

ForumIAS

F

Prelims Marathon

13th and 19th July,
2020

HISTORY
ECONOMICS
POLITY
SCIENCE AND TECHNOLOGY
GEOGRAPHY AND ENVIRONMENT

History

Q.1) Which of the following is/are **Paleolithic site (s)** in India?

1. Pallavaram
2. Hunsgi valley
3. Bhimbetka

Select the correct answer using the code given below:

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

ANS) A

Explanation: Lower Palaeolithic tools are found in most parts of India, except in a few regions of the Ganges valley, southern Tamil Nadu and in the hilly areas of the Western Ghats.

Athirampakkam, Pallavaram and Gudiyam near Chennai, Hunsgi valley and Isampur in Karnataka, and Bhimbetka in Madhya Pradesh are some important Palaeolithic sites where the Acheulian tools are found.

Q.2) Which pre-historic **period** marked the beginning of agriculture and animal domestication?

- a) Paleolithic
- b) Mesolithic
- c) Neolithic
- d) Chalcolithic

ANS: C

Explanation: The Neolithic period marked the beginning of agriculture and animal domestication.

- It is an important phase in Indian history.
- Early evidence of Neolithic culture is found in the Fertile Crescent region of Egypt and Mesopotamia, the Indus region, the Ganges valley of India and also in China.
- Between 10,000 BCE to 5000 BCE, agriculture emerged in these regions, which led to several cultural developments.

Q.3) Which of the following **feature (s)** is/are prevalent in harappan towns?

1. Fortification
2. Grid pattern
3. Drainage system

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: Harappa (Punjab, Pakistan), Mohenjo-Daro (Sindh, Pakistan), Dholavira, Lothal, and Surkotada (Gujarat, India), Kalibangan and Banawali (Rajasthan, India), and Rakhigarhi (Haryana, India) are the major cities in the Harappan period.

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- **Fortification, wellplanned streets and lanes and drainages** are noticed in the Harappan towns.
- A civic authority perhaps controlled the planning of the towns.
- The Harappans used baked and unbaked bricks, and stones for construction.
- The **towns had a grid pattern and drainages** were systematically built.
- The houses were built of mud bricks while the drainages were built with burnt bricks. Houses had more than one floor.

Q.4) Which of the following sequence is correct about **Vedic literature**?

- a) Vedas – Samhitas – Brahmanas – Upanishad
- b) Vedas – Samhitas – Upanishad – Brahmanas
- c) Vedas – Brahmanas – Samhitas – Upanishad
- d) Vedas – Brahmanas – Upanishad – Samhitas

ANS) A

Explanation: The **Vedas** (Vid = to know, Vidya) are one of the earliest known texts to have been composed in India.

- The language of the Vedas is described as Vedic Sanskrit.
- The main collections of Vedic hymns are called **samhitas**. The Rig Vedic samhita is the earliest text.
- Each samhita has added texts called **brahmanas**, which have commentaries on the hymns and rituals.
- Each brahmana has an **aranyaka** (forest text) and an **upanishad**.

Q.5) Arrange the following **pottery ware culture** in chronological order:

1. Ochre Coloured Pottery Culture
2. Northern Black Polished Ware Culture
3. Painted Grey Ware Culture

Select the correct answer using the code given below:

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

ANS: C

Explanation: Ochre Coloured Pottery Ware culture is found in northern India dating to the Chalcolithic period.

- The Iron Age in North India coincides with the painted Grey Ware culture.
- **The painted grey ware is dated to from 1100 to 800 BCE.** The pottery was fine grey in colour with painted geometric designs.
- The painted grey ware laid the foundation of the early political formations. It correlates with the Kuru-Panchala kingdom known from the Vedic texts.
- The **Painted Grey Ware cultural phase is followed by Northern Black Polished Ware culture (NBPW), which is associated with the Mahajanapada and Mauryan periods.**

Q.6) Consider the following statements regarding the **Mahajanapadas**:

1. According to Buddhist and Jaina traditions, there were sixteen mahajanapadas.
2. Both monarchy and oligarchy nature of polity prevailed in mahajanapadas.

