradesh
- d) Uttarakhand

ANS: A

Explanation: Threatened by untamed dogs and stray cattle, the blackbuck, Punjab's State animal, is fighting for survival at the Abohar Wildlife Sanctuary in the Fazilka district.

- Abohar is an open wildlife sanctuary, spreading across private land in 13 villages.
- The blackbuck was notified as State animal of Punjab in 1989, and its presence in the State is confined only to the Abohar Wildlife Sanctuary, with its unique habitat of semi-arid plains featuring agricultural fields, intermittent fallow-barren land, scattered sand dunes and mounds, and ridges.
- In the sanctuary, where land in mainly owned by the local Bishnoi community, there were 3,273 blackbucks, according to the 2017 census conducted jointly by the Punjab Biodiversity Board (PBB) and the Forest and Wildlife Department, against 3,500 in 2011.

Source: The Hindu

Q.19) "Dachigam national park" is often seen in news is located in which of the following State/Union Territory?

- a) Pondicherry
- b) Uttarakhand
- c) Jammu & Kashmir
- d) Andaman & Nicobar Islands

ANS: C

Explanation: Dachigam National Park is located 22 km from Srinagar in Jammu and Kashmir.

- The name literally stands for 'ten villages', which could be in memory of the ten villages that were relocated in order to create the park.
- The Park is only 141 sq. kms. and roughly rectangular in shape, approximately 23.5km by 6km.
- It is best considered as two sections Upper and Lower Dachigam.
- Lower Dachigam, in the west, comprises approximately a third of the total area and is the area most accessible to a visitor.
- Upper Dachigam in the east extends over the higher reaches and is a good day's trek from the nearest road head.
- Dachigam was initially established to ensure the supply of clean drinking water to Srinagar city.
- A protected area since 1910, it was declared as a national park in 1981.
- The park is best known as the home of the hangul, or Kashmir stag.

Q.20) Which of the following statements is/are NOT correct about "Sunderban Wetland"?

- 1. It is the largest protected wetland in the country.
- 2. It is a UNESCO World heritage site.

Select the correct answer using the code given below:

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

ANS: D

Explanation: On January 30, 2019 the Indian Sundarban was accorded the status of 'Wetland of International Importance' under the Ramsar Convention.

- The Sundarbans comprises hundreds of islands and a network of rivers, tributaries and creeks in the delta of the Ganga and the Brahmaputra at the mouth of the Bay of Bengal in India and Bangladesh.
- Located on the southwestern part of the delta, the Indian Sundarban constitutes over 60% of the country's total mangrove forest area.
- It is the 27th Ramsar Site in India, and with an area of 4,23,000 hectares is now the largest protected wetland in the country.
- The Indian Sundarban, also a UNESCO world heritage site, and it is home to the Royal Bengal Tiger.



Ecology & Environment (Biodiversity conservation)

- **Q.1)** Which of the following is NOT part of in-situ conservation?
- a) National park
- b) Wildlife sanctuary
- c) Botanical garden
- d) Biosphere reserve

ANS: C

Explanation: Conserving the animals and plants in their natural habitats is known as insitu conservation. The established natural habitats are:

- National parks
- Sanctuaries
- Biosphere reserves and
- Reserved forests
- Protected forests

Source: Shankar

Q.2) Consider the following statements regarding the "red data book":

- 1. It is a loose-leaf volume of information on the status of many kinds of species.
- 2. It was first issued after the 1972 Stockholm conference on environment.

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

ANS: A

Explanation: Species judged as threatened are listed by various agencies as well as by some private organizations. The most cited of these lists is the Red Data Book.

- It is a loose-leaf volume of information on the status of many kinds of species.
- This volume is continually updated and is issued by the International Union for Conservation of Nature (IUCN) located in Morges, Switzerland.
- "Red" of course is symbolic of danger that the species both plants and animals presently experience throughout the globe.
- The Red Data Book was first issued in 1966 by the IUCN's Special Survival Commission as a guide for formulation, preservation and management of species listed.

Source: IUCN

- **Q.3)** The "Nagzira Tiger Reserve (TR)" is often seen in news is located in which of the following state?
- a) Maharashtra
- b) Madhya Pradesh
- c) Chhattisgarh
- d) Uttar Pradesh

ANS: A

Explanation:

Nawegaon-Nagzira Tiger Reserve (NNTR) was notified as 46th tiger reserve of India on 12th December, 2013. Its 5th Tiger reserve of Maharashtra. It is situated in Gondia and Bhandara Districts in the North–Eastern corner of Maharashtra. Gondia district shares common boundaries with the states of Madhya Pradesh & Chhattisgarh on North and Eastern side respectively. Strategically the Tiger Reserve is located in the heart of central Indian Tiger landscape which contributes almost 1/6 of the total tiger population of the country. This area is an excellent abode to almost all major floral and faunal species found in central India. NNTR comprised of the notified area of Nawegaon National Park, Nawegaon Wildlife Sanctuary, Nagzira Wildlife Sanctuary and Koka Wildlife Sanctuary. Except 17.6 ha. land in Nagzira sanctuary, (Nagzira tourism complex) and 251.46 ha of PF in Koka sanctuary, rest has been notified as the Critical Tiger habitat as per Sec. 38 (v) of the WLP (Amendment) Act 2006.

The Nawegaon National Park and Nawegaon wildlife Sanctuary (Nawegaon Block) are adjoining to each other. Both are situated in the Gondia District of Maharashtra. Nagzira, New Nagzira and Koka Wildlife Sanctuaries (Nagzira Block) are adjoining to one another located partly in Gondia and partly in Bhandara district. Both the blocks are separated from each other by Forest area and Non-forest with many villages, farmlands, Highways and Rail lines etc.

Source: Government of Maharashtra

Q.4) Consider the following statements regarding "bryophytes":

- 1. They usually grow in dry places.
- 2. True roots are absent in bryophytes.
- 3. Mostly found in Thar Desert and its surrounding areas.

Which of the statements given above is/are correct?

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

ANS: D

Explanation: Bryophytes: The plant body is differentiated into a small stem and simple leaves, but true roots are absent.

- They usually grow in moist places. E.g. Liverworts, mosses.
- They are the second largest group of green plants in India distributed largely in Eastern Himalaya, North-eastern India, Western Himalaya and the Western Ghats.
- Mosses constitute the major component of Indian bryo-flora followed by liverworts and hornworts.

Source: Shankar

Q.5) Consider the following statements:

- 1. Mosses, ferns, epiphytes, lianas and vines are predominant in these forests.
- 2. Ebony trees predominate in these forests.
- 3. A variety of tropical orchids are found.

The above given statements represents/describes which of the following forest in India?

- a) Tropical deciduous forest
- b) Tropical rain forest region
- c) Desert area
- d) Mountain forest

ANS: B

Explanation: Tropical rain forest region: Extensive grass lands interspersed with densely forested gorges of evergreen vegetation known as shoals occur in the Nilgiris (an offshoot of Western ghats).

• Sholas also occur in Aanaimalai and Palani hills.

- The rain forests of the Western Ghats have dense and lofty trees with much species diversity.
- Mosses, ferns, epiphytes, orchids, lianas and vines, herbs, shrubs make diverse habitat.
- Ebony trees predominate in these forests. A variety of tropical orchids are found.
- Stratification in rain forests is very distinct three horizontal layers are distinguished.

Source: Shankar

Q.6) Which of the following statement is NOT correct about Wildlife Protection Act (WPA), 1972?

- a) It consists of 6 schedule lists, which give varying degrees of protection.
- b) Poaching, smuggling and illegal trade of animals listed in all schedules are prohibited.
- c) Animals listed in schedule 1 and part II of schedule 2 has absolute protection offences under these are prescribed the highest penalties.
- d) Examples of animals listed in schedule 4 are mongooses, vultures, etc.

ANS: B

Explanation: Wildlife Protection Act (WPA), 1972 consists of 6 schedule lists, which give varying degrees of protection.

- Poaching, smuggling and illegal trade of animals listed Schedule 1 to schedule 4 are prohibited.
- Animals listed in schedule 5 are called "vermin" which can be hunted.
- Cultivation, Collection, extraction, trade, etc. of Plants and its derivatives listed in schedule 6 are prohibited.

Source: Envis

Q.7) Which of the following pair (s) is/are NOT correctly matched?

River : Tiger Reserve

Ken River : Panna Tiger Reserve
 Vamsadhara River : Satkosia Tiger Reserve

3. Cauvery River : Kalakad-Mudunthurai Tiger Reserve

Select the correct answer using the code given below:

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

ANS: C

Explanation: Satkosia spreads along the magnificent gorge over the mighty river Mahanadi in Odisha.

- Established in 1976 as a wildlife sanctuary, Satkosia is a paradise of immense scenic charm.
- It is one of the best ecosystems in the country, representing a diverse floral and faunal extravaganza.
 - The name Satkosia originates from two words; sat meaning seven and kos meaning two miles, indicating the length of the gorge as 14 miles or 22 km.
- The area was declared as Satkosia Tiger Reserve in 2007, comprising two adjoining wildlife sanctuaries; the Satkosia Gorge sanctuary and Baisipalli sanctuary. The Reserve is spread over 4 districts like; Angul, Cuttack, Nayagarh and Boudh.

The forests of Panna National Park (Tiger Reserve) along with Ken Gharial Wildlife Sanctuary and adjoining territorial divisions form a significant part of the catchment area of

the 406 km (252 mi) Ken River which runs northeast for about 72 km (45 mi) through the park.

Source: The Hindu

Q.8) Which of the following river is NOT flows through kaziranga national park?

- a) Manas
- b) Brahmaputra
- c) Diphlu
- d) Mora Dhansiri

ANS: A

Explanation: Kaziranga is a vast stretch of tall elephant grass, marshland and dense tropical moist broadleaf forests crisscrossed by four main rivers — Brahmaputra, Diphlu, Mora Diphlu and Mora Dhansiri and has numerous small water bodies.

Source: The Hindu

- **Q.9)** Recently, which of the following Lake is affected by "avian botulism" a neuro-muscular illness caused by a toxin which is produced by a bacterial strain led to mass mortality of birds?
- a) Dal Lake
- b) Kolleru Lake
- c) Sambhar Lake
- d) Chilika Lake

ANS: C

Explanation: The Indian Veterinary Research Institute (IVRI), Bareilly, confirmed avian botulism — a neuro-muscular illness caused by a toxin which is produced by a bacterial strain — as the reason for mass mortality of birds, including migratory species from Northern Asia, at Sambhar Lake in Rajasthan.

- The laboratory tests conducted on the samples of carcasses collected from the lake confirmed the disease infecting the birds, the probability of which was earlier stated by veterinarians in the State.
- The illness, caused by a bacterium called Clostridium botulinum, affected the nervous system of birds, leading to flaccid paralysis in their legs and wings and neck touching the ground.
- More than 18,000 carcasses of birds have been removed from the lake and its catchment area so far, raising concern among environmentalists and ornithologists.
- The scientists at IVRI found the samples infested with maggots of third stage with a clear indication that the avian mortality had occurred over a period of time.

Source: The Hindu

- **Q.10)** Consider the following statements regarding "Asiatic Lion":
- 1. It is found in all districts of Gujarat.
- 2. Asiatic Lions are listed as Threatened under the IUCN Red List.
- 3. Asiatic Lions are protected under Schedule I of Wildlife Protection Act (1972).

Which of the statements given above is/are correct?

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

ANS: C

Explanation: Asiatic lions are found in protected areas and agro-pastoral landscape of Saurashtra, covering nine districts in Gujarat.

- Its current estimated population is 674. India has recorded a 29% increase in its population in the past five years from 523 in 2015 to 674 in 2020.
- Asiatic Lions are listed as 'Endangered' under the IUCN Red List. Asiatic Lions are protected under Schedule I of Wildlife Protection Act (1972).



Environment (Biodiversity conservation)

Q.1) Consider the following statements regarding "phytoplankton":

- 1. They are microscopic plant organisms that live in aquatic environments, both salty and fresh.
- 2. Phytoplankton produces more than 60% of oxygen produced from all plants.
- 3. Their total biomass is greater than plants on land.

Which of the statements given above is/are correct?

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

ANS: D

Explanation: Derived from the Greek words phyto (plant) and plankton (made to wander or drift), phytoplankton are microscopic plant organisms that live in aquatic environments, both salty and fresh.

