

ForumIAS

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Prelims Marathon

10th to 16th August,
2020

HISTORY
ECONOMICS
POLITY
SCIENCE AND TECHNOLOGY
GEOGRAPHY AND ENVIRONMENT

History

Q.1) Consider the following statements regarding the “**Vedas**”:

1. The word ‘Veda’ signifies knowledge and they are actually providing humans about knowledge to conduct their life on Earth.
 2. The Vedas were initially handed down orally by generations to generations.
- 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 word ‘Veda’ signifies knowledge and the texts are actually about providing humans about knowledge to conduct their entire life on earth and beyond.

- It is written in highly stylised poetic style and the language is full of symbols and myths.
- The **Vedas were initially handed down orally by generations** of Brahmin families but it is estimated by historians that they were compiled around 1500 BC-1000 BC.

Q.2) Consider the following statements regarding the “**Aranyakas**”:

1. The Aranyakas are also texts attached to the Upanishads.
2. They are said to be compilations of ritualistic information on the birth and death cycles as well as the complexity of the soul.

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 Aranyakas are also texts attached to the Vedas and they describe the rituals and sacrifices involved in the Vedas from various perspectives.

- They are said to be compilations of ritualistic information on the birth and death cycles as well as the complexity of the soul.
- It is argued that holy and learned men, called Munis, who preferred to dwell within the limits of the forests, taught them.

Q.3) The “**Tarangmel**” folk dance is related to which of the following state?

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

ANS: C

Explanation: The **Tarangmel folk dance of Goa** that celebrates the youthfulness of the region. It is performed during Dussehra and Holi. The use of rainbow-like costumes with multi coloured flags and streamers make it a visual spectacle.

Q.4) Consider the following statements regarding the “**Lepakshi Paintings**”:

1. Paintings are located in Anantapur district of Andhra Pradesh.
2. Paintings were developed in the period of Vijayanagara Empire.
3. Paintings are based on religious themes of Ramayana and Maha Bharata.

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: Located in the Anantapur district of Andhra Pradesh, these mural paintings were executed on Veerabhadra temple walls at Lepakshi in 16th Century.

- Made during the Vijaynagara period, they follow a religious theme, based on Ramayana, Mahabharata and incarnations of Vishnu.
- The paintings show a complete absence of primary colours, especially blue.
- They depict a decline in painting in terms of quality.
- The forms, figures and details of their costumes are outlined with black colour.

Q.5) Consider the following statements regarding the “**Theosophical Society Movement**”:

1. Movement led by Madame H.P. Blavatsky and Colonel M.S. Olcott.
2. The society believed that a special Relationship between a person soul and god.

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: A group of westerners led by Madame H.P. Blavatsky (1831-1891) and Colonel M.S. Olcott, who were inspired by Indian thought and culture, founded the Theosophical Society in New York City, United States in 1875.

- In 1882, they shifted their headquarters to Adyar, on the outskirts of Madras (at that time) in India.
- The society believed that a special relationship could be established between a person's soul and God by contemplation, prayer, revelation, etc. It accepted the Hindu beliefs in reincarnation and karma, and drew inspiration from the philosophy of the Upanishads and samkhya, yoga and Vedanta schools of thought.
- It aimed to work for universal brotherhood of humanity without distinction of race, creed, sex, caste or colour.

Q.6) Consider the following statements regarding the “**Gupta period**”:

1. Gupta Empire is often hailed as the Golden period of Indian Architecture.
2. Only Hindu temple architecture reached climax in Gupta Age.

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 emergence of the Gupta Empire in 4th century A.D. is often hailed as the “Golden period of Indian Architecture”.

- While the earlier Gupta rulers were Buddhists and continued the traditions of Buddhist architecture, temple architecture came to the fore front under the patronage of the Hindu rulers of the later Gupta phase.
- Temple architecture reached its climax during this period. Similarly, Buddhist and Jain art also reached its peak during the Gupta Age.
- The Gupta rulers, especially in the later phase, were Brahmanical rulers. However, they showed exemplary tolerance for all other religions.
- Three principal deities were worshipped – Vishnu in the Northern and Central part of India, Shiva in the Southern part and Shakti in the Eastern part of India as well as in the Malabar coast or South-west part of India.

Q.7) Consider the following statements regarding the “**Jainism**”:

1. It was older than Buddhism.
2. It places heavy emphasis upon ethical conduct, personal purity for the liberation of the individual Souls.

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: Jainism is a very ancient world religion with a history of over 3000 years, which originated in the Indian subcontinent, like Hinduism and Buddhism.

- Although it has some similarities with both traditions, Jainism is different from them with its own unique and distinguishing features.
- It is also older than Buddhism and is truly one of the most ancient and living religions of the world, besides Hinduism and Judaism.
- Jaina Dharma, as it is known popularly, is a truly ascetic religion which places heavy emphasis upon ethical conduct, personal purity for the liberation of the individual Souls. Jainism does not believe in a Creator God.
- It accepts the material universe as a self-existing system. Everything in it, including the individual Soul, is an aspect of matter.
- Each Soul is eternal but it has states, shapes and sizes. In the bound state (bandha) it is subject to karma and rebirth. It attains liberation only when it is able to completely get rid of karma.
- Jainism was founded by 24 Perfect Beings, known as Tirthankaras, who appeared upon earth in the past and laid the foundation for its doctrine.
- Mahavira was the last and the most popular of the Tirthankaras. Since it is a difficult and austere religion, from the earliest times, Jainism enjoyed popularity only among certain sections of Indian society, especially merchant communities.
- It is a predominantly Indian religion, with some following abroad. In this section we included information on the history, beliefs, practices, philosophy, and ethics of Jainism, and comparison with other faiths.

Q.8) The “**Industrial Revolution**” was first started in which of the following country?

- a) France
- b) Britain

- c) Germany
- d) United States of America

ANS: B

Explanation: The Industrial Revolution started in England in the early 18th century, with the invention of new machines like the spinning Jenny, steam engine, the power loom and several others.

- These machines greatly improved production in the fields of textile, metallurgy, steam power and agriculture.
- The industrial revolution reached other European nations late and this helped England to maintain its hegemony.

Q.9) Consider the following statements regarding the “**Khilji Dyanasty**”:

1. Alauddin Khilji was the founder of Khilji Dynasty.
2. Alauddin was the first ruler to defeat the southern parts 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

ANS: B

Explanation: Alauddin Khilji was the second ruler and probably the most powerful monarch of the Khilji Dynasty.

- After conquering the throne by killing his uncle and predecessor, Jalaluddin Firuz Khilji, he continued his legacy of invading states and territories to increase his empire over the Indian subcontinent.
- He was the first Muslim ruler to successfully defeat and conquer southern parts of India. His passion for conquest helped him achieve success at wars, thereby expanding his influence to South India as well.
- In this endeavor of expansion, he was well supported by his loyal generals, especially Malik Kafur and Khusraw Khan.
- He ensured that he completely ousted the reigning kings and administered absolute power while invading the northern states.
- In south India, he used to loot the states and also extracted payment of annual taxes from the overthrown rulers.
- Besides his expeditions of raiding and conquering, he was engaged in defending the Delhi Sultanate from continuous Mongol invasions.
- He also acquired the Koh-i-noor, one of the largest known diamonds in human history, while invading the Kakatiya rulers of Warangal.
- He also introduced some agrarian as well as market reforms which produced mixed results.

Q.10) Which of the following sites is/are constructed by “**Shahjahan**”?

1. Red Fort
2. Jama Masjid
3. Moti Masjid

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: One of the most significant incidents in the life of Mughal Emperor Shah Jahan was the construction of Taj Mahal.

- His beloved wife Mumtaz Mahal died while giving birth to their fourteenth child and the reason behind her death was stated to be postpartum haemorrhage.
- This left Shah Jahan devastated who then decided to build the world's most beautiful monument in the memory of his wife.
- After many years of planning, hard work and immense sacrifices, the monument, which came to be known as the Taj Mahal was built.
- Today people from different parts of the world travel to India just to see this amazing white colored edifice which is also one of the most visited tourist destinations of India.
- Taj Mahal continues to be one of the Seven Wonders of the World.

The following monuments were also constructed by Shah Jahan during his rule:

- Red Fort or Lal Quila (Delhi)
- Sections of the Agra Fort
- Jama Masjid (Delhi)
- Moti Masjid or Pearl Mosque (Lahore)
- Shalimar Gardens (Lahore)
- Sections of the Lahore Fort (Lahore)
- Jahangir Mausoleum
- Takht-e-Taus

Economy

Q.1) Consider the following statements regarding the “**interim report of the 15th Finance Commission (FC)**”:

1. The commission recommended continuing the 14th Finance commission vertical divisible pool of tax revenues.
2. The demographic performance is the new parameter added to the horizontal divisible pool criteria.