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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: According to Puranic, Buddhist and Jaina traditions, there were sixteen mahajanapadas.

- The proto-states of the Gangetic region were known as janapadas and comprised chiefdoms, republics and small kingdoms.
- **There were also ganasanghas or oligarchies, which were centred on clans. The Vrijjis were one of the best known of the gana-sanghas,** and Vaishali was their capital in the Mithila region.
- The **mahajanapadas on the Gangetic plains were all monarchies.** Vedic orthodoxy was an established practice in these kingdoms.



Q.7) Which of the following is/are **sect (s)** of Buddhism?

- 1. Mahasanghikas
- 2. Sthaviravadins
- 3. Sarvastivadins

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: In course of time, Sthaviravadins, Mahasanghikas and Sarvastivadins emerged as major sects of Buddhism.

- New ideas emerged among the Sarvastivadins and Mahasanghikas. It led to the emergence of Mahayana and Hinayana (the Great and Lesser Vehicles) in Buddhism.
- Mahayana or the Great Vehicle became popular and influential in India. Nalanda University was an important centre of Buddhist learning and was patronised by the Palas. Mahayana spread to China and Japan.
- Hinayana or the Lesser Vehicle became popular in Sri Lanka, Burma, Thailand and other South-east Asian countries.

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- By the end of the Gupta period, Vajrayana or the Vehicle of the Thunderbolt emerged. It was popular in Bengal and Bihar.
- It was influenced by primitive local cults and spread to Tibet in the 11th century CE. The Vikramasila University in Bihar was an important centre of Vajrayana Buddhism.

Q.8) Which Delhi Sultanate relied on **Bandagan** (elite military class) to consolidate the kingdom?

- a) Qutu-ud-din Aibak
- b) Shams-ud-din Iltutmish
- c) Balban
- d) Raziya Sultana

ANS: B

Explanation: The consolidation of a kingdom as vast as the Delhi Sultanate needed reliable governors and administrators.

- Rather than appointing aristocrats and landed chieftains as governors, **the early Delhi Sultans, especially Iltutmish, favoured their special slaves purchased for military service, called bandagan in Persian.**
- They were carefully trained to man some of the most important political offices in the kingdom.
- Since they were totally dependent upon their master, the Sultan could trust and rely upon them.

Q.9) Who among the following abolished the **“Group of Forty”** (Turkan-i-Chahalgani) system?

- a) Raziya Sultan
- b) Iltutmish
- c) Balban
- d) Tughril Khan

ANS: C

Explanation: The nobles occupied a position next only to the king in status and rank.

- Enjoying high social status and commanding vast resources they at times became strong enough to challenge the king.
- In the Delhi Sultanate, nobles were drawn from different tribes and nationalities like the Turkish, Persian, Arabic, Egyptian and Indian Muslims.
- Iltutmish organized a Corps of Forty, all drawn from Turkish nobility and selected persons from this Forty for appointments in military and civil administration.
- The nobles were organized into several factions and were constantly engaged in conspiracies.
- Balban therefore abolished the Corps of Forty and thereby put an end to the domination of “Turkish nobles”.
- Alauddin Khalji also took stern measures against the “Turkish nobles” by employing spies to report to him directly on their clandestine and perfidious activities.

Q.10) Consider the following statements regarding the **Jizya tax**:

1. It was introduced by Qutb-ud-din Aibak for the first time in India.
2. It was levied on both individuals and agriculture land.

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: A

Explanation: Jizya is a tax levied and **collected per head (not on agriculture land)** by Islamic states on non-Muslim subjects living in their land.

- In India, Qutb-ud-din Aibak imposed jizya on non-Muslims for the first time.
- Jizya was abolished by the Mughal ruler Akbar in 16th century but was re-introduced by Aurangzeb in the 17th century.

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Economy

Q.1) Consider the following statements regarding the **strategic disinvestment or strategic sale**:

1. It implies the sale of the Government shareholding of central public sector enterprises (CPSE) of up to 50%, or such higher percentage.
2. It is approved by the Ministry of Finance.