- Some phytoplanktons are bacteria, some are protists, and most are single-celled plants. Among the common kinds are cyanobacteria, silica-encased diatoms, dinoflagellates, green algae, and chalk-coated coccolithophores.
- Phytoplankton produce more than 60% of oxygen produced from all plants.
- Like land plants, all phytoplankton have chlorophyll to capture sunlight, and they use photosynthesis to turn it into chemical energy.
- They consume carbon dioxide, and release oxygen. All phytoplankton photosynthesize, but some get additional energy by consuming other organisms.
- These micro-algae are present throughout the lighted regions of all the seas and oceans including the Polar Regions.
- Their total biomass is many times greater than that of the total plants on land and they serve as the "pasture grounds" in the aquatic environment.

Source: Shankar

Q.2) Arrange the following in chronological order:

- 1. National Policy for Wildlife Conservation.
- 2. Wildlife Protection Act.
- 3. Project Tiger.

Select the correct answer using the code given below:

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

ANS: A

Explanation: The adoption of a National Policy for Wildlife Conservation in 1970 and the enactment of the Wildlife (Protection) Act in 1972 lead to a significant growth in the protected areas network.

- From 5 national parks and 60 sanctuaries to a network of 669 Protected Areas with geographical area of the country, 4.92%.
- Project Tiger is a tiger conservation programme launched in April 1973 by the Government of India during Prime Minister Indira Gandhi's tenure.

Source: Envis

- Q.3) Which of the following is/are declared by state as protected areas for their adequate ecological, geomorphological and natural significance?
- 1. National Parks
- 2. Wildlife Sanctuaries
- 3. Biosphere reserves

Select the correct answer using the code given below:

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

ANS: B

Explanation: The Wild Life (Protection) Act of 1972 provided for the declaration of certain areas by the State Government as wildlife sanctuaries if the area was thought to be of adequate ecological, geomorphological and natural significance.

The Wild Life (Protection) Act (WPA) of 1972 provided for the declaration of National Parks by the State Government in addition to the declaration of wildlife sanctuaries.

Source: Wildlife Protection Act, 1972

- **Q.4)** Consider the following statements regarding "Conservation Reserves":
- 1. It is bought by amendment to environment protection act in 2003.
- 2. It is an area owned by the State Government adjacent to National Parks and sanctuaries for protecting the landscape, seascape and habitat of fauna and flora.

Which of the statements given above is/are correct?

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

ANS: B

Explanation: Conservation Reserve and Community Reserves are the outcome of Amendments to the Wild life protection act in 2003.

- The Amendment Act of 2003 provided for the creation of a new type of protected area called a Conservation Reserve.
- It is an area owned by the State Government adjacent to National Parks and sanctuaries for protecting the landscape, seascape and habitat of fauna and flora.
- It is managed through a Conservation Reserve Management Committee.

Source: Shankar

Q.5) Consider the following statements:

- 1. Slender loris (primate) found only in the tropical rainforests of Southern India and Sri Lanka.
- 2. The Indian star tortoise found only in scrub forests of India.

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

Explanation: Slender loris (primate) found only in the tropical rainforests of Southern India and Sri Lanka.

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The Indian star tortoise found in scrub forests of India and Sri Lanka.

Source: WWF

Q.6) Which of the following are global biodiversity hottest hotspots?

- 1. Madagascar
- 2. Philippines
- 3. Caribbean

Select the correct answer using the code given below:

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

ANS: D

Explanation: The eight hottest hot spots are:

- 1. Madagascar
- 2. Philippines
- 3. Sundaland
- 4. Brazil's Atlantic Forest
- 5. Caribbean
- 6. Indo-Burma
- 7. Western Ghats/Sri Lanka
- 8. Eastern Arc and Coastal Forests of Tanzania/Kenya

These eight 'hottest hot spots', appear at least three times in the top ten listings for each factor.

Source: ENVIS

Q.7) Consider the following statements project tiger:

- 1. It was launched during Indira Gandhi Prime Ministership.
- 2. State of Madhya Pradesh has highest tiger reserves in India.

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

ANS: C

Explanation: Project Tiger is a tiger conservation programme launched in April 1973 by the Government of India during Prime Minister India Gandhi's tenure.

- The tiger reserves in India are governed by Project Tiger which is administrated by the National Tiger Conservation Authority.
- About 80% of the tigers in the world are found in India.
- The state of Madhya Pradesh (6 tiger reserves) has the highest number of Tiger reserves with a total tiger population of 526.

Source: ENVIS

Q.8) Consider the following statements regarding "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 statements given above is/are correct?

a) 1 only

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

ANS: C

Explanation: 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.

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.

Source: NCERT

Q.9) "Appiko movement" is started in which of the following state?

- a) Tamil Nadu
- b) Himachal Pradesh
- c) Karnataka
- d) Kerala

ANS: C

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.

Source: NCERT

- **Q.10)** "Pameda Wildlife Sanctuary" is recently in news is located in which of the following state?
- a) Madhya Pradesh
- b) West Bengal
- c) Chhattisgarh
- d) Assam

ANS: C

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.
- 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.

Source: The Hindu

Environment Legislations

- **Q.1)** Which of the following schemes are merged under "National Plan for Conservation of Aquatic Eco-Systems (NPCA)"?
- 1. National Wetlands Conservation Programme.
- 2. National Lake Conservation Plan (NLCP).
- 3. National Mission on Conservation of Mangroves.

Select the correct answer using the code given below:

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

ANS: B

Explanation: For conservation of lakes and wetlands, Ministry of Environment, Forests & Climate Change has been implementing two separate Centrally Sponsored Schemes (CSS), namely the National Wetlands Conservation Programme (NWCP) and the National Lake Conservation Plan (NLCP).

- To avoid overlap, promote better synergies and to ensure that conservation/ management works, an integrated scheme NPCA was proposed with the objective of conserving aquatic ecosystems (lakes and wetlands) through implementation of sustainable conservation plans governed with application of uniform policy and guidelines.
- The Cabinet Committee on Economic Affairs (CCEA), in its meeting held on 7th February 2013, has approved the proposal for merger of National Lake Conservation Plan and National Wetlands Conservation Programme into a new scheme 'National Plan for Conservation of Aquatic Eco-Systems' (NPCA).
- The merged scheme to be operational during XII Plan Period at an estimated cost of Rs.900 crore with a funding pattern of 70:30 cost sharing between Central Government and respective State Governments (90:10 for NE States).

Source: National Water Mission

Q.2) "Montreux Record" is often seen in news is related to which of the following?

- a) Mangroves
- b) Coral Reefs
- c) Wetlands
- d) Estuaries

ANS: C

Explanation: Montreux Record is the principal tool under the Ramsar Convention, is a register of wetland sites on the List of Wetlands of International Importance.

- It highlights those sites where adverse changes in ecological character have occurred, are occurring, or are likely to occur as a result of technological developments, pollution or other human interference and which are therefore in need of priority conservation attention.
- It is maintained as part of the Ramsar List.

Source: Ramsar Convention

Q.3) Consider the following statements:

- 1. The Ganga Action Plan was launched by Prime Minister Rajiv Gandhi.
- 2. The National Ganga River Basin Authority (NGRBA) is chaired by Prime Minister.

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

ANS: C

Explanation: The Ganga Action Plan was launched on 14th January 1986 with the main objective of pollution abatement, to improve water quality by interception, diversion and treatment of domestic sewage and toxic and industrial chemical wastes present, from identified grossly polluting units entering in to the river.

- After reviewing the effectiveness of the "Ganga Action Plan", the Government announced the "Mission Clean Ganga" project on 31st December, 2009 with the objective that by 2020, no municipal sewage and industrial waste would be released in the river without treatment, with the total budget of around Rs.15,000 crore.
- The Government also established the National Ganga River Basin Authority (NGRBA), chaired by the Prime Minister, with the objective to ensure effective abatement of pollution and conservation of the river Ganga, by adopting a river basin approach for comprehensive planning and management.

Source: Shankar

Q.4) Which of the following are the components of fly ash?

- 1. Silicon dioxide
- 2. Calcium oxide
- 3. Arsenic
- 4. Plutonium
- 5. Strontium

Select the correct answer using the code given below:

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

ANS: A

Explanation: Ash is produced whenever combustion of solid material takes place.

- Fly ash is one such residue which rises with the gases into the atmosphere.
- Fly ash is a very fine powder and tends to travel far in the air. The ash which does not rise is termed as bottom ash.
- Nearly 73% of India's total installed power generation capacity is thermal, of which 90% is coal-based generation, with diesel, wind, gas, and steam making up the rest.

Composition:

- Aluminum silicate (in large amounts)
- Silicon dioxide (SiO2) and
- Calcium oxide (CaO).

Fly ash particles are oxide rich and consist of silica, alumina, oxides of iron, calcium, and magnesium and toxic heavy metals like lead, arsenic, cobalt, and copper.

Source: Shankar

- **Q.5)** Which of the following pollutants are notified under "National Ambient Air Quality Standards (NAAQS)"?
- 1. Sulphur Dioxide

- 2. Nitrogen Dioxide
- 3. Benzene
- 4. Ozone
- 5. Lead

Select the correct answer using the code given below:

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

ANS: D

Explanation: National Ambient Air Quality Standards (NAAQS) were notified in the year 1982, duly revised in 1994 based on health criteria and land uses.

The NAAQS have been revisited and revised in November 2009 for 12 pollutants, which include

- sulphur dioxide (SO2),
- nitrogen dioxide (NO2),
- particulate matter having size less than 10 micron (PM10),
- particulate matter having size less than 2.5 micron (PM2.5),
- ozone,
- lead,
- carbon monoxide (CO),
- arsenic,
- nickel,
- benzene,
- ammonia, and
- benzopyrene.

Source: The Hindu

Q.6) Which of the following is/are objectives of "Wild Life Protection Act, 1972"?

- 1. Prohibition of hunting
- 2. Establishment of protected areas
- 3. Prohibition of taxidermy
- 4. Management of Zoos

Select the correct answer using the code given below:

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

ANS: D

Explanation: India has been implementing various laws to save the wildlife and the Wildlife Protection Act 1972 is one of them. THE OBJECTIVES ARE AS FOLLOWS:

- Prohibition of hunting
- Protection and management of wildlife habitats
- Establishment of protected areas
- Regulation and control of trade in parts and products derived from wildlife
- Management of zoos
- WLPA is also against taxidermy, which is the preservation of a dead wild animal as a trophy, or in the form of rugs, preserved skins, antlers, horns, eggs, teeth, and nails.

Source: Indian Express

- **Q.7)** Which of the following statements is/are correct about "BioCarbon Fund Initiative for Sustainable Forest Landscape"?
- 1. It is a multilateral fund supported by donor governments.
- 2. It promotes reducing greenhouse gas emissions from the land sector, from deforestation and forest degradation in developing countries (REDD+).

Select the correct answer using the code given below:

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

ANS: C

Explanation: The BioCarbon Fund Initiative for Sustainable Forest Landscapes (ISFL) is a multilateral fund, supported by donor governments and managed by the World Bank. It promotes reducing greenhouse gas emissions from the land sector, from deforestation and forest degradation in developing countries (REDD+), and from sustainable agriculture, as well as smarter land-use planning, policies and practices.

Source: UNCCD

- **Q.8)** Which of the following Acts have been enacted by India for "conservation of the coastal and marine environment"?
- 1. Environment (Protection) Act, 1986.
- 2. Wildlife (Protection) Act 1972.
- 3. National Biodiversity Act, 2002.

Select the correct answer using the code given below:

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

ANS: D

Explanation: The Marine Protected Area Network is a tool for managing natural marine resources for biodiversity conservation and for the well-being of people dependent on the resources.

The **Coastal** Regulation Zone Notification, 1991, National Biodiversity Act, 2002 and the Environment (Protection) Act, 1986 have been enacted by India for conservation of the coastal and marine environment along with the Wildlife (Protection) Act 1972, which also provides for establishment of wildlife protected areas (PAs) by state governments.

Source: Indian Express

- **Q.9)** Which of the following statements is/are correct about "National Parks" in India?
- 1. National Park is defined by state government via notification.
- 2. The state government can fix and alter boundaries of the National Parks with prior consultation and approval with National Board of Wildlife.

Select the correct answer using the code given below:

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

ANS: C

Explanation: National Park is defined by state government via notification. There is no need to pass legislation (act) by the state assembly to declare a National Park.

- The state government can fix and alter boundaries of the National Parks with prior consultation and approval with National Board of Wildlife.
- No human activity is permitted inside the national park except for the ones permitted by the Chief Wildlife Warden of the state under the conditions given in CHAPTER IV, WPA 1972.

Source: Shankar

Q.10) The "Clean Seas Campaign" is often seen in news is launched by which of the following?