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

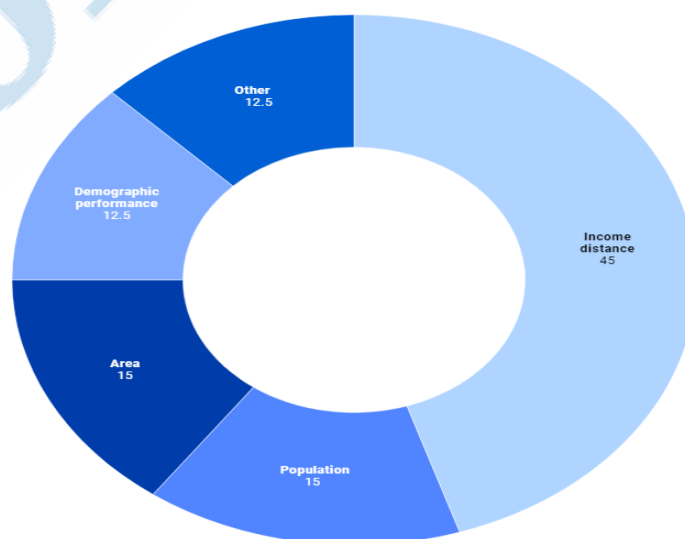
Explanation: The interim report of the Fifteenth Finance Commission, tabled together with the Union Budget for 2020-21, leaves the tax devolution formula between the centre and states largely unchanged.

- It, however, calls for greater clarity on government finances, a new fiscal legislation and improvements in the implementation of the Goods and Services Tax.
- The commission will submit its final report only in October 2020. Its interim recommendations will underpin the 2020-21 budget while final recommendations will be used for subsequent years.
- The finance commission, headed by NK Singh, recommended an aggregate share of 41 percent of the net proceeds of the union taxes to be devolved to states in FY21.
- The Fourteenth Finance Commission has increased the devolution to states to 42 percent.
- **The demographic performance is the new crucial parameter that has been added to the mix.**

Weights For Horizontal Devolution

In %

Income distance Population Area Demographic performance Other



Q.2) The “**Companies Fresh Start Scheme 2020**” is recently in news is related to which of the following?

- a) To promote pharmaceutical products and to reduce the imports of active pharmaceutical ingredients (API).
- b) To enable companies make good of any filing-related defaults, irrespective of duration of default, and make a fresh start as a fully compliant entity.
- c) To promote solar manufacturing base to fulfill the domestic needs.
- d) Waiver of Small scale manufacturing unit loans up to 10lakhs to overcome CoVID-19 crisis.

ANS: B

Explanation: The Corporate Affairs Ministry (MCA) has come up with the ‘Companies Fresh Start Scheme 2020’ to enable companies make good of any filing-related defaults, irrespective of duration of default, and make a fresh start as a fully compliant entity.

- To provide a similar facility to Limited Liability Partnerships (LLPs), the MCA has also revised the ‘LLP Settlement Scheme, 2020’, which is in vogue today.
- The Fresh Start scheme and modified LLP Settlement Scheme reduce compliance burden during the unprecedented public health situation caused by Covid-19.
- The USP of both the schemes is a one-time waiver of additional filing fees for delayed filings by the companies or LLPs with the Registrar of Companies during the currency of the Schemes, i.e. during the period starting from April 1 and ending on September 30.
- The Schemes, apart from giving longer timelines for corporate to comply with various filing requirements under the Companies Act 2013 and LLP Act, 2008, significantly reduce the related financial burden on them, especially for those with long standing defaults, thereby giving them an opportunity to make a “fresh start”.
- Both the Schemes also contain provision for giving immunity from penal proceedings, including against imposition of penalties for late submissions and also provide additional time for filing appeals before the concerned Regional Directors against imposition of penalties, if already imposed.

Q.3) Which of following are the “**grants of the finance commission**”?

- 1. Grants for rural and urban local bodies.
- 2. Assistance to State Disaster Response Fund (SDRF).
- 3. Post devolution revenue deficit grants.

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: The 73rd Constitutional Amendment requires both the Centre and states to help Panchayati Raj institutions to evolve as a unit of self-governance by assigning them funds, functions and functionaries.

The Finance Commission Grants, in the Union Budget, provides funds to local bodies, state disaster relief funds and compensates any revenue loss to states after devolution of taxes.

The Finance Commission Grants are primarily divided into four sub-heads.

- 1. **Grants for rural local bodies:** The three-tier model of governance envisioned in the Constitution assigns clear roles and responsibilities to Gram Panchayats.

- The Finance Commission recommendations ensure that these local bodies are adequately funded.
- In fact, nearly half of the Finance Commission Grants in Union Budget goes to village local bodies.

2. **Grants for urban local bodies:** In addition to units of self-governance at the village level, the Constitution also envisages cities as units of self-governance.

- Urban local bodies like municipal councils receive the largest chunk of Finance Commission Grants after Rural Local Bodies and Post Devolution Deficit Grants to states.

3. **Assistance to SDRF:** The central government also provides funds to State Disaster Relief Funds in addition to funding the National Disaster Management Authority (NDMA).

- The assistance to state government's disaster relief authorities is provided as per the recommendations of the Finance Commission.

4. **Post devolution revenue deficit grants:** About a third of the total revenue collected by the Centre is directly transferred to states as their share in the divisible pool.

- However, the Finance Commission also provides a mechanism for compensation of any loss incurred by states, which is called post-devolution revenue deficit grants.
- This Finance Commission Grant forms the second largest chunk of Finance Commission transfers after the assistance to local rural bodies.

Q.4) Consider the following statements regarding the **Cash Reserve Ratio (CRR)**:

1. CRR needs to be maintained only in cash.
2. Banks do not get any interest on the money that is with the RBI under the CRR requirements.

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 Reserve Bank of India or RBI mandates that banks store a proportion of their deposits in the form of cash so that the same can be given to the bank's customers if the need arises.

- The percentage of cash required to be kept in reserves, vis-a-vis a bank's total deposits, is called the Cash Reserve Ratio.
- The cash reserve is either stored in the bank's vault or is sent to the RBI.
- **Banks do not get any interest on the money that is with the RBI under the CRR requirements.**
- **Unlike Statutory Liquidity Ratio or SLR, which can be maintained in either gold or cash, CRR needs to be maintained only in cash.**

Q.5) Recently the Reserve Bank of India (RBI) has decided to **change its accounting year** from July-June to April- May on whom recommendations?

- a) Urjit Patel
- b) Ramesh Chand
- c) Bimal Jalan
- d) Shaktikant Das

ANS: C

Explanation: After nearly eight decades, the Reserve Bank of India (RBI) has decided to change its accounting year from July-June to April- May.

- Accordingly, the next accounting year will be a nine-month period, which starts from July 2020 and ends on March 31, 2021.
- Thereafter, all the financial years will start from April every year, the RBI.
- **The Bimal Jalan Committee on Economic Capital Framework (ECF) of the RBI had proposed a more transparent presentation of the RBI's annual accounts and change in its accounting year from July to June to April to March from the financial year 2020-21.**

Q.6) Consider the following statements regarding the **regional rural banks (RRB)**:

1. RRBs were set up on the basis of the recommendations of the Narasimham Working Group.
2. The equity of a regional rural bank is held by the Central Government, concerned State Government and the Sponsor Bank in the proportion of 50:15:35.

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: Regional Rural Banks (RRBs) are financial institutions which ensure adequate credit for agriculture and other rural sectors.

- **Regional Rural Banks were set up on the basis of the recommendations of the Narasimham Working Group (1975), and after the legislations of the Regional Rural Banks Act, 1976.**
- **The first Regional Rural Bank "Prathama Grameen Bank" was set up on October 2, 1975. At present there are 82 RRBs in India.**
- **The equity of a regional rural bank is held by the Central Government, concerned State Government and the Sponsor Bank in the proportion of 50:15:35.**
- The RRBs combine the characteristics of a cooperative in terms of the familiarity of the rural problems and a commercial bank in terms of its professionalism and ability to mobilise financial resources.
- Each RRB operates within the local limits as notified by Government.
- The main objectives of RRB's are to provide credit and other facilities, especially to the small and marginal farmers, agricultural labourers artisans and small entrepreneurs in rural areas with the objective of bridging the credit gap in rural areas, checking the outflow of rural deposits to urban areas and reduce regional imbalances and increase rural employment generation.

Q.7) The "**Fear Index**" often seen in news is related to which of the following?