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: When the government decides to transfer the ownership and control of a public sector entity to some other entity, either private or public, the process is called strategic disinvestment.

- The Department of Investment and Public Asset Management (DIPAM) which comes under the Finance Ministry defines Strategic disinvestment as follows:
- “Strategic disinvestment would imply the sale of a substantial portion of the Government shareholding of central public sector enterprises (CPSE) of up to 50%, or such higher percentage as the competent authority may determine, along with transfer of management control.”
- The Cabinet Committee on Economic Affairs (CCEA) approves the strategic divestment of government holdings.

Q.2) With reference to the **new Non Performing Assets (NPA) recognition norms**, which of the following statements is/are correct?

1. The new norms replace all the earlier resolution plans except Joint Lenders Forum (JLF).
2. The lenders can initiate the process of a resolution plan (RP) even before a default.
3. The lenders shall undertake a prima facie review of the borrower account within 30 days from the day of default.

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: C

Explanation: The Reserve Bank of India (RBI) on June 7, 2019 issued a new framework for resolution of bad loans, replacing the previous norms quashed by the Supreme Court in April, offering a 30-day gap for stress recognition instead of the one-day default earlier.

- The **new norms replaces all the earlier resolution plans such** as the framework for revitalising distressed assets, corporate debt restructuring scheme, flexible structuring of existing long-term project loans, strategic debt restructuring scheme (SDR), change in ownership outside SDR, and scheme for sustainable structuring of stressed assets (S4A), and **the joint lenders’ forum** with immediate effect.

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- The central bank said lenders shall recognise incipient stress in loan accounts, immediately on default, by classifying such assets as special mention accounts (SMA).
- Since default with any lender is a lagging indicator of financial stress faced by the borrower, it is expected that the **lenders initiate the process of implementing a resolution plan (RP) even before a default.**
- The central bank said once a borrower is reported to be in default by any lenders, financial institutions, small finance banks or NBFCs, **the lenders shall undertake a prima facie review of the borrower account within 30 days from the day of default.**

Q.3) Recently the Reserve Bank of India (RBI) has **slapped restrictions on withdrawal** on Punjab and Maharashtra Cooperative Bank Ltd (PMC Bank). Under which Act does the RBI has imposed restrictions?

- a) Reserve Bank of India Act, 1934
- b) Banking Regulation Act, 1949
- c) The Deposit Insurance and Credit Guarantee Corporation Act, 1961
- d) Payment and Settlement Systems Act, 2007

ANS: B

Explanation: The RBI has slapped restrictions on Punjab and Maharashtra Cooperative Bank Ltd (PMC Bank). It has also appointed an administrator and superseded its board of directors.

- The PMC had been placed under 'directions' of the Reserve Bank of India (RBI) for six months, after irregularities had been found in lending.
- The RBI has issued directions in exercise of powers vested in it under **sub section (1) of Section 35 A of the Banking Regulation Act, 1949**, read with Section 56 of the Banking Regulation Act, 1949 (AACCS).

Q.4) Which of the following **financial institutions/banks** are covered under deposit insurance of Deposit Insurance and Credit Guarantee Corporation (DICGC)?

1. All Commercial Banks
 2. Regional Rural Banks
 3. Co-operative Banks
 4. Non-Banking Financial institutions
- Select the correct answer using the code given below:

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

ANS) A

Explanation: The functions of the DICGC are governed by the provisions of 'The Deposit Insurance and Credit Guarantee Corporation Act, 1961' (DICGC Act) and 'The Deposit Insurance and Credit Guarantee Corporation General Regulations, 1961' framed by the Reserve Bank of India in exercise of the powers conferred by sub-section (3) of Section 50 of the said Act.