- a) World Bank
- b) International Union for Conservation of Nature (IUCN)
- c) World Economic Forum (WEF)
- d) None

ANS: D

Explanation: UN Environment (UNEP) launched Clean Seas (#CleanSeas on social media) in February 2017, with the aim of engaging governments, the general public and the private sector in the fight against marine plastic pollution.

- Over the next five years, we will address the root-cause of marine litter by targeting the production and consumption of non-recoverable and single-use plastic.
- To do this effectively, we need citizens to be aware, engaged and active in addressing the problem in their daily lives and beyond.

Source: UNEP



Environment - Intro

- **Q.1)** "The biome which has grasses with scattered trees and fire resisting thorny shrub" describes which of the following biome?
- a) Tundra
- b) Taiga
- c) Savannah
- d) Desert biome

ANS: C

Explanation: Savannah biome characterized by grasses with scattered trees and fire resisting thorny shrubs.

The fauna include a great diversity of grazers and browsers such as antelopes, buffaloes, zebras, elephants and rhinoceros; the carnivores include lion, cheetah, hyena; and mongoose, and many rodents.

Source: Shankar

- **Q.2)** Consider the following statements regarding "Environmental Information System (ENVIS)":
- 1. It is a central sponsored scheme of environment ministry.
- 2. Aim of the scheme is to integrate country-wide efforts in environmental information collection, collation, storage, retrieval and dissemination through ENVIS websites.

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

ANS: B

Explanation: Environmental Information System (ENVIS), a Central Sector Scheme of the Ministry has been implemented since 1982.

The purpose of the scheme is to integrate country-wide efforts in environmental information collection, collation, storage, retrieval and dissemination through ENVIS websites, which are dedicated to different interesting themes.

Source: ENVIS

- Q.3) Which of the following species are the examples of cetaceans?
- 1. Dolphins
- 2. Crocodiles
- 3. Porpoises
- 4. Whales

Select the correct answer using the code given below:

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

ANS: C

Explanation: Dolphins, Porpoises and whales are called cetaceans. A cetacean is a creature belonging to a group of water living mammals that have no hind limbs and a blowhole for breathing.

Source: Shankar

Q.4) Which of the following is NOT a gaseous biogeochemical cycle?

- a) Nitrogen biogeochemical cycle
- b) Carbon biogeochemical cycle
- c) Calcium biogeochemical cycle
- d) Oxygen biogeochemical cycle

ANS: C

Explanation: Biogeochemical cycles can be classed as gaseous, in which the reservoir is the air or the oceans (via evaporation), and sedimentary, in which the reservoir is the Earth's crust.

- Gaseous cycles include those of nitrogen, oxygen, carbon, and water;
- Sedimentary cycles include those of iron, calcium, phosphorus, and other more earthbound elements.

Source: NCERT

- **Q.5)** In the earth's atmosphere, which of the following have the property of absorbing the heat and contribute to the warming of atmosphere?
- 1. Carbon Dioxide
- 2. Soot
- 3. Water Vapor

Select the correct answer using the code given below:

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

ANS: D

Explanation: Greenhouse gas, any gas that has the property of absorbing infrared radiation (net heat energy) emitted from Earth's surface and reradiating it back to Earth's surface, thus contributing to the greenhouse effect.

- Carbon dioxide, methane, and water vapour are the most important greenhouse gases. (To a lesser extent, surface-level ozone, nitrous oxides, and fluorinated gases also trap infrared radiation.)
- Greenhouse gases have a profound effect on the energy budget of the Earth system despite making up only a fraction of all atmospheric gases.
- Concentrations of greenhouse gases have varied substantially during Earth's history, and these variations have driven substantial climate changes at a wide range of timescales.
- In general, greenhouse gas concentrations have been particularly high during warm periods and low during cold periods.
- These gases have a high capacity for absorbing infrared radiation or occur in significant quantities, whereas others have considerably lower capacities for absorption or occur only in trace amounts.

Source: NCERT

- **Q.6)** Consider the following statements regarding "bioremediation":
- 1. It is the use of living micro-organisms to degrade the environmental contaminants into less toxic forms.

2. It uses naturally occurring bacteria and fungi or virus or plants to degrade or detoxify substances hazardous to human health and the environment.

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

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

ANS: B

Explanation: Bioremediation is the use of living micro-organisms to degrade the environmental contaminants into less toxic forms.

- It uses naturally occurring bacteria and fungi or plants to degrade or detoxify substances hazardous to human health and/or the environment.
- The microorganisms may be indigenous to a contaminated area or they may be isolated from elsewhere and brought to the contaminated site.
- Contaminant compounds are transformed by living organisms through reactions that take place as a part of their metabolic processes.
- Biodegradation of a compound is often a result of the actions of multiple organisms.
- Bioremediation can be effective only where environmental conditions permit microbial growth and activity.
- The application often involves the manipulation of environmental parameters to allow microbial growth and degradation to proceed at a faster rate.

Source: Shankar

Q.7) Consider the following statements:

- 1. Lotic habitats are those existing in relatively fast running streams like springs, rivers and brooks.
- 2. Lentic habitats are represented by the lakes, ponds, and swamps.

Which of the statements above given is/are correct?

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

ANS: C

Explanation: Fresh community consists of an array of organisms depending on the physic-chemical and biological characteristics of the freshwater environment. Freshwater habitats are divided into two major categories:

- Lotic (lotus = washed, or running water): Lotic habitats are those existing in relatively fast running streams, springs, rivers and brooks.
- Lentic (lenis = calm or standing water): Lentic habitats are represented by the lakes, ponds and swamps.

Source: NCERT

Q.8) Consider the following statements regarding "Carbon Credit":

- 1. It is a tradable permit.
- 2. The holder of the credit has the right to emit one ton of carbon dioxide or an equivalent of another greenhouse gas.
- 3. The main goal for the creation of carbon credits is the reduction of emissions of carbon dioxide and other greenhouse gases.

Which of the statements given above is/are correct?

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

ANS: D

Explanation: A carbon credit is a tradable permit or certificate that provides the holder of the credit the right to emit one ton of carbon dioxide or an equivalent of another greenhouse gas.

- The main goal for the creation of carbon credits is the reduction of emissions of carbon dioxide and other greenhouse gases from industrial activities to reduce the effects of global warming.
- Carbon credits are market mechanisms of the minimization of greenhouse gases emission.
- The introduction of carbon credit was ratified in the Kyoto Protocol.
- The Paris Agreement validates the application of carbon credits to reduce emissions of the greenhouse gases and sets the provisions for the further facilitation of the carbon credits markets.

Types of Carbon Credits: There are two types of the carbon credits:

- Voluntary emissions reduction (VER): A carbon offset that is exchanged in the overthe-counter or voluntary market for credits.
- Certified emissions reduction (CER): Emission units (or Carbon credits) created through a regulatory framework with the purpose of offsetting a project's emission. The main difference between the two is that there is a third party certifying body that regulates the CER as opposed to the VER.

Source: Shankar

Q.9) Consider the following statements regarding "Indian State of Forest Report":

- 1. The India State of Forest Report 2019 has been prepared by Forest Survey of India (FSI).
- 2. Tree and Forest cover was increased compared to last assessment.

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

ANS: C

Explanation: The India State of Forest Report 2019 has been prepared by Forest Survey of India (FSI).

- The report is a biennial exercise.
- It assesses the forest and tree cover, bamboo resources, carbon stock and forest fires.
- The forest cover in the country has increased by 3,976 square kilometer in the last two years.
- The tree and forest cover together made up 25.56% of India's area. In the last assessment it was 24.39%.

Source: The Hindu

Q.10) "Living Planet Report" is published by which of the following organization?

a) Global Environment Facility

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- b) IUCN
- c) World Wide Fund for Nature (WWF)
- d) World Economic Forum

ANS: C

Explanation: The World Wide Fund for Nature (WWF) is an international non-governmental organization founded in 1961, working in the field of wilderness preservation, and the reduction of human impact on the environment.

- It was formerly named the World Wildlife Fund, which remains its official name in Canada and the United States.
- WWF aims to "stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.
- The Living Planet Report is published every two years by WWF since 1998; it is based on a Living Planet Index and ecological footprint calculation.
- In addition, WWF has launched several notable worldwide campaigns including Earth Hour and Debt-for-Nature Swap, and its current work is organized around these six areas: food, climate, freshwater, wildlife, forests, and oceans.

Source: The Hindu

Environment (Miscellaneous)

- **Q.1)** Arrange the following acts of environment and biodiversity conservation in chronological order:
- 1. Customs Act.
- 2. Water (Prevention and Control of Pollution) Act.
- 3. Air (Prevention and Control of Pollution) Act.

Select the correct answer using the code given below:

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

ANS: A

Explanation: Important acts related to environment and biodiversity conservation in India are:

- Prevention of Cruelty to Animals Act, 1960.
- Customs Act, 1962.
- Seeds Act, 1966.
- The Patents Act, 1970.
- Wildlife (Protection) Act, 1972.
- Water (Prevention and Control of Pollution) Act, 1974.
- Forest (Conservation) Act, 1980.
- Air (Prevention and Control of Pollution) Act, 1981.

Source: ENVIS

- Q.2) Which of the following plant (s) is/are desert growing?
- 1. Cactus
- 2. Euphorbias
- 3. Sagebrush

Select the correct answer using the code given below:

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

ANS: D

Explanation: The desert flora is drought resistance such as cactus, euphorbias, sagebrush.

Fauna: Reptiles, Small Mammals and birds.

Source: NCERT

Q.3) Consider the following statements regarding energy flow in ecosystem:

- 1. Energy always flows from lower to higher trophic level.
- 2. It never flows in the reverse direction.

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

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

ANS: D

Explanation: Trophic level interaction deals with how the members of an ecosystem are connected based on nutritional needs.

- Energy flows through the trophic levels: from producers to subsequent trophic levels.
- This energy always flows from lower (producer) to higher (herbivore, carnivore etc.) trophic level.
- It never flows in the reverse direction that is from carnivores to herbivores to producers.

Source: NCERT

- Q.4) Litter Earthworms Chicken Hawk is an example of which of the following?
- a) Detritus food chain
- b) Grazing food chain
- c) Both A & B
- d) None

ANS: A

Explanation: Detritus food chain: The detritus food chain includes different species of organisms and plants like algae, bacteria, fungi, protozoa, mites, insects, worms and so on.

- The detritus food chain begins with dead organic material.
- The food energy passes into decomposers and detritivores, which are further eaten by smaller organisms like carnivores.
- Carnivores, like maggots, become a meal for bigger carnivores like frogs, snakes and so on.
- Primary consumers like fungi, bacteria, protozoans, and so on are detritivores which feed on detritus.

Source: Shankar

- **Q.5)** Which of the following pyramid is always upright in nature?
- a) Pyramid of numbers
- b) Pyramid of biomass
- c) Pyramid of energy
- d) All of the above

ANS: C

Explanation: To compare the functional roles of the trophic levels in an ecosystem, an energy pyramid is most suitable.

- An energy pyramid reflects the laws of thermodynamics, with conversion of solar energy to chemical energy and heat energy at each trophic level and with loss of energy being depicted at each transfer to another trophic level.
- Hence the pyramid is always upward, with a large energy base at the bottom.

Source: Shankar

- **Q.6)** Which of the following ways carbon is added to atmosphere in carbon biogeochemical cycle?
- 1. Respiration
- 2. Decomposition
- 3. Photosynthesis

Select the correct answer using the code given below:

a) 1 only

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

ANS: B

Explanation: Carbon is present in the atmosphere, mainly in the form of carbon dioxide (CO2). Carbon cycle involves a continuous exchange of carbon between the atmosphere and organisms.

- Carbon from the atmosphere moves to green plants by the process of photosynthesis, and then to animals.
- By process of respiration and decomposition of dead organic matter it returns back to atmosphere. It is usually a short term cycle.

Source: NCERT

- **Q.7)** "Pokkali" a traditional agriculture method is practiced by which of the following state?
- a) Andhra Pradesh
- b) Assam
- c) Bihar
- d) Kerala

ANS: D

Explanation: Pokkali is a unique saline tolerant rice variety that is cultivated using extensive aquaculture in an organic way in the water-logged coastal regions, spread in about 5000 hectares area in Alappuzha, Thrissur and Ernakulam districts of Kerala in Southern India.