- a) Stock market volatility
- b) Monsoon prediction
- c) Earthquake frequency index
- d) Money circulation index

ANS: A

Explanation: Created by the Chicago Board Options Exchange (CBOE), the Volatility Index, or VIX, is a real-time market index that represents the market's expectation of 30-day forward-looking volatility.

- Derived from the price inputs of the S&P 500 index options, it provides a measure of market risk and investors' sentiments.
- **It is also known by other names like "Fear Gauge" or "Fear Index".**
- Investors, research analysts and portfolio managers look to VIX values as a way to measure market risk, fear and stress before they take investment decisions.

Q.8) The “**GATI portal**” is recently in news is related to which of the following?

- a) Monsoon prediction
- b) Flight tracking
- c) National highways
- d) Water ways

ANS: C

Explanation: Terming delays in highway projects as “unacceptable”, Road Transport and Highways Minister, asked officials and developers to strictly adhere to project schedules.

- **Minister also launched online web portal ‘GATI’ on the pattern of ‘PRAGATI’, the portal used by the Prime Ministers’ Office for monitoring projects.**
- The portal ‘GATI’ can be accessed from NHAI’s website, and contractors and concessionaires can raise any project-related issues on the platform, according to a statement by the Ministry of Road Transport and Highways.
- The issues raised on ‘GATI’ will be daily monitored by a team of NHAI officers and will be constantly reviewed by the senior officers of the National Highways Authority of India (NHAI) and the Ministry of Road Transport and Highways.

Q.9) Consider the following statements regarding the “**Extended Fund Facility (EFF)**”:

1. It is a lending facility of the World Bank.
2. It was established to help countries address medium and longer-term balance of payments problems.

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 Extended Fund Facility is lending facility of the Fund of the IMF and it was established in 1974 to help countries address medium- and longer-term balance of payments problems.

- The EFF is prescribed for a country who is suffering from balance of payment problem caused by structural weaknesses and who need fundamental economic reforms.
- The use of the facility has increased substantially in the recent crisis period.

Q.10) Which one among the following items has **maximum weight** in wholesale price index (WPI)?

- a) Raw materials
- b) Fuel and electricity

- c) Food Items
- d) Manufactured products

ANS: D

Explanation: Wholesale Price Index (WPI) measures the average change in the prices of commodities for bulk sale at the level of early stage of transactions.

The index basket of the WPI covers commodities falling under the three major groups namely Primary Articles, Fuel and Power and Manufactured products. (The index basket of the present 2011-12 series has a total of 697 items including 117 items for Primary Articles, 16 items for Fuel & Power and **564 items for Manufactured Products.**)

Polity

Q.1) Consider the following statements regarding the **parliamentary legislation in the state field**:

1. Rajya Sabha can pass a resolution to make laws on the state list.
2. Resolution should pass with a simple majority.

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: If the Rajya Sabha declares that it is necessary in the national interest that Parliament should make laws on a matter in the State List, then the Parliament becomes competent to make laws on that matter.

- Such a resolution must be supported by two-thirds of the members present and voting.
- The resolution remains in force for one year; it can be renewed any number of times but not exceeding one year at a time.
- The laws cease to have effect on the expiration of six months after the resolution has ceased to be in force.

Q.2) Consider the following statements regarding the “**National Pharmaceutical Pricing Authority (NPPA)**”:

1. It was set up through an act of Parliament.
2. It was under Ministry of Health and Family Welfare.

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: **National Pharmaceutical Pricing Authority (NPPA)** was constituted vide **Government of India Resolution dated 29th August, 1997** as an attached office of the **Department of Pharmaceuticals (DoP), Ministry of Chemicals & Fertilizers** as an **independent Regulator for pricing of drugs and to ensure availability and accessibility of medicines at affordable prices.**

Functions of the National Pharmaceutical Pricing Authority:

- To implement and enforce the provisions of the Drugs (Prices Control) Order in accordance with the powers delegated to it.
- To deal with all legal matters arising out of the decisions of the Authority.
- To monitor the availability of drugs, identify shortages, if any, and to take remedial steps;
- To collect/maintain data on production, exports and imports, market share of individual companies, profitability of companies etc. for bulk drugs and formulations;

- To undertake and/or sponsor relevant studies in respect of pricing of drugs/pharmaceuticals;
- To recruit/appoint the officers and other staff members of the Authority, as per rules and procedures laid down by the Government;
- To render advice to the Central Government on changes/revisions in the drug policy;
- To render assistance to the Central Government in the parliamentary matters relating to the drug pricing.

Q.3) Consider the following statements about “**National Register of Citizens (NRC)**”:

1. NRC is a register containing names of all genuine Indian citizens.
2. At present, only Assam has such a register.

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 National Register of Citizens (NRC) is a register containing names of all genuine Indian citizens. At present, only Assam has such a register.

- The exercise may be extended to other states as well.
- Nagaland is already creating a similar database known as the Register of Indigenous Inhabitants.
- The Centre is planning to create a National Population Register (NPR), which will contain demographic and biometric details of citizens.
- The NRC will be updated as per the provisions of The Citizenship Act, 1955 and The Citizenship (Registration of Citizens and Issue of National Identity Cards) Rules, 2003.

Q.4) Consider the following statements regarding the “**Panchayati Raj system in India**”:

1. Rajasthan was the first state to establish Panchayati Raj.
2. West Bengal adopted the four-tier system of Panchayati Raj.

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: Rajasthan was the first state to establish Panchayati Raj. The scheme was inaugurated by the prime minister on October 2, 1959, in Nagaur district.

- Rajasthan was followed by Andhra Pradesh, which also adopted the system in 1959. Thereafter, most of the states adopted the system.
- Though most of the states created panchayati raj institutions by mid 1960s, there were differences from one state to another with regard to the number of tiers, relative position of samiti and parishad, their tenure, composition, functions, finances and so on.
- For example, Rajasthan adopted the three-tier system while Tamil Nadu adopted the two-tier system. West Bengal, on the other hand, adopted the four-tier system.
- Further, in the Rajasthan–Andhra Pradesh pattern, panchayat samiti was powerful as the block was the unit of planning and development, while in Maharashtra–

Gujarat pattern, zila parishad was powerful as the district was the unit of planning and development.

- Some states also established nyaya panchayats, that is, judicial panchayats to try petty civil and criminal cases.

Q.5) Consider the following statements regarding the “**National Health Authority (NHA)**”:

1. It was earlier called as National Health Agency.
2. It oversees government health insurance scheme (PMJAY).
3. The Ministry of Health is responsible for overseeing the day-to-day affairs of the NHA.

Which of the statements given above is/are correct?

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

ANS: B

Explanation: the Union Cabinet finalized the make-up of the new National Health Authority (NHA).

- It will now directly oversee the government-funded flagship health insurance scheme-the Pradhan Mantri Jan Arogya Yojana (PM-JAY)—which is a part of the Centre’s Ayushman Bharat umbrella policy for healthcare.
- It replaces the earlier National Health Agency. This new body will now oversee the PM-JAY instead of the Ministry of Health.
- The Union Minister for Health and Family Welfare will chair the NHA’s governing board, while other members include the NITI Aayog’s CEO and the NHA CEO.
- The Ministry of Health will no longer be responsible for overseeing the day-to-day affairs of the NHA.
- Instead, the NHA will now decide on setting the bar for premium amounts, and purchasing healthcare from the private sector without favouring any one entity or depleting the public exchequer, among others
- The NHA will also oversee the process of developing a robust information technology platform for the public sector, and working alongside the Insurance Regulatory and Development Authority.
- The NHA board will meet once in three months. Although the health body hasn’t received any statutory backing yet, it will continue to enjoy autonomy in how it runs day-to-day operation working out of the department of health research’s office in the ministry.
- “No new funds have been approved. The existing budget that was approved earlier by the Cabinet for The National Health Agency, including costs related to IT, human resources, infrastructure and operational costs would be utilised by the proposed National Health Authority”.

Q.6) The concept of “**Public Interest Litigation**” was first time introduced in which of the following country?

- a) France
- b) Britain
- c) USA
- d) Japan

ANS: C

Explanation: The concept of Public Interest Litigation (PIL) originated and developed in the USA in the 1960s.

- In the USA, it was designed to provide legal representation to previously unrepresented groups and interests.
- It was undertaken in recognition of the fact that the ordinary marketplace for legal services fails to provide such services to significant segments of the population and to significant interests.
- Such groups and interests include the poor, environmentalists, consumers, racial and ethnic minorities, and others.

Q.7) Consider the following statements regarding the “**Fundamental Duties**”:

1. Fundamental Duties were added to constitution by 42nd constitutional amendment.
2. Under 42nd constitutional amendment total eleven duties were added to constitution.