Banks covered by Deposit Insurance Scheme are:

- **All commercial banks** including the branches of foreign banks functioning in India, **Local Area Banks and Regional Rural Banks.**

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- **Co-operative Banks** - All eligible co-operative banks as defined in Section 2(gg) of the DICGC Act are covered by the Deposit Insurance Scheme.
- All State, Central and Primary co-operative banks functioning in the States/Union Territories which have amended their Co-operative Societies Act as required under the DICGC Act, 1961, empowering RBI to order the Registrar of Co-operative Societies of the respective States/Union Territories to wind up a co-operative bank or to supersede its committee of management and requiring the Registrar not to take any action for winding up, amalgamation or reconstruction of a co-operative bank without prior sanction in writing from the RBI, are treated as eligible banks.
- At present **all Co-operative banks are covered by the Scheme**. The Union Territories of Lakshadweep and Dadra and Nagar Haveli do not have Co-operative Banks.

Q.5) Which of the following are the **trigger points** that invite corrective action from the central bank under Prompt Corrective Action (PCA)?

1. Capital to Risk weighted Asset Ratio (CRAR)
2. Net Non-Performing Assets (NPA)
3. Return on Assets (RoA)
4. Leverage ratio (LR)

Select the correct answer using the code given below:

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

ANS: A

Explanation: RBI's Prompt Corrective Action (PCA) Framework is a set of guidelines for banks that are weak in terms of identified indicators including – poor asset quality, insufficient capital and insufficient profit or losses.

- The **Reserve Bank of India initiated the Scheme of Prompt Corrective Action (PCA) in 2002** to discipline banks when they report poor and risky financial performance.
- PCA is a policy action guideline (first in May 2014 and revised effective from April 1, 2017) if a commercial bank's financial condition worsens below a mark.
- The PCA framework **specifies the trigger points** or the level in which the RBI will intervene with corrective action. This trigger points are expressed in terms of parameters for the banks.

The parameters that invite corrective action from the central bank are:

- **Capital to Risk weighted Asset Ratio (CRAR)**
- **Net Non-Performing Assets (NPA)**
- **Return on Assets (RoA)** and
- **Leverage ratio**

Q.6) The term **Economic Capital Framework**, sometimes seen in news is related to which of the following?

- a) Commercial Banks
- b) Reserve Bank of India
- c) New Development Bank
- d) International Monetary Fund

ANS: B

Explanation: Bimal Jalan Committee was set up to review the **economic capital framework of the RBI**.

- Its mandate was to review global best practices followed by the central banks in making assessment and provisions.
- It has suggested that the framework may be periodically reviewed after every five years.
- The panel recommended to align the central bank's accounting year with the financial year which could reduce the need for paying interim dividend.
- The panel also suggested a clearer distinction between the two components of economic capital — realized equity and revaluation balances — mainly because of the volatile nature of the revaluation balances.

Q.7) The central bank (RBI) has **three different funds** that together comprise its reserves. Arrange the following funds in **ascending order** with respect to the reserves?

1. The Currency and Gold Revaluation Account (CGRA)
2. The Contingency Fund (CF)
3. The Asset Development Fund (ADF)

Select the correct answer using the code given below:

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

ANS: B

Explanation: The central bank has three different funds that together comprise its reserves. These are the Currency and Gold Revaluation Account (CGRA), the Contingency Fund (CF) and the Asset Development Fund (ADF).

- Of these, the **CGRA is by far the largest** and makes up the significant bulk of the RBI's reserves.
- The fund, which in essence is made up of the gains on the revaluation of foreign exchange and gold, stood at ₹6.91 lakh crore as of financial year 2017-18.
- The CGRA has grown quite significantly since 2010, at a compounded annual growth rate of 25%.
- The **CF is the second biggest fund**, amounting to ₹2.32 lakh crore in 2017-18.
- It is designed to meet contingencies from exchange rate operations and monetary policy decisions and is funded in large part from the RBI's profits.
- The **ADF makes up a much smaller share of the reserves**.

Q.8) The proper definition of **FARMER** is provided by which of the following?

- a) NITI Aayog
- b) National Commission of Farmers 2007
- c) NABARD Act, 1981

ANS: B

Explanation: According to the **National Commission of Farmers 2007**, the term **"FARMER"** will refer to a person actively engaged in the economic and/or livelihood activity of growing crops and producing other primary agricultural commodities and will include all agricultural operational holders, cultivators, agricultural labourers, sharecroppers, tenants, poultry and livestock rearers, fishers, beekeepers, gardeners,

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pastoralists, non-corporate planters and planting labourers, as well as persons engaged in various farming related occupations such as sericulture, vermin-culture, and agro-forestry. The term will also include tribal families / persons engaged in shifting cultivation and in the collection, use and sale of minor and non-timber forest produce.