Source: Shankar

- **Q.8)** Which of the following MAB biodiversity hotspots are present in India?
- 1. The Himalayas
- 2. Indo Burma
- 3. The Western Ghats Sri Lanka
- 4. The Sunderland

Select the correct answer using the code given below:

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

ANS: D

Explanation: There are 4 biodiversity hot spots present in India. They are:

- 1. The Himalayas
- 2. Indo-Burma and
- 3. The western Ghats & Sri Lanka
- 4. Sunderland

Source: Shankar

- **Q.9)** Consider the following statements regarding project elephant:
- 1. It was launched in February, 1982 as centrally sponsored scheme to assist states having free ranging populations of wild elephants.
- 2. The Project is being implemented in all states.

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

ANS: D

Explanation: Project Elephant was launched in February, 1992 as centrally sponsored scheme to assist states having free ranging populations of wild elephants and to ensure long term survival of identified viable populations of elephants in their natural habitats.

- The Project is being mainly implemented in 13 States / UTs, viz. Andhra Pradesh, Arunachal Pradesh, Assam, Jharkhand, Karnataka, Kerala, Meghalaya, Nagaland, Orissa, Tamil Nadu, Uttaranchal, Uttar Pradesh and West Bengal.
- Small support is also being given to Maharashtra and Chhattisgarh.
- States are being given financial as well as technical assistance in achieving the objectives of the Project.
- Help is also provided to other states with small populations of elephants for the purpose of census, training of field staff and mitigation of human-elephant conflict.

Source: Shankar

Q.10) "Sukhna Lake" is recently in news is located in which of the following city?

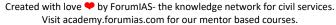
- a) Bangalore
- b) Chennai
- c) Lucknow
- d) Chandigarh

ANS: D

Explanation: The Punjab and Haryana High Court has declared Sukhna Lake legal entity and has ordered demolition of legal/unauthorized constructions in its catchment area.

- Sukhna Lake in Chandigarh is a reservoir at the foothills (Shivalik hills) of the Himalayas.
- This lake was created in 1958 by Le Corbusier and the Chief Engineer P L Verma by damming the Sukhna Choe, a seasonal stream coming down from the Shivalik Hills.
- The lake is a sanctuary for many exotic migratory birds like the Siberian duck, storks and cranes during the winter months.

Source: The Hindu



Environmental Organisations

- **Q.1)** Consider the following statements regarding "The Indian Network on Climate Change Assessment (INCCA)":
- 1. It was launched at CoP 21 of UNFCCC in 2015.
- 2. It was launched to assist the countries who are willing to join International Solar Alliance (ISA).

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

ANS: D

Explanation: The Indian Network on Climate Change Assessment (INCCA) was launched in October 2009 by the Ministry of Environment and Forests (MoEF) in an effort to promote domestic research on climate change, and build on the country's climate change expertise.

- INCCA is a network-based programme of the MoEF, which consists of over 120 institutions and over 250 scientists country wide is aimed at bringing in more science-based policy-making, based on measurements, monitoring and modeling.
- Reports prepared by the INCCA will form a part of India's National Communication (Nat Com) to the United Nations Framework Convention on Climate Change (UNFCCC).

Source: Shankar

- **Q.2)** Indian government created National Communications (NATCOM) to implement the provisions of which of the following?
- a) UNFCCC
- b) UNCCD
- c) Kyoto Protocol
- d) Montreal Protocol

ANS: A

Explanation: In pursuance of the implementation of the provisions of the Convention, India's Initial National Communication (NATCOM) to the UNFCCC has been initiated in 2002 funded by the Global Environment Facility under its enabling activities programme through the United Nations Development Programme, New Delhi.

Source: Shankar

- **Q.3)** "Joint Implementation and Clean Development Mechanism" are often seen in news is related to which of the following?
- a) UNCBD
- b) Kyoto Protocol
- c) UNEP
- d) Montreal Protocol

ANS: B

Explanation: The Kyoto Protocol is made up of essential architecture that has been built and shaped over almost two decades of experience, hard work and political will. The beating heart of KP is made up of:

1. Reporting and verification procedures;

- 2. Flexible market-based mechanisms, which in turn have their own governance procedures; and
- 3. A compliance system.

The Kyoto Flexible Market Protocol mechanisms:

- Joint Implementation (JI)
- The Clean Development Mechanism (CDM)
- Emission Trading

Source: Shankar

- Q.4) Consider the following statements regarding "Global Environment Facility (GEF)":
- 1. It was established in 1991.
- 2. It was established by World Bank in consultation with UNEP and UNDP. 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

ANS: C

Explanation: The GEF was established in 1991 by the World Bank in consultation with the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP), to provide funding to protect the global environment.

Source: GEF

- Q.5) Which of the following famous organization logo is a Giant Panda?
- a) World Wildlife Fund or World Wide Fund for Nature (WWF)
- b) International Union for Conservation of 'Nature and Natural Resources (IUCN)
- c) United Nations Educational, Scientific and Cultural Organization (UNESCO)
- d) United Nations Environment Programme (UNEP)

ANS: A

Explanation: The inspiration came from Chi-Chi: a giant panda that had arrived at the London Zoo in the year 1961, when WWF was being created. Aware of the need for a strong, recognizable symbol that would overcome all language barriers, WWF's founders agreed that the big, furry animal with her appealing, black-patched eyes would make an excellent logo.

Source: Shankar

- **Q.6)** Which of the following are the focal areas of Global Environment Facility (GEF) for climate finance?
- 1. Biological diversity
- 2. Climate change
- 3. International Waters
- 4. Land degradation
- 5. Persistent Organic Pollutants (POP's)

Select the correct answer using the code given below:

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

ANS: D

Explanation: The GEF's governance, operational, financial and administrative oversight procedures are set out in the Instrument for the Establishment of the Restructured Global Environment Facility, which was adopted in 1994 and subsequently amended in 2002 (GEF Instrument). The GEF now has six focal areas:

- biological diversity;
- climate change;
- international waters;
- land degradation, primarily desertification and deforestation;
- ozone layer depletion; and
- Persistent organic pollutants.

Source: GEF

- **Q.7)** Inter-Governmental Panel on Climate Change (IPCC) is often seen in news was established by?
- a) UNEP, WMO & GEF
- b) UNEP & WMO
- c) GEF & UNEP
- d) UNDP & WMO

ANS: B

Explanation: The UN General Assembly adopted a resolution, in December 1988, on the subject and endorsed the UNEP/ WMO proposal for the setting up of the Inter-Governmental Panel on Climate Change (IPCC).

It was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) in 1988 to provide the governments of the world with a clear scientific view of what is happening to the world's climate.

Source: Shankar

- **Q.8)** Which of the following institution (s) is/are collaborated to establish UN REDD programme?
- 1. UNEP
- 2. FAO
- 3. UNDP

Select the correct answer using the code given below:

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

ANS: D

Explanation: Three UN Agencies – United Nations Environment Programme (UNEP), United Nations Development Programme (UNDP) and Food and Agriculture Organization of the United Nations (FAO) – have collaborated in the establishment of the UN-REDD programme, a multi-donor trust fund that allows donors to pool resources and provide funding with the aim of significantly reducing global emissions from deforestation and forest degradation in developing countries.

Source: Shankar

- **Q.9)** Which of the following convention provides the mechanisms to develop the International Standards for Phyto-sanitary 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).

ANS: D

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 Phyto-sanitary 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).

Source: UN CBD

- Q.10) Consider the following statements regarding India Biodiversity Awards:
- 1. It was launched in 2012 to recognize excellence in biodiversity governance across the country.
- 2. It was launched by Ministry of Environment with the help of UNEP.

Which of statements given above is/are correct?

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

ANS: A

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.

Source: The Hindu

- **Q.11)** Which of the following convention is formed to control of trans-boundary movements of hazardous waste and their disposal?
- a) Basel Convention
- b) Rotterdam Convention
- c) Stockholm Convention
- d) Vienna Convention

ANS: A

Explanation: The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was adopted on 22 March 1989 by the Conference of Plenipotentiaries in Basel, Switzerland, in response to a public outcry following the discovery, in the 1980s, in Africa and other parts of the developing world of deposits of toxic wastes imported from abroad.

Source: Basel Convention

Q.12) MARPOL Convention is related to which of the following?

- a) Sustainable use of marine resources
- b) Development of renewable energy on sea shores
- c) Prevention of pollution of the marine environment by ships
- d) All of the above

ANS: C

Explanation: The International Convention for the Prevention of Pollution from Ships (MARPOL) is the main international convention covering prevention of pollution of the marine environment by ships from operational or accidental causes.

- The MARPOL Convention was adopted on 2 November 1973 at IMO. The Protocol of 1978 was adopted in response to a spate of tanker accidents in 1976-1977.
- As the 1973 MARPOL Convention had not yet entered into force, the 1978 MARPOL Protocol absorbed the parent Convention. The combined instrument entered into force on 2 October 1983.
- In 1997, a Protocol was adopted to amend the Convention and a new Annex VI was added which entered into force on 19 May 2005. MARPOL has been updated by amendments through the years.
- The Convention includes regulations aimed at preventing and minimizing pollution from ships both accidental pollution and that from routine operations and currently includes six technical Annexes.

Source: Shankar

Q.13) Which of the following activities carried out by Wildlife Institute of India (WII)?

- 1. Training
- 2. Research
- 3. Publicity
- 4. Consultancy services

Select the correct answer using the code given below:

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

ANS: D

Explanation: Build up scientific knowledge on wildlife resources. Train personnel at various levels for conservation and management of wildlife.

- Carry out research relevant to management including the development of techniques appropriate to Indian conditions.
- Provide information and advice on specific wildlife management problems.
- Collaborate with international organizations on wildlife research, management and training.

- Develop as a regional centre of international importance on wildlife and natural resource conservation.
- Publicity and consultancy services

Source: Shankar

- Q.14) Which of the following convention is related to Persistent Organic Pollutants?
- a) Basel convention
- b) Paris convention
- c) Stockholm convention
- d) Rotterdam convention

ANS: C

Explanation: The Stockholm Convention on Persistent Organic Pollutants is a global treaty to protect human health and the environment from chemicals that remain intact in the environment for long periods, become widely distributed geographically, accumulate in the fatty tissue of humans and wildlife, and have harmful impacts on human health or on the environment.

- Exposure to Persistent Organic Pollutants (POPs) can lead to serious health effects including certain cancers, birth defects, dysfunctional immune and reproductive systems, greater susceptibility to disease and damages to the central and peripheral nervous systems.
- Given their long range transport, no one government acting alone can protect its citizens or its environment from POPs.
- In response to this global problem, the Stockholm Convention, which was adopted in 2001 and entered into force in 2004, requires its parties to take measures to eliminate or reduce the release of POPs into the environment.

Source: Stockholm Convention

Q.15) Mangroves For the Future (MFF) was an initiative of which of the following institution?

- a) IUCN
- b) World Bank
- c) UNEP
- d) GEF

ANS: A

Explanation: The devastation caused by the Indian Ocean tsunami of December 2004 laid bare the vital link between coastal ecosystems and human livelihoods.

- It was United States President Bill Clinton's vision that rebuilding in tsunami-hit areas should improve natural infrastructure and strengthen resilience against future natural disasters.
- In response to this vision, IUCN (International Union for Conservation of Nature) and the United Nations Development Programme (UNDP) developed Mangroves for the Future in 2006.
- Since then, MFF has grown to include eight institutional partners, plus a growing number of countries.

Source: Shankar

Q.16) Which state in India deployed artificial reefs to protect the Islands?

- a) Tamil Nadu
- b) Andhra Pradesh

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- c) Karnataka
- d) Gujarat

ANS: A

Explanation: Sinking islands may become a reality with sea level rise and climate change in decades to come.

- Tamil Nadu has hit upon a novel idea to protect such islands on its coast deployment of artificial reefs near vulnerable islands.
- Artificial reefs, made of concrete, have been found to be capable of preventing further erosion of ecologically sensitive islands and also regenerate coral biodiversity in the Gulf of Mannar region.
- Vaan is one of the 21 islands in the Gulf of Mannar, which was declared marine biodiversity park in 1986.
- Indiscriminate mining of coral and use of destructive fishing practices in the past few decades have fully submerged two of the islands while Vaan was on the verge of submergence when the project began in 2015.
- Its area had been reduced from 16 hectares in 1986 to 2 hectares in 2014.

Source: The Hindu

Q.17) Consider the following statements regarding "Estuarine Biology Regional Centre (EBRC)":

- 1. India has more than 20 EBRCs.
- 2. Primary objective of this centre is to conduct investigations on faunal diversity of estuaries only.

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

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

ANS: D

Explanation: Estuarine Biology regional centre, Gopalpur-on-sea, Ganjam is one of the sixteen regional Centre of Zoological Survey of India, Ministry of Environment, Forest and Climate change, Govt of India established in 1980 during the 6th five year plan of Govt of India.