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 rights and duties of the citizens are correlative and inseparable; the original constitution contained only the fundamental rights and not the fundamental duties.

- In other words, the framers of the Constitution did not feel it necessary to incorporate the fundamental duties of the citizens in the Constitution.
- However, they incorporated the duties of the State in the Constitution in the form of Directive Principles of State Policy.
- 42nd Amendment Act of 1976 added 10 Fundamental Duties to the Indian Constitution.
- Swaran Singh Committee in 1976 recommended Fundamental Duties, the necessity of which was felt during the internal emergency of 1975-77.
- 86th Amendment Act 2002 later added 11th Fundamental Duty to the list.

Q.8) Consider the following statements regarding the “**Corporate Social Responsibility (CSR)**”:

1. The Companies Act, 2013 is a landmark legislation that made India the first country to mandate and quantify CSR expenditure
2. The details of corporate social responsibility are mentioned in the Section 135 of the Companies Act, 2013.

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: As per as Corporate Social Responsibility is concerned, the Companies Act, 2013 is a landmark legislation that made India the first country to mandate and quantify CSR expenditure.

- The inclusion of CSR is an attempt by the government to engage the businesses with the national development agenda.
- The details of on corporate social responsibility are mentioned in the Section 135 of the Companies Act, 2013.

- The Act came into force from April 1, 2014, every company, private limited or public limited, which either has a net worth of Rs 500 crore or a turnover of Rs 1,000 crore or net profit of Rs 5 crore, needs to spend at least 2% of its average net profit for the immediately preceding three financial years on Corporate social responsibility activities.
- The CSR activities in India should not be undertaken in the normal course of business and must be with respect to any of the activities mentioned in Schedule VII of the act.

Q.9) Which of the following institution releases the “**Prime Global Cities Index**”?

- a) Moody’s
- b) Knight Frank’s
- c) World economic forum
- d) Asian Development Bank

ANS: B

Explanation: Knight Frank's Prime Global Cities Index tracks the performance of luxury residential prices across key global cities on a quarterly basis using data compiled by our global research network.

- National capital New Delhi has emerged as the 10th fastest growing city globally for luxury residential real estate with a rise of 4.4 per cent in capital value over the past one year, says the latest report by Knight Frank.
- Bengaluru with a rise of 2.8 per cent in capital value year-on-year and Mumbai (up 0.8 per cent) are ranked 15th and 30th, respectively in the 46 cities tracked by Knight Frank globally.

Q.10) Consider the following statements regarding the “**National Legal Services Authority (NALSA)**”:

1. It is a constitutional body under Article 39A of the constitution.
2. It was constituted to monitor and evaluate implementation of legal aid programmes.

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: Article 39A of the Constitution of India provides for free legal aid to the poor and weaker sections of the society and ensures justice for all.

- Articles 14 and 22(1) of the Constitution also make it obligatory for the State to ensure equality before law and a legal system which promotes justice on the basis of equal opportunity to all.
- In the year 1987, the Legal Services Authorities Act was enacted by the Parliament which came into force on 9th November, 1995 to establish a nationwide uniform network for providing free and competent legal services to the weaker sections of the society on the basis of equal opportunity.
- **The National Legal Services Authority (NALSA) is a statutory body that has been constituted under the Legal Services Authorities Act, 1987 to monitor and evaluate implementation of legal aid programmes and to lay down policies and principles for making legal services available under the Act.**

Science and technology

Q.1) Consider the following statements regarding the “**air-breathing propulsion system**”:

1. It utilizes the atmospheric oxygen during their flight and reduces the total propellant required to place a satellite in orbit.
2. Ramjet, Scramjet and Dual Mode Ramjet (DMRJ) are the examples of air-breathing engines.

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: Launch vehicles use combustion of propellants consisting of oxidiser and fuel for deriving the energy.

- **Air breathing propulsion systems use atmospheric oxygen, which is available up to about 50 km of earth's surface to burn the fuel stored on-board thereby making the system much lighter, more efficient and cost effective.**
- Air breathing propulsion is a solution for a powered long return cruise flight necessary for reusable launch vehicles.
- The collection and use of air involves challenges as the launch vehicle speeds through atmosphere at supersonic speeds.
- This calls for the development of **ramjet or scramjet** (supersonic combustion ramjet) technologies.
- The **Dual Mode Ramjet (DMRJ)**, the ramjet-scramjet combination, is currently under development, which will operate during the crucial Mach 3 to Mach 9 ascend flight of the launch vehicle.

Q.2) The **Quasi-Zenith** is a regional terrestrial positioning network system launched by which of the following country?

- a) France
- b) ASEAN countries
- c) Britain
- d) Japan

ANS: D

Explanation: QZSS is a Japanese satellite positioning system composed mainly of satellites in quasi-zenith orbits (QZO).

- QZSS (Michibiki) has been in operation since November 2018 to develop a satellite positioning service that can be used stably in all locations at all times.
- This system is compatible with GPS satellites and can be utilized with them in an integrated fashion.
- In this way, the satellite positioning service environment was advanced dramatically.
- QZSS can be used even in the Asia-Oceania regions with longitudes close to Japan, so its usage will be expanded to other countries in these regions as well.

Q.3) The “**Project NETRA**” is often seen in news is related to which of the following?

- a) Earth observation satellite constellation system
- b) Early warning system in space to detect debris
- c) Early warning system of Disasters
- d) High Altitude Defense System

ANS: B

Explanation: The Indian Space Research Organisation (ISRO) initiated ‘Project NETRA’ – an early warning system in space to detect debris and other hazards to Indian satellites.

- The space agency says our SSA (space situational awareness) will first be for low-earth orbits or LEO which have remote-sensing spacecraft.
- Under NETRA, or Network for space object Tracking and Analysis, the ISRO plans to put up many observational facilities: connected radars, telescopes; data processing units and a control centre.
- They can, among others, spot, track and catalogue objects as small as 10 cm, up to a range of 3,400 km and equal to a space orbit of around 2,000 km.

Q.4) The “**world’s first-ever thermal battery plant**” was launched in which of the following state?

- a) Andhra Pradesh
- b) Rajasthan
- c) Tamil Nadu
- d) Maharashtra

ANS: A

Explanation: India became home to the world’s first-ever thermal battery plant, which was inaugurated in Andhra Pradesh.

Conventional battery technology: is based on the system of charging/discharging cycles that are driven by electricity.

- For example, the Lithium-ion battery, a staple of many electronic devices, consists of electric charges being transferred from electrodes.
- Energy is derived from this battery, when lithium atoms turn into lithium ions (Li⁺), and get stored when this reaction reverses.
- Therefore, Li-ion batteries work on the basis of electrical energy.

Thermal batteries: on the other hand, use thermal energy to operate, i.e., the energy created by temperature differences.

- Therefore, the energy transfer in thermal batteries helps store heat when heat travels from one part of the battery setup to the other.
- For that to happen, a thermal battery consists of two parts: a cool zone known as sink, and a hot source called source.
- Both these sides consist of compounds known as phase-changing materials (PCMs), which can change their state of matter on the basis of a physical/chemical reaction.

Q.5) The “**Terminator Tape**” is often seen in news is related to which of the following?

- a) Sea cables
- b) Space debris
- c) Solar energy
- d) Ship tracking

ANS: B

Explanation: To tackle the problem of space debris, a company called Tethers Unlimited has demonstrated an easy solution to get rid of satellites once they are of no use.

- **The solution involves a 230-foot long strip of conductive tape, which is delightfully called the Terminator Tape.**
- The Terminator Tape is a small module about the size of a notebook.
- Weighing less than two pounds, it is designed to attach to the exterior of a satellite which deploys the 230-foot long conductive tape through an electric signal from either the satellite or an independent timer unit when the satellite completes its mission and is ready to get disposed.

Q.6) Consider the following statements regarding the **benefits of Gene Editing**:

1. It can be used to treat many human diseases & genetic disorders like HIV/AIDS, hemophilia.
2. It could form the basis of highly efficient & cost effective next generation antibiotics.
3. It can be used to bring to life extinct species.

Which of the statements given above is/are correct?

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

ANS: D

Explanation: It is a type of genetic engineering in which DNA is inserted, deleted or replaced in the genome of an organism using artificially engineered nucleases, or “molecular scissors”.

- **Human genome editing can be used to treat many human diseases & genetic disorders like HIV/AIDS, hemophilia etc.**
- **It could substantially bolster disease resistance in humans & increase life span.**
- It could form the basis of highly efficient & cost effective next generation antibiotics (based on bacteriophage viruses).
- **Gene editing can be used to protect endangered species or bring to life extinct species.**
- It can be used to grow healthier food (via fortification) and increasing harvest.
- It has the potential to slow down the spread of diseases by eliminating its means of transmission. E.g. Gene editing can be used to introduce sterile mosquitoes into the environment.