The Primary objective of this centre is to conduct investigations on faunal diversity of estuaries, backwaters, lagoons and mangrove ecosystem along the east and west coast of India.

Source: ENVIS

Q.18) Consider the following statements regarding "Wetlands International":

- 1. It is an inter-governmental organization to protect wetlands.
- 2. Luc Hoffmann Medal was presented by Wetlands International for Wetland Science and Conservation

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

ANS: A

Explanation: Wetlands International is the global not-for-profit organization dedicated to the conservation and restoration of wetlands.

- Wetlands are the source of water that supports all forms of life.
- Despite our efforts to promote their importance, loss and damage to wetlands and their biodiversity continues.
- Our vision is a world where wetlands are treasured and nurtured for their beauty, the life they support and the resources they provide.
- The Wetlands International Luc Hoffmann Medal for Wetland Science and Conservation is awarded every triennium to honor Dr Luc Hoffmann, one of the inspirational and far-sighted founders of Wetlands International.

Source: Shankar

Q.19) In which year the Government of India enacted the Disaster Management Act, which envisaged the creation of National Disaster Management Authority (NDMA)?

- a) 2001
- b) 2003
- c) 2005
- d) 2007

ANS: C

Explanation: The Government of India (GOI), in recognition of the importance of Disaster Management as a national priority, set up a High-Powered Committee (HPC) in August 1999 and a National Committee after the Gujarat earthquake, for making recommendations on the preparation of Disaster Management plans and suggesting effective mitigation mechanisms

- The Tenth Five-Year Plan document also had, for the first time, a detailed chapter on Disaster Management.
- The Twelfth Finance Commission was also mandated to review the financial arrangements for Disaster Management.
- On 23 December 2005, the Government of India enacted the Disaster Management Act, which envisaged the creation of National Disaster Management Authority (NDMA), headed by the Prime Minister, and State Disaster Management Authorities (SDMAs) headed by respective Chief Ministers, to spearhead and implement a holistic and integrated approach to Disaster Management in India.

Source: Shankar

Q.20) Global Environment Outlook is published by which of the following Institution?

- a) UNEP
- b) WEF
- c) World Bank
- d) UNFCCC

ANS: A

Explanation: The Global Environment Outlook (GEO) is often referred to as UN Environment's flagship environmental assessment. The first publication was in 1997 and was originally requested by Member States.

• It is a flagship report because it fulfills the core functions of the organization, which date back to the UN General Assembly resolution that established the UN Environment Programme in 1972.

- The Global Environment Outlook (GEO) is a consultative and participatory process to prepare an independent assessment of the state of the environment, the effectiveness of the policy response to address these environmental challenges and the possible pathways to be achieve various internationally agreed environmental goals.
- The process also builds capacity for conducting integrated environmental assessments and reporting on the state, trends and outlooks of the environment.
- The Global Environment Outlook (GEO) is also a series of products that informs environmental decision-making for not only governments but also various stakeholders such as the youth, businesses and local governments and aims to facilitate the interaction between science and policy.



Climate Change

Q.1) Which of the following is/are the sources of methane?

- 1. Wetlands
- 2. Oceans
- 3. Volcanoes

Select the correct answer using the code given below:

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

ANS: D

Explanation: Methane (CH4) is emitted by natural sources such as wetlands, as well as human activities such as leakage from natural gas systems and the raising of livestock. Smaller sources include termites, oceans, sediments, volcanoes, and wildfires.

Source: Shankar

Q.2) Consider the following statements regarding "fluorinated gases":

- 1. They have very high global warming potentials (GWPs) relative to other greenhouse gases.
- 2. They are removed from the atmosphere only when they are destroyed by sunlight in the far upper atmosphere.

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

ANS: C

Explanation: Fluorinated gases are emitted through a variety of industrial processes such as aluminum and semiconductor manufacturing & Substitution for Ozone-Depleting Substances.

- Many fluorinated gases have very high global warming potentials (GWPs) relative to other greenhouse gases. Fluorinated gases are well-mixed in the atmosphere, spreading around the world after they're emitted.
- Fluorinated gases are removed from the atmosphere only when they are destroyed by sunlight in the far upper atmosphere. In general, fluorinated gases are the most potent and longest lasting type of greenhouse gases emitted by human activities.

Source: Shankar

Q.3) Which of the following statement is NOT correct about black carbon?

- a) Black carbon warms the Earth by absorbing heat in the atmosphere and by reducing albedo.
- b) Black carbon disrupts cloudiness and monsoon rainfall and accelerates melting of mountain glaciers such as the Hindu Kush-Himalayan glaciers.
- c) Black carbon stays in the atmosphere for years.
- d) Both A & C.

ANS: C

Explanation: Black carbon (BC) is a solid particle or aerosol, (though not a gas) contributes to warming of the atmosphere.

- Black carbon, commonly known as soot, is a form of particulate air pollutant, produced from incomplete combustion.
- It consists of pure carbon in several linked forms. Black carbon stays in the atmosphere for only several days to weeks.
- Thus the effects of BC on the atmospheric warming and glacier retreat disappear within months of reducing emissions.

Source: Shankar

Q.4) Arrange the following greenhouse gases according to their global warming potential (GWP) in ascending order:

- 1. Methane
- 2. Carbon Dioxide
- 3. Nitrous Oxide

Select the correct answer using the code given below:

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

ANS: C Explanation:

GWP & Lifetime of Green House Gases:

S. No	GAS	GWP (100-year)	LIFETIME (years)
1	Carbon di oxide	1	100
2	Methane	21	12
3	Nitrous oxide	310	120
4	Hydro fluoro carbons (HFCs)	140-11,700	1-270
5	Perfluoro carbons (PFCs)	6,500-9,200	800-50,000
6	Sulfur hexafluoride (SF6)	23,900	3,200

Q.5) Consider the following statements:

- 1. Oceans are a significant reservoir for Carbon Dioxide.
- 2. Ocean acidification is the change in ocean chemistry increasing of ocean pH.

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

ANS: A

Explanation: Oceans are an important reservoir for CO2, absorbing a significant quantity of it (one-third) produced by anthropogenic activities and effectively buffering climate change.

Ocean acidification is the change in ocean chemistry – lowering of ocean pH (i.e.
increase in concentration of hydrogen ions) driven by the uptake of carbon
compounds by the ocean from the atmosphere.

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• As the uptake of atmospheric carbon dioxide by the ocean increases, the concentration of hydrogen ions in the ocean increases, the concentration of carbonate ions decreases, the pH of the oceans decreases and the oceans become less alkaline – this process is known as ocean acidification.

Source: Shankar

- **Q.6)** "Coastal waters are also affected by excess nutrient inputs, mostly nitrogen, from agriculture, fertilizers and sewage" describes which of the following?
- a) Eutrophication
- b) Bio-magnification
- c) Bio-accumulation
- d) Ocean Acidification

ANS: A

Explanation: Coastal waters are also affected by excess nutrient inputs, mostly nitrogen, from agriculture, fertilizers and sewage.

The resulting eutrophication leads to large plankton blooms, and when these blooms collapse and sink to the sea bed the subsequent respiration of bacteria decomposing the algae leads to a decrease in sea water oxygen and an increase in CO2 (a decline in pH).

Source: Shankar

- Q.7) Consider the following statements regarding "upwelling zones":
- 1. Surface Coastal regions periodically experience upwelling events where deeper ocean water circulates onto continental shelves and near-shore areas.
- 2. This exposes the productive upper ocean ecosystems to colder water containing more nutrients & more carbon dioxide.

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

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

ANS: D

Explanation: UPWELLING: Surface Coastal regions periodically experience upwelling events where deeper ocean water circulates onto continental shelves and near-shore areas.

- This exposes the productive upper ocean ecosystems to colder water containing more nutrients & more CO2.
- As ocean acidification makes the upper oversaturated layer of sea water shallower each year, these natural upwelling events will more often cause under-saturated water to well up and flow to the shore.
- Coastal marine organisms that form shells are unaccustomed to such events, and periodic exposures to these significantly different conditions may affect these communities.

Source: Shankar

- **Q.8)** The term "paraquat poisoning" is in news is related to which of the following?
- a) Pesticide
- b) Fungicide
- c) Herbicide
- d) Insecticide

ANS: C

Explanation: The VIMSAR, a major public healthcare center for western Odisha and parts of Chhattisgarh and Jharkhand, has many deaths cases of farmers, since September 2017.

- The reason behind these deaths is the consumption of Paraquat a herbicide used in agricultural fields.
- Paraquat is a toxic chemical that is widely used as an herbicide (plant killer), primarily for weed and grass control.

Source: Indian Express

- **Q.9)** Recently, which of the following "International Organization/Bank" has announced that it would stop funding fossil fuel projects at the end of 2021?
- a) International Monetary Fund
- b) World Bank
- c) European Investment Bank
- d) AIIB

ANS: C

Explanation: The European Investment Bank said that it would stop funding fossil fuel projects at the end of 2021, in a landmark decision.

- The ban on funding comes into effect a year later than originally proposed after lobbying by European Union member states.
- Under the new policy, energy projects applying for EIB funding will need to show they can produce one kilowatt hour of energy while emitting less than 250 grams of carbon dioxide, a move which bans traditional gas-burning power plants.
- Gas projects are still possible, but would have to be based on what the bank called "new technologies," such as carbon capture and storage, combining heat and power generation or mixing in renewable gases with the fossil natural gas.
- The European Commission has only an observer role on the EIB board, but the powerful EU executive body has much sway and holds the power to cast a deciding vote at a deadlock between the bank's current 28 shareholders, the EU member states.
- There was no need for that as the bank said that members representing 90% of its capital had approved the new energy lending policy.
- The EIB, the biggest multilateral lender in the world, has ambitious goals on sustainable finance.

Source: The Hindu

- **Q.10)** The words "SWAS, STAR and SAFAL" is often seen in news is related to which of the following?
- a) Bio-pesticides
- b) Bio-fertilizers
- c) Air purifying machines
- d) Green crackers

ANS: D

Explanation: 'Green' crackers have a small shell size compared to traditional crackers.

- They are produced using less harmful raw materials and have additives which reduce emissions by suppressing dust.
- Green crackers don't contain banned chemicals such as lithium, arsenic, barium and lead.

• They are called Safe Water Releaser (SWAS), Safe Thermite Cracker (STAR) and Safe Minimal Aluminium (SAFAL) crackers.

Green crackers release water vapour and don't allow the dust particles to rise. They are designed to have 30% less particulate matter pollution.

Source: The Hindu



Climate Change & Mitigation Strategies

Q.1) "Saturation Horizon" mechanism is related to which of the following?

- a) Ocean acidification
- b) Global Warming
- c) Land degradation
- d) Shifting of ITCZ

ANS: A

Explanation: Deep, cold ocean waters are naturally under saturated with carbonate ions causing the shells of most calcifying organisms to dissolve.

- Surface waters are over saturated with carbonate ions and do not readily dissolve shells of calcifying organisms.
- The saturation horizon is the level below which calcium carbonate minerals undergo dissolution.
- Those organisms that can survive below the saturation horizon do so due to special mechanisms to protect their calcium carbonate from dissolving.
- As ocean acidification causes this horizon to rise vertically in the water column so more and more calcifying organisms will be exposed to under saturated water and thus vulnerable to dissolution of their shells and skeletons.
- The saturation horizon of calcite occurs at a greater ocean depth than that for aragonite, but both horizons have moved closer to the surface presently when compared to the 1800s.

Source: Shankar

Q.2) Consider the following statements regarding "Ozone":

- 1. It is an allotrope of oxygen consisting of three atoms of oxygen.
- 2. It is only found in the stratosphere.

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

ANS: A

Explanation: Ozone is a natural gas; it is an allotrope of oxygen consisting of three atoms of oxygen bound together in a non-linear fashion. The chemical symbol of ozone is O3.

- It is found in two different layers of the atmosphere. Ozone in the troposphere is "bad" because it dirties the air and helps to form smog, which is not good to breathe.
- Ozone in the stratosphere is "good" because it protects life on Earth by absorbing some of the sun's harmful Ultra Violet (UV) rays.
- The ozone layer is very important because the configuration of the ozone molecule and its chemical properties are such that ozone efficiently absorbs ultraviolet light, thus acting like a sun-screen.

Source: Shankar

Q.3) Chloroflourocarbons (CFCs) are used in which of the following?

- 1. Refrigerators
- 2. Foaming agents
- 3. Freezing foods

Select the correct answer using the code given below:

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

ANS: D

Explanation: CFCs molecules are made up of chlorine, fluorine and carbon. They are used as refrigerants, propellants in aerosol sprays, foaming agents in plastic manufacturing, fire extinguishing agents, solvents for cleaning electronic and metallic components, for freezing foods etc.

Two-thirds of CFC is used as refrigerants while one-third is used as blowing agents in foam insulation products.

Source: Shankar

Q.4) "The Umheher technique" is related to which of the following?

- a) Ozone measurement
- b) Global warming potential measurement
- c) Sea level rise measurement
- d) Glaciers measurement

ANS: A

Explanation: The Umheher technique: the most common measure of total ozone abundance is the Dobson unit (named after the pioneering atmospheric physical Gordon Dobson) which is the thickness of the ozone column (compressed at Standard Temperature and Pressure (STP)) in milli-centimeters. At STP one Dobson unit is equal to 2.69x1020 molecules per square meter.

Source: Shankar

- Q.5) Which of the statement is NOT correct about impact of climate change?
- a) Moderate warming i.e. increase of 1 to 3°C in mean temperature, is expected to benefit crop yields in temperate regions.
- b) In lower latitudes in seasonally dry tropics, even moderate temperature increases (1 to 2°C) are likely to have negative impacts for major cereal crops.
- c) Warming of more than 3°C is expected to have negative effect on production in all regions.
- d) None.

ANS: D

Explanation: Climate Change can affect crop yield as well as the types of crops that can be grown in certain areas, by impacting agricultural inputs such as water for irrigation, amounts of solar radiation that affect plant growth, as well as the prevalence of pests.

- Rise in temperatures caused by increasing greenhouse gases is likely to affect crops differently from region to region.
- For example, moderate warming (increase of 1 to 3°C in mean temperature) is expected to benefit crop yields in temperate regions, while in lower latitudes especially seasonally dry tropics, even moderate temperature increases (1 to 2°C) are likely to have negative impacts for major cereal crops.
- Warming of more than 3°C is expected to have negative effect on production in all regions.

Source: Shankar

- **Q.6)** Which of the following is/are examples of carbon sinks?
- 1. Oceans
- 2. Unmineable mines
- 3. Soil

Select the correct answer using the code given below:

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

ANS: D

Explanation: Carbon capture and storage, also known as CCS or carbon sequestration, describes the technologies designed to tackle global warming by capturing CO2 at power stations, industrial sites or even directly from the air and permanently storing it underground.

Carbon sequestration describes long-term storage of carbon dioxide or other forms of carbon to either mitigate or defer global warming. Carbon sequestration may be carried out by pumping carbon into 'carbon sinks'— an area that absorbs carbon.

- Natural sinks Oceans, forests, soil etc.
- Artificial sinks Depleted oil reserves, unmineable mines, etc.

Source: Shankar

- Q.7) Consider the following statements regarding "Carbon Offset":
- 1. Carbon offsets are credits for reductions in greenhouse gas emissions.
- 2. Carbon offsets are quantified and sold in metric tons of carbon dioxide equivalent (CO2e). Which of the statements given above is/are NOT correct?
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

ANS: D

Explanation: Carbon offsets are credits for reductions in greenhouse gas emissions made at another location, such as wind farms which create renewable energy and reduce the need for fossil-fuel powered energy.

- Carbon offsets are quantified and sold in metric tonnes of carbon dioxide equivalent (CO2e).
- Buying one tonne of carbon offsets means there will be one less tonne of carbon dioxide in the atmosphere than there would otherwise have been.

Source: Shankar

- **Q.8)** Which of the following initiatives are covered under the National Mission for Enhanced Energy Efficiency (NMEEE)?
- 1. Perform Achieve and Trade
- 2. Market Transformation for Energy Efficiency
- 3. Bureau of Energy Efficiency
- 4. Framework for Energy Efficient Economic Development (FEEED)

Select the correct answer using the code given below:

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

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d) 1, 2, 3 and 4

ANS: C

Explanation: The National Mission for Enhanced Energy Efficiency (NMEEE), which seeks to strengthen the market for energy efficiency by creating conducive regulatory and policy regime.

- NMEEE has been envisaged to foster innovative and sustainable business models to the energy efficiency sector.
- The NMEEE seeks to create and sustain markets for energy efficiency in the entire country which will benefit the country and the consumers".

Four New Initiatives to Enhance Energy Efficiency:

- Perform Achieve and Trade
- Market Transformation for Energy Efficiency
- Energy Efficiency Financing Platform (EEP)
- Framework for Energy Efficient Economic Development (FEEED)

Source: Shankar

Q.9) "Global Animal Protection Index" is released by which of the following institute?

- a) World Economic Forum
- b) UNEP
- c) World Animal Protection
- d) FAO

ANS: C

Explanation: India is one of the better-performing countries in the global Animal Protection Index 2020, created by international animal welfare charity, World Animal Protection.

- The Animal Protection Index (API) aims to showcase where countries are doing well, and where they fall short on animal welfare policy and legislation, so they can take steps to improve.
- The index ranks countries from A (being the highest score) to G (being the weakest score) according to their policy and legislation.
- India has attained a C ranking in the index, along with countries like New Zealand, Mexico, France, and Spain.

Source: The Hindu

Q.10) Which of the following is/are principle agents of Acid rain?

- 1. Sulfuric Acid
- 2. Methane
- 3. Nitric Acid

Select the correct answer using the code given below:

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

ANS: C

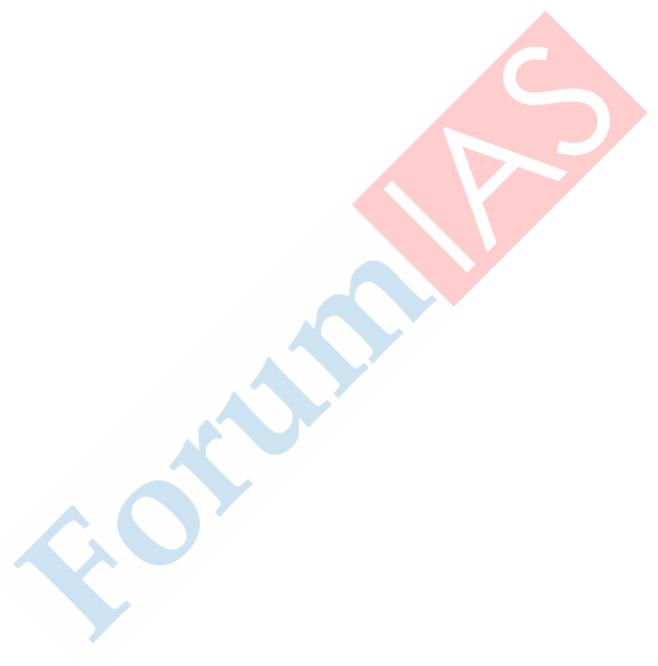
Explanation: The term 'acid rain' refers to the deposition of wet or dry acidic materials from the atmosphere on the earth's surface.

 Although most conspicuously associated with rainfall, the pollutants may fall on the earth's surface either in the form of snow, sleet, hail or fog or in the dry form of gases or particulate matter.

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- Sulphuric acid and nitric acid is considered as the principal agents responsible for acid rain. But the major culprits are human beings.
- Smokes emitted from the industries are the major source of sulphur dioxide whereas smokes emitted from the motor vehicle is the major source of nitrogen oxide.
- These emissions mixed with atmospheric moisture from the sulphuric acid and nitric acids which, sooner or later precipitate on earth in various form.

Source: NCERT



Environment Impact Assessment & Ecosystem

- Q.1) Which of the following is/are the impacts of sand mining in India?
- 1. Changes in channel course.
- 2. Deepening of rivers and estuaries.
- 3. Enlargement of river mouths.

Select the correct answer using the code given below:

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

ANS: D

Explanation: Sand acts as an aquifer, and as a natural carpet on the bottom of the river.

- Stripping this layer leads to downstream erosion, causing changes in channel bed and habitat type, as well as the deepening of rivers and estuaries, and the enlargement of river mouths.
- As the river system lowers, local groundwater is affected, which leads to water scarcities aggravating agriculture and local livelihoods.

Source: Shankar

Q.2) "Bharathappuzha River" is often seen in news is flows in which of the following state?

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

ANS: A

Explanation: Bharathappuzha, also known as the Nila or Ponnani River, is a river in India in the state of Kerala.

- With a length of 209 km, it is the second longest river in Kerala after the Periyar.
- Nila has groomed the culture and life of South Malabar part of Kerala.
- Despite numerous prohibitions and regulations, sand mining continues rapidly on the riverbed of the Bharathapuzha in kerala.
- Water tables have dropped dramatically and a land once known for its plentiful rice harvest now faces scarcity of water.

Source: The Hindu

Q.3) "Colony Collapse Disorder" is related to which of the following?

- a) Butterflies
- b) Honey Bees
- c) Rhinoceros
- d) Elephants

ANS: B

Explanation: Colony Collapse Disorder (CCD) is a new tag-name presently being given to a condition that is characterized by an unexplained rapid loss of a Bee colony's adult population.

• Sudden loss of a colony's worker bee population with very few dead bees found near the colony.

- The queen and brood (young) remained, and the colonies had relatively abundant honey and pollen reserves.
- But hives cannot sustain themselves without worker bees and would eventually die.
- This combination of events resulting in the loss of a bee colony has been called Colony Collapse Disorder (CCD).

Source: Shankar

- **Q.4)** Which Article of Indian Constitution states that the State shall endeavor to protect and improve the environment and to safeguard the forests and wild life of the country?
- a) Article 41 A
- b) Article 47 A
- c) Article 48 A
- d) Article 51 A

ANS: C

Explanation: Article 48A (DPSP) of the Indian Constitution, it is stated that the State shall endeavor to protect and improve the environment and to safeguard the forests and wild life of the country.

Source: Indian Constitution

- **Q.5)** Which of the following species is/are covered under schedule 1 of Wild Life (Protection) Act, 1972?
- 1. Sharks
- 2. Ravs
- 3. Skates

Select the correct answer using the code given below:

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

ANS: D

Explanation: With a view to stop the inhuman hunting of sharks and to enable the enforcement agencies to monitor the illegal hunting/poaching of the species of Sharks, Rays and Skates (Elasmobranchs) listed in Schedule I of the Wild Life (Protection) Act, 1972, Minister of for Environment and Forests has approved a policy for prohibiting the removal of shark fins on board a vessel in the sea.

Source: Shankar

- **Q.6)** "Environment Impact Assessment" in India is statutorily backed by which of the following Act?
- a) The Environment Protection Act
- b) The Water (Prevention and Control of Pollution) Act
- c) The Air (Prevention and Control of Pollution) Act
- d) Forest Conservation Act

ANS: A

Explanation: UNEP defines Environmental Impact Assessment (EIA) as a tool used to identify the environmental, social and economic impacts of a project prior to decision-making.

- It aims to predict environmental impacts at an early stage in project planning and design, find ways and means to reduce adverse impacts, shape projects to suit the local environment and present the predictions and options to decision-makers.
- Environment Impact Assessment in India is statutorily backed by the Environment Protection Act, 1986 which contains various provisions on EIA methodology and process.

Source: The Hindu

- **Q.7)** Which of the following greenhouse gas/gases included in the Global Carbon project?
- 1. Carbon Dioxide
- 2. Methane
- 3. Nitrous Oxide

Select the correct answer using the code given below:

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

ANS: D

Explanation: The Global Carbon Project (GCP) is an organization seeks to quantify global greenhouse gas emissions and their causes.

Established in 2001, its projects include global budgets for three dominant greenhouse gases

- Carbon dioxide,
- Methane.
- Nitrous oxide

GCP's complementary efforts are in areas of urban, regional, cumulative, and negative emissions.

- The main object of the group has been to fully understand the carbon cycle.
- The project has brought together emissions experts, earth scientists, and economists to tackle the problem of rising concentrations of greenhouse gases.
- The Global Carbon Project is currently chaired by Rob Jackson of Stanford University.

Source: The Hindu

- Q.8) "Askot Wildlife Sanctuary" is located in which of the following state?
- a) Himachal Pradesh
- b) Gujarat
- c) Chhattisgarh
- d) Uttarakhand

ANS: D

Explanation: Himalayan tailless bush blue, Arhopala ganesa ganesa, 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.

Source: The Hindu

Q.9) "The Commission on Ecosystem Management (CEM)" is related to which of the following?

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

ANS: B

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 and builds resilience of socioecological systems to address global challenges.