Q.7) Which of the following provisions is/are **NOT** covered under TRIPS-PLUS?

1. Agriculture
2. Manufacturing
3. Data Exclusivity

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: TRIPs Plus are higher level of protection norms demanded by the developed countries that are not prescribed by the WTO's TRIPs regime.

- Although they are named as 'TRIPs-Plus,' they are not formally related to TRIPs.
- Rather, the term is used to indicate that these requirements go beyond the minimum standards imposed by TRIPs.
- Many developing countries who are members of FTAs are under pressure to enact these tougher conditions in their patent laws.
- An example for advanced norms under TRIPs Plus is the protection demanded by developed countries for **data exclusivity**.

Q.8) Consider the following statements regarding the “**Science Research and Engineering Board (SERB)**”:

1. It was created through an act of parliament.
2. Its aim is to promoting basic research in Science and Engineering and to provide financial assistance to persons engaged in such research.

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: One of the most notable developments in the S&T sector in the XI Plan has been the **setting up of the Science and Engineering Research Board (SERB) through an Act of Parliament, viz. the Science and Engineering Research Board Act, 2008**.

- Promoting basic research in Science and Engineering and to provide financial assistance to persons engaged in such research, academic institutions, research and development laboratories, industrial concerns and other agencies for such research and for matters connected therewith or incidental thereto are the primary and distinctive mandate of the Board.
- SERB aims to build up best management systems which would match the best global practices in the area of promotion and funding of basic research.

Q.9) The “**Hololens - is a stand-alone mixed reality holographic headset**” is often seen in news is developed by which of the following?

- a) IBM
- b) Microsoft
- c) Facebook
- d) Apple

ANS: B

Explanation: Microsoft HoloLens, known under development as Project Baraboo, is a stand-alone mixed reality holographic headset specifically designed to be used on the Windows 10 platform.

- HoloLens allows users to experience 3D holographic images as though they are a part of their environment.
- It can help doctors to see through the organs and tissues in the operating theatre.

Q.10) The “**Shahi Litchi**” which earned the Geographical Indication tag recently is famous in which of the following state?

- a) Bihar
- b) West Bengal
- c) Assam
- d) Maharashtra

ANS: A

Explanation: The Shahi Litchi, a speciality of the north Bihar district of Muzaffarpur which earned the Geographical Indication tag a couple of years ago, stands apart from other varieties by virtue of its unique fragrance, extra-juicy pulp and smaller-than-usual seed.

Geography

Q.1) Arrange the following **dams/reservoirs** from south to north direction:

1. Mettur dam
2. Nizam sagar
3. Nagarjuna sagar
4. Indira sagar

Select the correct answer using the code given below:

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

ANS: C

Explanation:



Q.2) Arrange the following **mahajanapadas** from east to west direction:

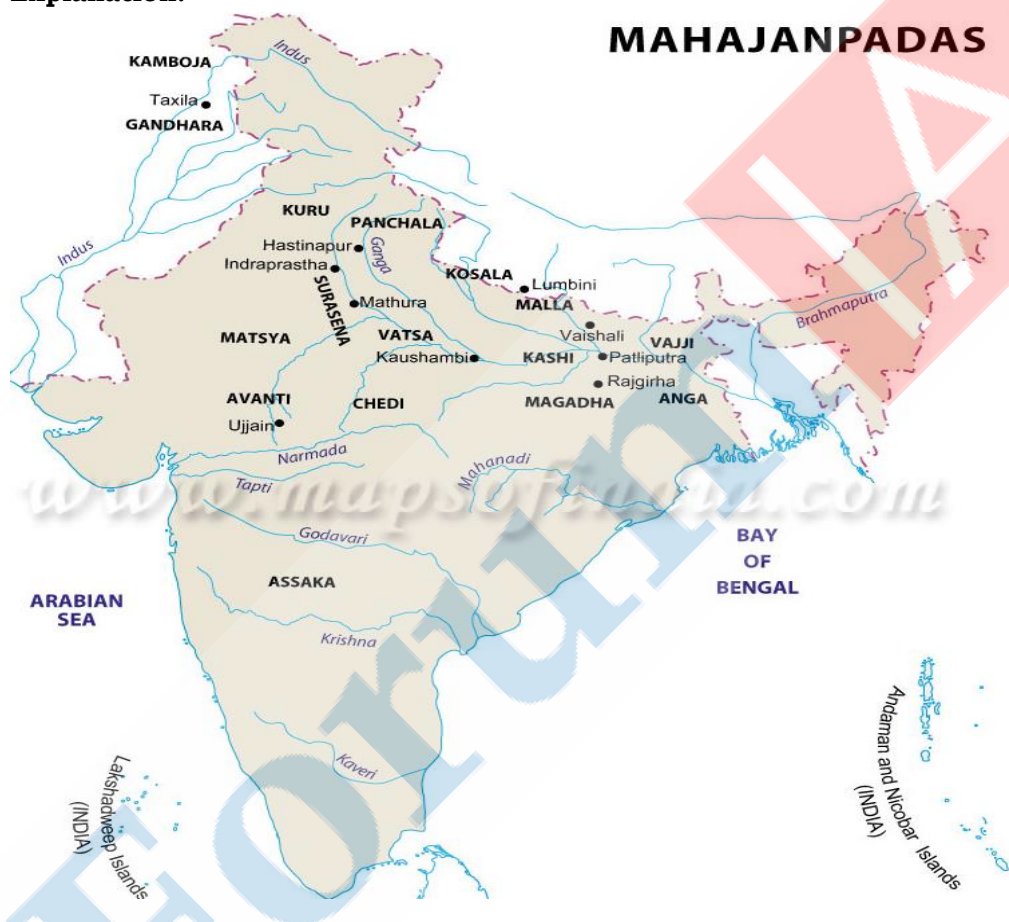
1. Anga
2. Kashi
3. Vatsa
4. Avanti

Select the correct answer using the code given below:

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

ANS: A

Explanation:



Q.3) Arrange the following **rivers flow through Arunachal Pradesh** from west to east:

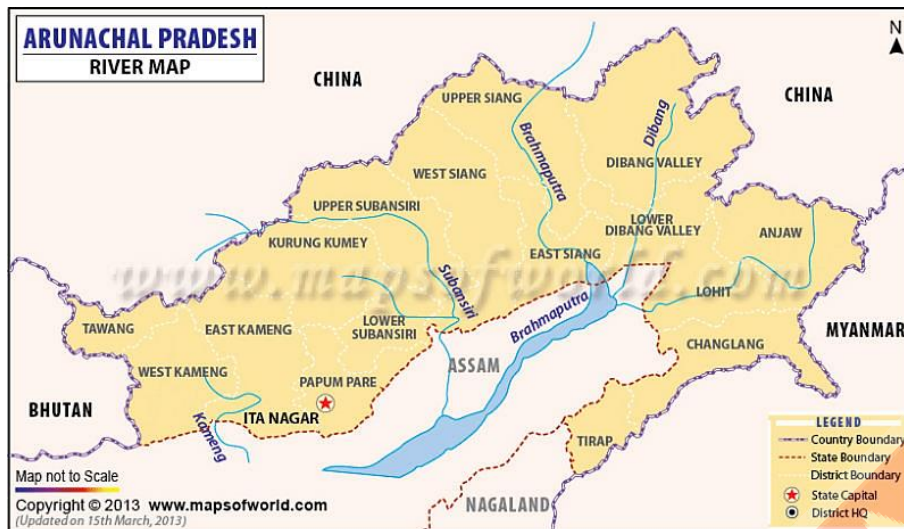
1. Subansiri River
2. Kameng River
3. Lohit River
4. Dibang River

Select the correct answer using the code given below:

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

ANS: B

Explanation:



Q.4) The **National Highway 44** passes through which of the following states?

1. Himachal Pradesh
2. Uttar Pradesh
3. Madhya Pradesh
4. Chhattisgarh
5. Andhra Pradesh

Select the correct answer using the code given below:

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

ANS: D

Explanation:



Q.5) Which of the following pair (s) is/are correctly matched?

Caves	:	State
1. Kanheri caves	:	Gujarat
2. Belum caves	:	Andhra Pradesh
3. Barabar caves	:	Bihar

Select the correct answer using the code given below:

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

ANS: B

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.

Q.6) Which of the following lakes are located in Rajasthan?