Source: The Hindu

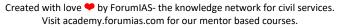
- Q.10) "Project REGENERATE" is related to which of the following?
- a) Renewable energy production by least developed countries.
- b) Conservation of Mangroves.
- c) Conservation of Coral Reefs.
- d) Conservation of Soil.

ANS: C

Explanation: Recognising that sound coastal resource management is critical to sustainable development and climate adaptation, the Government of Maldives is developing and implementing policies to protect coral reefs and support marine management.

Project REGENERATE is generously funded by the United States Agency for International Development (USAID) and works towards building capacity for marine management and climate change adaptation of ecosystems, local communities and government in the Maldives.

Source: The Hindu



Conservation efforts made by government

- **Q.1)** Consider the following statements regarding national parks:
- 1. National parks are established by respective government in accordance with environment protection act, 1980.
- 2. National Parks enjoy a greater degree of protection than sanctuaries.

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

ANS: B

Explanation: The Wild Life (Protection) Act (WPA) of 1972 provided for the declaration of National Parks by the State Government in addition to the declaration of wildlife sanctuaries.

- National Parks are declared in areas that are considered to be of adequate ecological, geomorphologic and natural significance although within the law, the difference in conservation value of a National Park from that of a sanctuary is not specified in the WPA 1972.
- National Parks enjoy a greater degree of protection than sanctuaries.
- Certain activities which are regulated in sanctuaries, such as grazing of livestock, are prohibited in National Parks.

Source: Shankar page no: 175

Q.2) The Chief Wild Life Warden may, on application, grant to any person a permit to enter or reside in a sanctuary/ National Park for which of the following purposes?

- 1. Investigation of wildlife
- 2. Photography
- 3. Tourism

Select the correct answer using the code given below:

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

ANS: D

Explanation: The Chief Wild Life Warden may, on application, grant to any person a permit to enter or reside in a sanctuary/ National Park for all or any of the following purposes:

- investigation or study of wildlife and purposes ancillary or incidental thereto
- photography
- scientific research
- tourism
- transaction of lawful business with any person residing in the sanctuary

Source: Shankar Page no: 176

- Q.3) Consider the following statements regarding "conservation reserves":
- 1. It was created under forest rights act, 2006.
- 2. It is an area owned by the State Government adjacent to National Parks and sanctuaries for protecting the landscape, seascape and habitat of fauna and flora.

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

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

ANS: A

Explanation: The Amendment Act (Wildlife Protect Act, 1972) of 2003 provided for the creation of a new type of protected area called a Conservation Reserve.

- It is an area owned by the State Government adjacent to National Parks and sanctuaries for protecting the landscape, seascape and habitat of fauna and flora.
- It is managed through a Conservation Reserve Management Committee
- The State Government may, after having consultations with the local communities, declare any area owned by the Government as conservation reserve.

Source: Shankar Page No: 177

Q.4) "Bhitarkanika National Park and Bhitarkanika Sanctuary" is often seen in news is located in which of the following state?

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

ANS: D

Explanation: The Bhitarkanika Wildlife Sanctuary (Odisha) is one of India's biggest estuarine crocodile habitats and a major coastal eco-system.

- It was declared as a National Park because of its ecological, faunal, floral, geomorphological and zoological association and importance and for the purpose of protection in 1998.
- In August 2002, it was designated as the second Ramsar site (i.e. Wetland of International importance).

Source: The Hindu

- Q.5) Which of the following flora and fauna are prohibited for exports in India?
- 1. Meat of buffalo
- 2. Sea shell
- 3. Fuel wood

Select the correct answer using the code given below:

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

ANS: D

Explanation: The prohibited items are not permitted to be exported. An export licence will not be given in the normal course for goods in the prohibited category. The following are the items probited in the flora and fauna category:

- All wild animals, animal articles including their products and derivatives (excluding
 those for which ownership certificates have been granted and also those required for
 transactions for education, scientific research and management under Wild Life
 (Protection) Act, 1972 including their parts and products).
- Beef of cows, oxen and calf. Beef in the form of offal of cows, oxen and calf

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- Meat of buffalo (both male and female) fresh and chilled and frozen
- Peacock Tail Feathers & its Handicrafts and articles
- Shavings & Manufactured Articles of shavings of Shed Antlers of Chital and Sambhar
- Sea shells
- Wood and wood products
- · Fuel wood

Source: Shankar Page No: 179

Q.6) Which international institution designates parts of natural and cultural landscapes extending over large area of terrestrial or coastal/marine ecosystems or a combination as a biosphere reserve?

- a) UNICEF
- b) UNESCO
- c) GEF
- d) IUCN

ANS: B

Explanation: Biosphere Reserve (BR) is an international designation by UNESCO for representative parts of natural and cultural landscapes extending over large area of terrestrial or coastal/marine ecosystems or a combination thereof.

- BRs are special environments for both people and the nature and are living examples of how human beings and nature can co-exist while respecting each others' needs.
- Biosphere reserves are sites established by countries and recognized under UNESCO's Man and the Biosphere (MAB) Programme to promote sustainable development based on local community efforts and sound science.

Source: Shankar Page no: 180

Q.7) Consider the following statements regarding "tigers" in India:

- 1. The Central Government shall, on recommendation of the National Tiger Conservation Authority, notify an area as a tiger reserve.
- 2. The present tiger population in India is greater than in 1900.

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

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

ANS: C

Explanation: A potential example of conservation of a highly endangered species is the Indian Tiger (Panthera tigris).

- The fall and rise in the number of Tiger population in India is an index of the extent and nature of conservation efforts.
- It is estimated that India had about 40 000 tigers in 1900, and the number declined to a mere about 1800 in 1972.
- The tiger tally in the country stands at 2,967. The tiger population in the country has grown from 1,400 in 2014 to 2,967 in 2019.
- The State Government shall, on recommendation of the National Tiger Conservation Authority, notify an area as a tiger reserve.

Source: Shankar page no: 187 and The Hindu

Q.8) Which of the following subspecies of tiger is/are extinct?

- 1. Sumatran
- 2. Bali
- 3. Javan

Select the correct answer using the code given below:

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

ANS: C

Explanation: The scientific name for the tiger is Panthera tigris.

- There are eight subspecies of tiger: among the eight, at present five subspecies are present in the wild.
- They are Bengal, South China, Indochinese, Sumatran, and Siberian.
- Three subspecies of tiger—Caspian, Bali, and Javan—are extinct.

Source: Shankar page no: 187

Q.9) "Pugmark Census Technique" is used to estimate the population of which of the following specie?

- a) Tiger
- b) Elephant
- c) Rhinoceros
- d) Snow Leopard

ANS: A

Explanation: The process of estimating the number of tigers in a given area is called 'Tiger census.'

- This exercise provides us with an estimate of tiger number, density and change in tiger indices a measure of tiger occupancy in a given area.
- It is conducted at regular intervals to know the current tiger populations and population trends.
- Besides estimating the number of tigers the method also helps to gather information on the density of the tiger populations and associated prey.
- The most commonly used technique in the past was 'Pugmark Census Technique'.
- In this method the imprints of the pugmark of the tiger were recorded and used as a basis for identification of individuals.
- Now it is largely used as one of the indices of tiger occurrence and relative abundance.

Source: Shankar page no: 188

Q.10) "Nagarjunsagar-Srisailam Tiger Reserve" is the largest tiger reserve in India is located in which of the following state (s)?

- a) Andhra Pradesh
- b) Telangana
- c) Chhattisgarh
- d) Both A & B

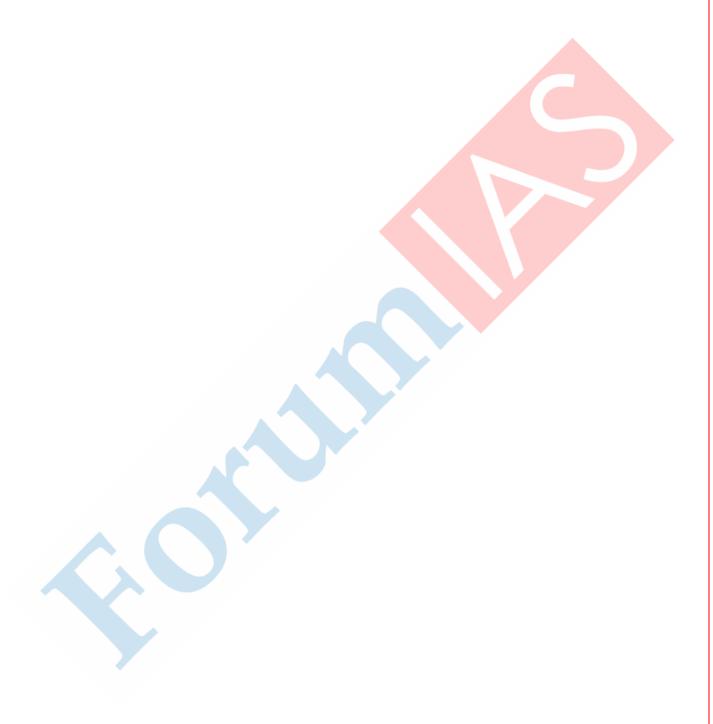
ANS: D

Explanation: Nagarjunsagar-Srisailam Tiger Reserve is the largest tiger reserve in India.

• The reserve spreads over five districts, Kurnool District, Prakasam District, Guntur District of Andhra Pradesh and Nalgonda District and Mahbubnagar district of Telangana state.

• The total area of the tiger reserve is 3,728 km².

Source: ENVIS



Revision Test

- **Q.1)** Consider the following statements regarding "Green Climate fund":
- 1. It was established at CoP 16 of UNFCCC.
- 2. It funds both developed and developing countries green projects.

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

ANS: A

Explanation: At COP 16, Parties established a Green Climate Fund (GCF) as an operating entity of the financial mechanism of the Convention under Article 11.

The GCF will support projects, programmes, policies and other activities in developing country Parties. The Fund will be governed by the GCF Board.

Source: Shankar page no: 255

- **Q.2)** The Loess Plateau climate smart agriculture is worldwide famous for its success. In which of the following country it was implemented?
- a) Australia
- b) Japan
- c) China
- d) Canada

ANS: C

Explanation: Climate-smart agriculture gives attention to landscape approaches, for example, integrated planning of land, agriculture, forests, fisheries and water to ensure synergies are captured.

- These can be further strengthened by adding better weather forecasting, more resilient food crops and risk insurance to cover losses when the vagaries of weather strike.
- If yields increase through such practices and become more stable, it results in improved farm incomes. A more stable income helps enhance the adaptive capacity of farmers.
- A good number of countries are now showing that it can be done.
- China has been a leader in this, with programs such as the Loess Plateau now internationally famous.

Source: Shankar page no: 263

- Q.3) Which of the following process/methods used by IPCC related to climate change?
- 1. Review
- 2. Research
- 3. Monitoring

Select the correct answer using the code given below:

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

ANS: A

Explanation: The IPCC is a scientific body. It reviews and assesses the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change.

- It does not conduct any research nor does it monitor climate related data or parameters.
- Thousands of scientists from all over the world contribute to the work of the IPCC on a voluntary basis.
- Review is an essential part of the IPCC process, to ensure an objective and complete assessment of current information.

Source: Shankar page no: 263

- **Q.4)** National Green House Gas Inventories Programme (NGGIP) was established by which of the following institution?
- a) WEF
- b) UNDP
- c) IPCC
- d) IUCN

ANS: C

Explanation: The IPCC established the national green house gas Inventories Programme (NGGIP) to provide methods for estimating national inventories of greenhouse gas emissions to, and removals from, the atmosphere.

The guidance produced by the NGGIP is used by countries that are Parties to the UN Framework Convention on Climate Change (UNFCCC) to estimate the emissions and removals that they report to the UNFCCC.

Source: Shankar page no: 264

- Q.5) "Global Stocktake" is often seen in news is related to which of the following?
- a) UNFCCC
- b) Global Environment Facility
- c) World Bank
- d) UNEP

ANS: A

Explanation: GST refers to proposed five-yearly-review of the impact of climate change action undertaken by countries.

- Under the Paris Agreement, each country has to present a climate action plan every five years.
- Under the Paris Agreement, the first global stocktake will happen in 2023.
- It will help world to determine whether it needs to do more and how much more.