- 1. Pichola Lake
- 2. Fateh Sagar Lake
- 3. Swaroop Sagar Lake
- 4. Ana Sagar Lake

Select the correct answer using the code given below:

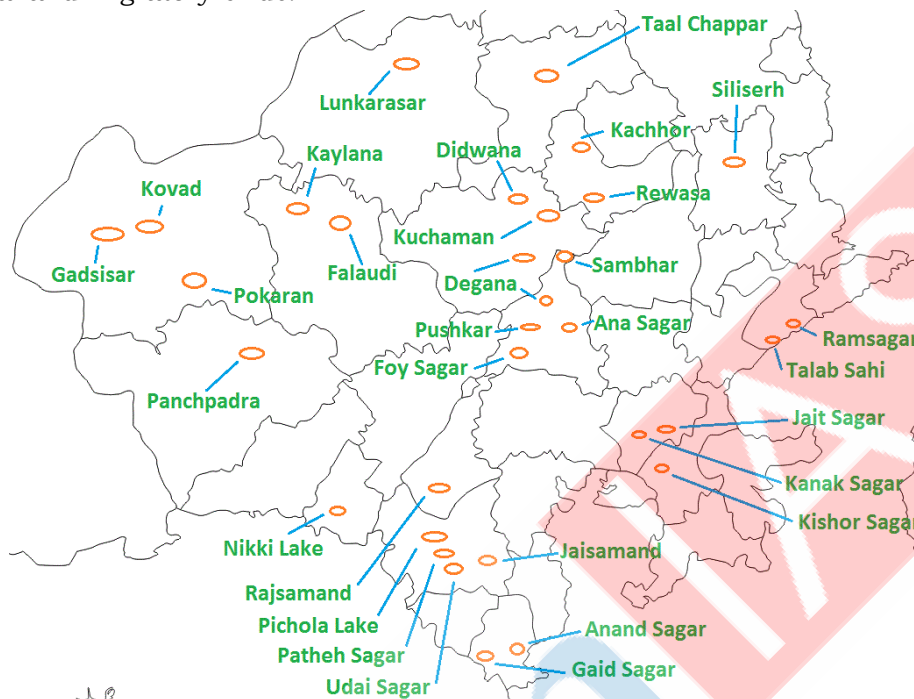
- a) 1, 2 and 3 only
- b) 2 and 3 only
- c) 2 and 4 only
- d) 1, 2, 3 and 4

ANS: D

Explanation: A contentious decision of the Udaipur Urban Improvement Trust to redefine and protect the boundaries of the famous Pichola and Fateh Sagar lakes at their “full tank level” has led to 30% shrinkage in their size and reduced their submergence area to 4.5 sq. km and 2.5 sq. km, respectively.

- The subsequent construction activities on the lakefront land have changed their ecological character of the once beautiful lakes.
- The increasing threat to the lake ecosystem in the City of Lakes, which is a globally renowned tourist destination.

- The entire lake system, comprising Pichola, Fateh Sagar, Swaroop Sagar, Badi and Udai Sagar, should be restored to the “maximum water level” with the erection of pillars and the lakefront be left undisturbed for nesting and breeding activities of local and migratory birds.



Q.7) The “**Buddha Nullah**” – is a seasonal stream often seen in news is located in which of the following state?

- a) Haryana
- b) Punjab
- c) Rajasthan
- d) Uttar 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.

Q.8) The words “**Saranda and Chaibasa**” often seen in news is related to which of the following?

- a) Underground reservoirs
- b) Uranium mines
- c) Iron ore reserves
- d) Copper Mines

ANS: C

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.

Q.9) Recently the union cabinet approved a proposal to set up a **major port at Vadhavan** is located in which of the following state?

- a) Maharashtra
- b) Odisha
- c) Gujarat
- d) Andhra Pradesh

ANS: A

Explanation: The Union Cabinet approved a proposal to set up a major port at Vadhavan near Dahanu in Maharashtra with a total cost of ₹65,545 crore, including about ₹14,500 crore of GST.

This is part of the government's plan to develop infrastructure projects with a cost of ₹100-lakh crore over the next five years.

Q.10) The "**Natuna Islands**" is recently in news, is located in which of the following sea?

- a) Adriatic Sea
- b) Mediterranean Sea
- c) South China Sea
- d) Barents Sea

ANS: C

Explanation: The Natuna Islands is located in Indonesia's Riau Islands province, the west side of the South China Sea.

The Island overlaps with China's nine-dash line claim under which China argues that the waters around the Natuna islands are Chinese traditional fishing grounds.

Environment

Q.1) The “**Prior Informed Consent (PIC)**” procedure is often seen in news is related to which of the following?

- a) Rotterdam Convention
- b) Stockholm Convention
- c) Basel convention
- d) Both A and C

ANS: D

Explanation: Prior Informed Consent (PIC) procedure is followed by Rotterdam Convention and Basel Convention.

- The Prior Informed Consent (PIC) procedure is the mechanism for formally obtaining and disseminating the decisions of importing Parties, as to whether they wish to receive future shipments of those chemicals listed in Annex III of the Convention and for ensuring compliance with these decisions by exporting Parties.
- The chemicals listed in Annex III include pesticides and industrial chemicals that have been banned or severely restricted for health or environmental reasons by two or more Parties and which the Conference of the Parties has decided to subject to the PIC procedure.

Q.2) The “**Nandankanan Zoological Park (NZP)**” is sometimes seen in news is located in which of the following state?

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

ANS: A

Explanation: The **Nandankanan Zoological Park (NZP) (Odisha)** has lost one of its beloved members — **41-year-old Orangutan**, an extant species of great apes.

- According to NZP, the Orangutan **named ‘Bini’** died due to age-related complications.
- He also suffered from respiratory tract infection.

Q.3) The “**Rain loving snake (Ruahlawmrul)**” is sometimes seen in news is found in which of the following state?

- a) Arunachal Pradesh
- b) Kerala
- c) Mizoram
- d) Tamil Nadu

ANS: C

Explanation: The new genus and species of the natricine — predominantly aquatic — that took a seven-member team of herpetologists 12 years to document, has been named *Smithophis atemporalis* after eminent British herpetologist Malcolm Arthur Smith for his immense contribution to Indian herpetology.

- Although new to science, the discovery is locally called **Ruahlawmrul or rain-loving snake**.
- The maximum recorded size of the new species is 655 mm and is commonly seen in human dominated landscapes after rains.
- The team led by Varad B. Giri of the Bengaluru-based National Centre for Biological Sciences and comprising two Mizoram zoologists — H.T. Lalremsanga and Samuel Lalronunga — had conducted molecular analyses to find that **Ruahlawmrul and other species called bicoloured forest snake (*Rhabdops bicolor*), found primarily in Meghalaya, differed from the Olive forest snake (*Rhabdops olivaceous*) endemic to Western Ghats.**

Q.4) 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.

NOTE: United Nations Environment Programme Finance Initiative (UNEP FI) is a partnership between UNEP and the global financial sector to mobilize private sector finance for sustainable development.

- UNEP FI works with more than 300 members – banks, insurers, and investors – and over 100 supporting institutions – to help create a financial sector that serves people and planet while delivering positive impacts.
- We aim to inspire, inform and enable financial institutions to improve people’s quality of life without compromising that of future generations. By leveraging the UN’s role, UNEP FI accelerates sustainable finance.

Q.5) The “**Trimethoprim, Metronidazole and Ciproflaxacin**” often seen in news is related to which of the following?

- a) Pesticides
- b) Antibiotics
- c) Preservation agents of food
- d) Fruit ripening agents

ANS: B

Explanation: An assessment of antibiotic pollution in rivers across the world shows that the concentration of antibiotics in some rivers is much higher than what is considered safe.

- According to the antimicrobial resistance (AMR) industry alliance standards, the safe level ranges from 20-32,000 nanogramme per litre, depending on the antibiotic.
- However, in Bangladesh, the **antibiotic metronidazole** was found to 300 times the safe level — this was 170 times higher than what was estimated in London's River Thames.
- The researchers — who presented their findings at the two day annual meeting of the Society of Environmental Toxicology and Chemistry (SETAC) in Helsinki, which began on May 27 — estimated presence of 14 antibiotics in rivers of 72 countries across six continents.
- A total of 711 sites were tested and antibiotics were found at 65 per cent of them.
- **Trimethoprim**, an antibiotic used to treat urinary tract infection, was found at 307 of the 711 sites tested.
- **Ciproflaxacin** most frequently exceeded safe levels, surpassing the safety threshold at 51 places.

Q.6) Which of the following act (s) consent is/are required for the **River valley and River interlinking projects**?

1. The Environment (Protection) Act, 1986.
2. The Water (Prevention and Control of Pollution) Act, 1974.
3. The Air (Prevention and Control of Pollution) Act, 1981.