Source: Shankar page no: 259

- Q.6) "FAME India scheme" is often seen in news is related to which of the following?
- a) Climate smart agriculture
- b) Smart fuels
- c) Smart household appliances
- d) Electric & Hybrid vehicles

ANS: D

Explanation: Faster Adoption and Manufacturing of (Hybrid) and Electric Vehicles (FAME India) scheme rolled out in april, 2015 by Union Minister for Heavy Industries and Public Enterprises

- The scheme will help promote use of electric and hybrid vehicles, and initially, a subsidy of 30% will be provided to the buyers.
- Phased replacement of fossil fuel-based vehicles with those based on latest technologies will lead to a net saving of Rs 14,000 crore.
- The scheme is proposed to be implemented over six years, till 2020, which looks at sales of electric and hybrid vehicles up to 60-70 lakh units per year.

Q.7) Which of the following are the key dimensions of National Mission on Sustainable Agriculture (NMSA)?

- 1. Water efficiency
- 2. Credit support
- 3. Nutrient management
- 4. Agriculture insurance

Select the correct answer using the code given below:

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

ANS: D

Explanation: The NMSA has identified 10 key dimensions for adaptation and mitigation:

- Improved Crop Seeds, Livestock and Fish Culture
- Water Efficiency
- Pest Management
- Improved Farm Practices
- Nutrient Management
- Agricultural Insurance
- Credit Support
- Markets
- Access to Information
- Livelihood Diversification

Source: Shankar page no: 239

Q.8) The grey slender loris is often seen in news is a?

- a) Primate
- b) Reptile
- c) Bird
- d) Insect

ANS: A

Explanation: The gray slender loris (primate) is found in India and Sri Lanka. Its natural habitats are subtropical or tropical dry forests and subtropical or tropical moist lowland forests. It is threatened by habitat loss.

Source: Shankar page no: 220

Q.9) Which of the following institutions are involved in monitoring the ozone layer?

1. World Meteorological Organization (WMO).

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- 2. World Weather Watch (WWW).
- 3. Integrated Global Ocean Services Systems (IGOSS).

Select the correct answer using the code given below:

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

ANS: D

Explanation: Some organizations that help in monitoring the atmosphere and form a network of information's communication about the atmosphere, including ozone layer monitoring are:

- World Meteorological Organization (WMO)
- World Weather Watch (WWW)
- Integrated Global Ocean Services Systems (IGOSS)
- Global Climate Observing System (GCOS)

Source: Shankar page no: 217

Q.10) "Nameri tiger reserve" is located in which of the following state?

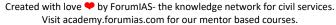
- a) Tamil Nadu
- b) Assam
- c) Tripura
- d) Himachal Pradesh

ANS: B

Explanation: Nameri Tiger Reserve (declared in 1999-2000) is located in the foothills of the eastern Himalayas in the Sonitpur district of the state of Assam.

- It is on the interstate border with Arunachal Pradesh. The Pakke Tiger Reserve of Arunachal Pradesh adjoins it on its north-eastern point.
- The river Jia-Bhareli (a tributary of Brahmaputra River) with its tributaries, the Nameri, Upper Dikorai and Bor Dikorai flow through the Reserve.
- Besided Tiger, the reserve is also home to the sambar, barking deer, wild boar and bison.

Source: The Hindu



Miscellaneous

Q.1) Which of the following pair (s) is/are correctly matched?

Caves:State1. Kanheri caves:Gujarat

2. Belum caves : Andhra Pradesh3. Barabar caves : Madhya Pradesh

Select the correct answer using the code given below:

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

ANS: C

Explanation: Kanheri caves: Kanheri the Kanhasela, Krishnagiri, Kanhagiri of ancient inscriptions, is located north of Mumbai and was a major Buddhist centre.

- Kanheri is located in the island of Salsette and 6 miles from Thana.
- The Kanheri Caves demonstrate the Buddhist influence on the art and culture of India.
- Kanheri comes from the Sanskrit Krishnagiri, which means Black Mountain.
- They were chiseled out of a massive basaltic rock outcropping.

Belum caves: are located in Andhra Pradesh.

Barabar caves: The Barabar Caves are the oldest surviving rock-cut caves in India, mostly dating from the Maurya Empire (322–185 BCE), some with Ashokan inscriptions, located in the Bela Ganj Block of Gaya district, Bihar, India, 24 km north of Gaya.

• The caves were used by ascetics from the Ajivika sect, founded by Makkali Gosala, a contemporary of Gautama Buddha, the founder of Buddhism, and of Mahavira, the last and 24th Tirthankara of Jainism.

Also present at the site are several rock-cut Buddhist and Hindu sculptures.

Source: NCERT

Q.2) The "Buddha Nullah" – is a seasonal stream often seen in news is located in which of the following state?

- a) Bihar
- b) Punjab
- c) Rajasthan
- d) Himachal Pradesh

ANS: B

Explanation: Originating at village Koom Kalan of Ludhiana (Punjab) and running for 47 kms till Walipur Kalan where it merges with River Sutlej, this stream carrying fresh water was earlier known as 'Buddha Dariya'.

- Over the years, the name got changed to Buddha Nullah (drain) owing to the sewage, industrial and domestic waste that is dumped into it in the 14-km stretch within Ludhiana city municipal corporation limits beginning from Tajpur road.
- There are three major sources polluting Buddha Nullah untreated sewage waste from Ludhiana city Sewage Treatment Plants (STPs), untreated industrial effluents

from 228 dyeing units, and 16 'outlets', which are directly releasing sewage and industrial waste into the stream.

• Of these 16 outlets, 11 are "MC disposal points" through which the civic body is directly releasing untreated sewage waste into the stream.

Source: Indian Express

- **Q.3)** The words "Saranda and Chaibasa" often seen in news is related to which of the following?
- a) Underground reservoirs
- b) Bauxite Mines
- c) Copper Mines
- d) Iron ore reserves

ANS: D

Explanation: Saranda and Chaibasa — in Jharkhand's West Singhbhum district had large iron ore reserves.

• The Union Ministry of Environment, Forest and Climate Change (MoEF&CC) will soon form a committee to explore the prospect of opening conservation or no-mining zone in Saranda and Chaibasa in West Singhbhum district of Jharkhand for iron ore mining.

Management Plan for Sustainable Mining (MPSM), which regulates mining in Chaibasa and the Saranda Sal forest area.

Source: The Hindu

- Q.4) Which of the following is/are NOT correct about "Subsidiary Alliance System"?
- 1. An Indian ruler entering into Subsidiary Alliance with the British had to dissolve his own armed forces and accept British forces.
- 2. If Indian ruler failed to pay army's maintenance, a portion of his territory would be taken away and ceded to the Zamindars.
- 3. No other Indian power to interfere in its internal affairs.

Select the correct answer using the code given below:

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

ANS: A

Explanation: Wellesley broadened the scope of this arrangement by his Subsidiary Alliance System, bringing under it Hyderabad, Mysore, Lucknow, the Maratha Peshwa, the Bhonsle (Kolhapur) and Sindhia (Gwalior).

The provisions of the Subsidiary Treaty are:

- An Indian ruler entering into Subsidiary Alliance with the British had to dissolve his own armed forces and accept British forces and a British Resident in his territory.
- He had to pay for the British army's maintenance. If he failed, a portion of his territory would be taken away and ceded to the British.
- The protected prince was to sever all connections with European powers other than the British, especially the French.
- No European should be employed without the permission of the British.
- No negotiation with any Indian power should be held without the Company's permission and
- No other Indian power to interfere in its internal affairs.

Source: NCERT

- **Q.5)** "Our position is not that truths are to be in all religions, but that all established religions of the World are true" was described by which of the following personality?
- a) Keshab Chandra Sen
- b) Swami Vivekananda
- c) Rabindranath Tagore
- d) Raja Ram Mohan Roy

ANS: A

Explanation: The development of the Western culture and ideology forced the traditional institutions to revitalize themselves.

- During the second half of the nineteenth century, the expression of protest and desire for change were articulated through various reform movements.
- What gave these reform movements an ideological unity were rationalism, religious universalism and humanism.
- For example, Raja Rammohun Roy repudiated the infallibility of the Vedas and during the Aligarh Movement, Syed Ahmed Khan emphasized that religious tenets were not immutable.
- As Keshab Chandra Sen said, 'Our position is not that truths are to be in all religions, but that all established religions of the World are true.'

Source: NCERT

- **Q.6)** The word "monetary transmission" often seen in news is related to which of the following?
- a) Judicious distribution of GST collection between Centre and states.
- b) The pass-through of the RBI's rate actions to the economy at large.
- c) Smooth transmission of tax devolution to states from centre.
- d) Providing timely credit for agriculture and other economically weaker sections.

ANS: B

Explanation: Monetary transmission is the pass-through of the RBI's rate actions to the economy at large.

- As you know, the RBI's most important task is to keep tabs on inflation by adjusting money supply.
- It also monitors the exchange rate. To control all this, the RBI uses many monetary tools.
- The repo rate, reverse repo rate and cash reserve requirement are being the key instruments.
- Let us take the repo rate, for instance. This is the rate at which the RBI lends short-term funds to banks to manage their day-to-day operations.
- When the RBI wants to stimulate growth, it cuts the repo rate to reduce the cost of borrowings.

Banks get money at a cheaper rate. If this is passed on to borrowers, then monetary transmission is said to have happened smoothly.

Source: The Hindu

- Q.7) Consider the following statements regarding the "steel sector in India":
- 1. India is the 2nd largest producer of crude steel in the world from 2017 onwards.
- 2. The per-capita consumption of finished steel in India is less than world average. Which of the statements given above is/are NOT correct?

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

ANS: A

Explanation: In CY 2019, the world crude steel production reached 1870 million tonnes (mt) and showed a growth of 3.4% over CY 2018.

- China remained world's largest crude steel producer in same period (996 mt) followed by India (111mt), Japan (99mt) and the USA (88mt).
- Per capita finished steel consumption in 2018 was 224.5 kg for world and 590.1 kg for China (Source: World Steel Association).
- The same for India was 73.3 kg in 2018 (Source: JPC) and 75.7 kg (provisional) in 2019. The per capita consumption of India in 2018-19 was 74.1 kg and that in 2019-20 was 74.6 kg (prov.)

The Indian steel industry has entered into a new development stage, post de-regulation, riding high on the resurgent economy and rising demand for steel.

- Rapid rise in production has resulted in India becoming the 2nd largest producer of crude steel during 2018 and 2019 (prov), from its 3rd largest status in 2017.
- The country was also the largest producer of Sponge Iron or DRI in the world and the 3rd largest finished steel consumer in the world after China & USA in 2019 (prov.)

Source: Economic Survey

- **Q.8)** Besides earth, which of the following celestial body has places with standing bodies of liquid on the surface?
- a) Jupiter
- b) Venus
- c) Titan
- d) Moon

ANS: C

Explanation: Titan and Earth are the solar system's two places with standing bodies of liquid on the surface. Titan boasts lakes, rivers and seas of hydrocarbons: compounds of hydrogen and carbon like those that are the main components of petroleum and natural gas.

"Titan is the most Earth-like body in the solar system. It has lakes, canyons, rivers, dune fields of organic sand particles about the same size as silica sand grains on Earth".

Source: NASA

- **Q.9)** Which of the following state has the unique distinction of having three (3) biosphere reserves of UNESCO (MAB) programme?
- a) Odisha
- b) Arunachal Pradesh
- c) Madhya Pradesh
- d) Tamil Nadu

ANS: D

Explanation: Tamil Nadu has been a pioneer State in Protected Area management and development of forest resources and wildlife.

- The total area under the protected area management is 7,072.95 sq. km. which comes to 30.92% of the State's Forest area.
- The Protected Areas in the State includes 5 National parks, 15 Wildlife sanctuaries, 15 bird sanctuaries and 2 conservation reserves besides 4 Tiger Reserves viz. Anamalai, Kalakkad Mundanthurai, Mudumalai and Sathyamangalam.
- These Protected Areas have been established under Wildlife (Protection) Act, 1972.
- Further Tamil Nadu also has the distinction of having 3 Biosphere Reserves viz. Nilgiris, Gulf of Mannar and Agasthiarmalai, which are internationally acclaimed for their rich and unique biodiversity.

Source: ENVIS

Q.10) "Recycling of nutrients in the ecosystem through the process of mineralization of dead organic materials is the most important role for decomposers", which of the following given is decomposers?

- a) Autotrophs
- b) Heterotrophs
- c) Phagotrophs
- d) Saprotrophs

ANS: D

Explanation: Saprotrophs feed by a process known as absorptive nutrition, in which the nutritional substrate (e.g., dead organism or other nonliving organic matter) is directly digested by a variety of enzymes that are excreted by the saprotroph.

The enzymes convert the detritus into simpler molecules, which are then absorbed by the cells to feed the organism.

Source: NCERT