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 National Green Tribunal has issued an order restraining Andhra Pradesh from proceeding further with the Godavari-Krishna-Penna river-linking project till the requisite environmental clearances and other permissions are taken under the Environment (Protection) Act, 1986.

- The river valley projects require environmental clearance and also consent under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981.
- The project could not be allowed till the requisite environmental requirements were met.

Q.7) Which Global sportswear giant aims to **eliminate the use of virgin plastics** in its products by 2024?

- a) Puma
- b) Nike
- c) Adidas
- d) Reebok

ANS: C

Explanation: Global sportswear giant Adidas aims at eliminating the use of virgin plastics in its products by 2024 — with a little help from a Maharashtra-based firm — the only one of its kind in the country to produce yarn out of discarded PET bottles.

- At its first factory set up in Nashik five years ago, Polygenta Technology Limited deploys a unique technology to break down used PET (short for Polyethylene Terephthalate) bottles and convert them into polyester filament yarn.

- The firm, with a capacity to convert 30 tonnes of PET bottles into yarn a day, plans to scale up capacity to around 100 tonnes a day in the next two years to meet demand from the likes of Adidas — one of its first clients.

NOTE: According to the United Nations, around 300 million tonnes of plastic are produced every year — roughly the weight of the entire human population. Of this, eight million tonnes of plastic waste ends up in the oceans; PET bottles are the main contributors to plastic waste globally and in India.

Q.8) Consider the following statements regarding the **ecologically sensitive zones (ESZs) notification 2019**:

1. It notifies that area within 10 km of protected areas comes under ESZs.
2. They are issued under the Environment (Protection) Act, 1986 and Environment (Protection) Rules 1986.

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: Over 30% of India's protected area has been covered under the final ecologically sensitive zone (ESZ) notification, the Environment Ministry informed the Lok Sabha.

- As on June 25, 2019, final ESZ notifications covering 316 protected areas (PAs) and draft ESZ notification covering 199 protected areas have been published by the ministry.
- **According to the ministry, out of the 651 Protected Areas (PAs) in India, 316 have been covered under the final ESZ notification which provides for prohibition of mining, stone quarrying and crushing units located within one k.m. of such protected areas.**
- **In the absence of the notification, an area of 10 k.m. around the PAs is considered 'default ESZ' according to the directions of the Supreme Court.**
- Out of the 316 areas covered in ESZ final notification, 100 PAs are in Andaman and Nicobar Islands followed by 29 in Maharashtra and 23 protected areas in Madhya Pradesh and Tamil Nadu.
- **The ESZ notifications are issued under the Environment (Protection) Act, 1986 and Environment (Protection) Rules 1986.**

Q.9) Consider the following statements regarding the **"Zero Tillage"**:

1. It is the process where the crop seed will be sown through drillers without prior land preparation.
2. Residual moisture can be effectively utilized in Zero Tillage.

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: Zero tillage is the process where the crop seed will be sown through drillers without prior land preparation and disturbing the soil where previous crop stubbles are present.

- Zero tillage not only reduce the cost of cultivation it also reduces the soil erosion, crop duration and irrigation requirement and weed effect which is better than tillage.
- Zero Tillage (ZT) also called No Tillage or Nil Tillage.

Advantages of Zero Tillage: Reduction in the crop duration and thereby early cropping can be obtained to get higher yields.

- Reduction in the cost of inputs for land preparation and therefore a saving of around 80%.
- Residual moisture can be effectively utilized and number of irrigations can be reduced.
- Dry matter and organic matter get added to the soil.
- Environmentally safe - Greenhouse effect will get reduced due to carbon sequestration.
- No tillage reduces the compaction of the soil and reduces the water loss by runoff and prevents soil erosion.
- As the soil is intact and no disturbance is done, No Till lands have more useful flora and fauna.

Q.10) Which of the following protocol/agreement is **NOT** related to Ozone layer?

- a) Kigali Agreement
- b) Vienna Convention
- c) Cartagena Protocol
- d) Montreal Protocol

ANS: C

Explanation: The ozone layer is a natural layer of gas in the upper atmosphere that protects humans and other living things from harmful ultraviolet (UV) radiation from the sun.

- Although ozone is present in small concentrations throughout the atmosphere, most (around 90%) exists in the stratosphere, a layer 10 to 50 kilometres above the Earth's surface.
- The ozone layer filters out most of the sun's harmful UV radiation and is therefore crucial to life on Earth.

Ozone depletion: Scientists discovered in the 1970s that the ozone layer was being depleted.

- Atmospheric concentrations of ozone vary naturally depending on temperature, weather, latitude and altitude, while substances ejected by natural events such as volcanic eruptions can also affect ozone levels.
- However, these natural phenomena could not explain the levels of depletion observed and scientific evidence revealed that certain man-made chemicals were the cause.
- These ozone-depleting substances were mostly introduced in the 1970s in a wide range of industrial and consumer applications, mainly refrigerators, air conditioners and fire extinguishers.
- **Vienna Convention (1985), Montreal Protocol (1987) and Kigali Agreement (2016) all three deal with the protection of ozone layer.**

Q.11) Which of the following **factors** are affecting the Indian monsoon?

1. Differential heating of the landmass of Asia and the Indian Ocean.

2. Existence of the Himalayan ranges and the Tibetan Plateau.
3. Changes in the equatorial Atlantic Ocean.

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 term monsoon has been derived from the Arabic word mausin or from the Malayan word monsin meaning 'season'.

Monsoons are seasonal winds (Rhythmic wind movements - Periodic Winds) which reverse their direction with the change of season.

Factors affecting monsoon in India-

- The differential heating of the landmass of Asia and the Indian Ocean.
- The existence of the Himalayan ranges and the Tibetan Plateau.
- The occurrence of heavy-light snow over the Tibetan Plateau.
- The existence and circulation of the upper air jet stream in the troposphere.
- Changes in the equatorial Atlantic Ocean have been known to have an inverse relationship with the Indian summer monsoon rainfall. This means if there is a cold phase in the Atlantic, it can bring more rainfall to India and vice versa.

Q.12) Recently which state has opened its **first specialized hydrotherapy treatment for elephants** suffering from arthritis, joint pain and foot ailments?

- a) Kerala
- b) Assam
- c) Tamil Nadu
- d) Uttar Pradesh

ANS: D

Explanation: India has opened its first specialised hydrotherapy treatment for elephants suffering from arthritis, joint pain and foot ailments near the Wildlife SOS' Elephant Conservation and Care Centre (ECCC), which currently houses 20 rescued elephants and is run in collaboration with the Uttar Pradesh Forest Department and the NGO Wildlife SOS.

- **Situated on the banks of the Yamuna in Mathura**, the new hydrotherapy jumbo pool is 11-foot-deep and has 21 high pressure jet sprays that create water pressure that massage the elephants' feet and body and help in increasing blood circulation.
- "The hospital started in 2018 already offers state-of-the-art modern facilities including wireless digital X-ray, laser treatment, dental X-ray, thermal imaging and ultra-sonography to treat injured, sick and geriatric elephants".

Q.13) Which of the following species are **critically endangered** in India?

1. Northern River Terrapin
2. Nicobar Megapode
3. Arabian Sea Humpback Whale
4. Red Panda

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: There are 21 critically endangered species in India. Snow Leopard, Bustard (including Floricans), Dolphin, Hangul, Nilgiri Tahr, Marine Turtles, Dugongs, Edible Nest Swiftlet, Asian Wild Buffalo, Nicobar Megapode, Manipur Brow-antlered Deer, Vultures, Malabar Civet, Indian Rhinoceros, Asiatic Lion, Swamp Deer, Jerdon's Courser, the Northern River Terrapin, Clouded Leopard, Arabian Sea Humpback Whale and Red Panda.

Q.14) With reference to the centrally sponsored scheme - Integrated Development of Wildlife Habitats (CSS-IDWH), which of the following are the **components of the scheme**?

1. Support to Protected Areas.
2. Protection of Wildlife outside Protected Areas.
3. Recovery programmes for saving critically endangered species and habitats.
4. Climate Change.

Select the correct answer using the code given below:

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

ANS: D

Explanation: Integrated Development of Wildlife Habitats' (IDWH) is an on-going centrally Sponsored Scheme which has been made operational by adding more components and activities to the erstwhile centrally Sponsored Scheme - "Assistance for the Development of National Parks and Sanctuaries" during the 11th Plan Period.

Under IDWH, the financial assistance is provided to State/UT Governments for protection and conservation of wildlife and its habitats in Protected Areas (PAs) as well as outside PAs and also for the recovery programmes of the critically endangered species.

Components of the scheme:

- **Support to Protected Areas (National Parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves).**
- **Protection of Wildlife outside Protected Areas.**
- **Recovery programmes for saving critically endangered species and habitats.**

Q.5) According to the "Botanical Survey of India report - Orchids of India: A Pictorial Guide", a publication detailing all the species of India, which of the following state has **highest endemic species of orchids**?

- a) Kerala
- b) Tamil Nadu
- c) Arunachal Pradesh
- d) Sikkim

ANS: A

Explanation: The Botanical Survey of India has come up with the first comprehensive census of orchids of India putting the total number of orchid species or taxa to 1,256.

- Orchids of India: A Pictorial Guide, a publication detailing all the species of India was unveiled earlier this month by the Ministry of Environment, Forest and Climate Change.
- The 1,256 species or taxa of orchids belong to 155 genera and 388 species are endemic to India.
- A State-wise distribution of orchid species points out that the Himalayas, North-East parts of the country and Western Ghats are the hot-spots of the beautiful plant species.

- The highest number of orchid species is recorded from Arunachal Pradesh with 612 species, followed by Sikkim 560 species and West Bengal; Darjeeling Himalayas have also high species concentration, with 479 species.
- While north-east India rank at the top in species concentration, the Western Ghats have high endemism of orchids.
- **There are 388 species of orchids, which are endemic to India of which about one-third (128) endemic species are found in Western Ghats. The publication point out that Kerala has 111 of these endemic species while Tamil Nadu has 92 of them.**
- Another interesting factor is that the entire orchid family is listed under appendix II of CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) and hence any trade of wild orchid is banned globally.
- “Some of the orchids like Dendrobium, Phalaenopsis, Oncidium and Cymbidium are quite popular in floriculture trade and have a demand both within and outside country”.

NOTE: Orchids can be broadly categorised into three life forms:

- epiphytic (plants growing on another plants including those growing on rock boulders and often termed lithophyte),
- terrestrial (plants growing on land and climbers) and
- mycoheterotrophic (plants which derive nutrients from mycorrhizal fungi that are attached to the roots of a vascular plant).

About 60% of all orchids found in the country, which is 757 species, are epiphytic, 447 are terrestrial and 43 are mycoheterotrophic.

Q.16) Consider the following statements regarding the “Ganges River Dolphin”:

1. It can only live in freshwater and is essentially blind.
2. The Vikramshila Gangetic Dolphin Sanctuary (VGDS) is the only dolphin sanctuary in the country.

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: Dolphins are one of the oldest creatures in the world along with some species of turtles, crocodiles and sharks.

- The Ganges river dolphin was officially discovered in 1801.
- Ganges river dolphins once lived in the Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of Nepal, India, and Bangladesh.
- But the species is extinct from most of its early distribution ranges.
- **The Ganges river dolphin can only live in freshwater and is essentially blind.**
- They hunt by emitting ultrasonic sounds, which bounces off of fish and other prey, enabling them to “see” an image in their mind.
- They are frequently found alone or in small groups, and generally a mother and calf travel together.
- Calves are chocolate brown at birth and then have grey-brown smooth, hairless skin as adults.
- Females are larger than males and give birth once every two to three years to only one calf.

- **The Vikramshila Gangetic Dolphin Sanctuary (VGDS), from Sultanganj to Kahalganj on the Ganga in Bihar is the only dolphin sanctuary in the country.**

Recent Measures: Restricting the speeds of vessels and blowing sirens and horns is how the Ministry of Shipping plans to safeguard the population of the Ganges River Dolphin, in the country's one dolphin reserve through which National Waterway-1 connecting Haldia to Varanasi passes.

Q.17) The “**Biofloc technology**” often seen in news is related to which of the following?

- a) Bio-fertilizers
- b) Aquaculture
- c) Biogas from solid-waste
- d) Renewable energy

ANS: B

Explanation: In an effort to help aquaculture farmers, the Tamil Nadu Dr. J. Jayalalithaa Fisheries University has developed a new feed that will aid in the growth of the vannamei shrimp and the tilapia fish.

- **Using biofloc, a new technology that obviates the need for the use of plankton in aquaculture, the feed, called Nutrifloc, and has been developed.**
- “We balance the carbon-nitrogen ratio in the water due to which certain microbes develop. These microbes help maintain the quality of the water and reduce formation of sludge”.
- The technology reduces the use of water, which earlier had to be changed on a regular basis, brings down power consumption and cuts the cost of feed.
- With the adoption of the technology, aquaculture can be done indoors as well since sunlight would be required only for those using plankton.

Q.18) Consider the following statements regarding the “**Fall Armyworm (FAW)**”:

1. It is an agriculture pest indigenous to African continent.
2. It was first reported on maize in Karnataka in 2018.

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: **Fall Armyworm (FAW), an insect indigenous to the Americas, has been spreading across the globe harming crops.**

- **It migrated to Africa in 2016 and India in June 2018.**
- It has also spread to neighboring countries like Sri Lanka, Bangladesh, Southern parts of China, Vietnam, Cambodia and Bangladesh.
- The impact of the FAW is so intense that in one year — 2017-18 — it has damaged 20-25% crop yield worth \$3.5 billion to 5 billion in about 40 African countries.
- For the first time, India has imported 5 million tonnes maize and it is suspected that the impact of FAW might be one of the reasons for that.
- This lepidopteran pest feeds in large numbers on leaves and stems of more than 80 plant species causing major damage to economically important cultivated crops and grasses such as maize, rice, sorghum and sugarcane, vegetable crops and cotton.
- America addressed the problem by introducing BT Maize.

Crops under attack

FAW IS A LONG-TIME AMERICAN PEST MUNCHING ITS WAY AROUND THE GLOBE, ATTACKING MOSTLY MAIZE, SORGHUM, MINOR MILLETS AND VEGETABLES.



The Fall Armyworm pest feeding on a plant on ICRISAT campus.

- It lays eggs on plants from which larvae hatch and start feeding on the leaves and stems, destroying them in the process.
- The female moth is a strong flyer and can cover 100 km in one night.
- In 2017-18, it damaged 20-25% crop yield worth \$3.5 billion to \$5 billion in about 40 African countries.
- In India, FAW infestation was first reported on maize in Karnataka in July 2018 followed by Telangana. It is now reported to have spread to Tamil Nadu, Telangana, Andhra Pradesh, Maharashtra, Odisha, Gujarat, Chhattisgarh and parts of West Bengal.
- India has imported 5 million tonnes maize, and one of the reasons for that could be large-scale FAW infestation. More than 80 crops were hit by the FAW.
- America addressed the problem by introducing BT Maize.



ICRISAT deputy director general Kiran Sharma, US Consul General Katherine Hadda, ICAR director general Trilochan Mohapatra and CMYT Global Maize Programme director B.M. Prasanna addressing the media on the pest threat at the institute in Patancheru of Sangareddy district on Wednesday.

*MOHD. ARIF

Q.19) The words “**Bhungroo and Urdhavam**” is often seen in news is related to which of the following?

- a) Water harvesting systems
- b) Tribal agriculture festivals
- c) Wild Bamboos
- d) Gums and resins

ANS: A

Explanation: Under Corporate Social Responsibility, Marico Company takes up water conservation projects, through the Parachute Kalpavriksha Foundation, largely in Karnataka, Tamil Nadu and Maharashtra.

It identifies farm lands, talks to farmers, and promotes different types of **water conservation systems** - **farm ponds, bunds on small farm lands, desilting of dams, Bhungroo, Urdhvam and a combination of Urdhvam and Bhungroo (recharging borewells).**

Q.20) “The rainfall mostly experienced in winters. It is also known as Subtropical Winter Rain Zone. The vegetation is mostly deciduous type. In summer, short stature, moisture retentive trees especially citrus fruits grow here.” Which of the following **region** describes the above lines?

- a) Tropical grasslands
- b) Tropical monsoon type
- c) Mediterranean region

d) Temperate grasslands

ANS: C

Explanation: The climate is known for warm to hot, dry summers and mild to cool, wet winters. Winter temperatures are usually between 30 and 65 degrees. Summer months all average above 50 degrees. The warmest month averages about 72 degrees.

- The cause of this climate is directly related to large bodies of water such as the Mediterranean Sea and ocean currents.
- During the summer, cold currents keep the climate mild and dry. Ocean currents shift as the seasons change.
- During the winter the water that was warmed up all summer moves in and keeps the land warm and often brings rain.
- Plants in Mediterranean climate must be able to survive long dry summers. Evergreens such as Pine and Cypress trees are mixed with deciduous trees such as some Oaks.
- Fruit trees and vines such as grapes, figs, olives, and citrus fruits grow well here. Other plants include what are called "scrub", which include small shrubs, grasses, and herbs.