Q.9) The **Protected Special Agricultural Zone (PSAZ)**, sometimes seen in news is related to which of the following state?

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

ANS: B

Explanation: The **Tamil Nadu Government has introduced a Bill in the Legislative Assembly seeking to declare the Cauvery delta region a Protected Special Agriculture Zone (PSAZ).**

- The Bill said, since certain non-farming activities were adversely affecting agriculture in the region, threatening the State's food security, "to protect the agriculture in this region, it is proposed to prohibit certain activities in the region."
- The Bill also sought to establish a 30-member Tamil Nadu Protected Agricultural Zone Authority headed by the Chief Minister to advise the government on various measures to protect and improve farming activities to increase farm production and farm productivity to serve the interest of farmers.
- **The proposed PSAZ would comprise of Thanjavur, Tiruvarur and Nagapattinam districts and five blocks each in Cuddalore and Pudukkottai districts.**
- These areas have been listed under the First Schedule of the Act, to which the government may add or omit any area in the future.
- The government has identified zinc smelter; iron ore process plants, copper smelter, aluminum smelter, tannery, and ship breaking industries among others as industries that adversely affect agriculture developments in the PSAZ. This list in the Second Schedule of the Act too, is subject to omission and addition subsequently.

Q.10) Which of the following **crops are monitored** under Market Intelligence and Early Warning System (MIEWS) Portal?

1. Sugar cane
2. Onions
3. Pulses
4. Tomato
5. Potato

Select the correct answer using the code given below:

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

ANS: D

Explanation: The MIEWS Dashboard and Portal is a 'first-of-its-kind' platform for 'real time monitoring' of **prices of tomato, onion and potato (TOP)** and for simultaneously generating alerts for intervention under the terms of the Operation Greens (OG) scheme.

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- This portal is a novel initiative of MoFPI leveraging IT tools and furthering the goals of Digital India.
- The portal would disseminate all relevant information related to TOP crops such as Prices and Arrivals, Area, Yield and Production, Imports and Exports, Crop Calendars, Crop Agronomy, etc in an easy to use visual format.

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Polity

Q.1) Which of the following pension scheme (s) is/are run by the **Pension Fund Regulatory & Development Authority (PFRDA)**?

1. National Pension System (NPS)
2. Atal Pension Yojana
3. Pradhan Mantri Shram Yogi Maandhan (PM-SYM)

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 Pension Fund Regulatory & Development Authority Act was passed on 19th September, 2013 and the same was notified on 1st February, 2014.

- PFRDA is regulating NPS, subscribed by employees of Govt. of India, State Governments and by employees of private institutions/organizations & unorganized sectors.
- Atal Pension Yojana (APY), a pension scheme launched by Government of India and run by PFRDA is focused on the unorganized sector workers.
- Under the APY, minimum guaranteed pension of Rs. 1,000/- or 2,000/- or 3,000/- or 4,000 or 5,000/- per month will start after attaining the age of 60 years depending on the contributions by the subscribers for their chosen pension amount.

Q.2) The “eShakti” initiative, sometimes seen in news is related to which of the following?

- a) Self Help Groups (SHG)
- b) Old age pension
- c) Women entrepreneurship
- d) Women skill development

ANS: A

Explanation: eShakti or Digitization of SHGs is an initiative of Micro Credit and Innovations Department of NABARD in line with our Hon'ble PM statement, 'we move with the dream of electronic digital India...'

- Digital India is an Rs 1.13-lakh crore initiative of Government of India to integrate the government departments and the people of India and to ensure effective governance. It is to "transform India into digital empowered society and knowledge economy".
- Keeping in view the Government of India's mission for creating a digital India, NABARD launched a project for digitization of all Self Help Group (SHG) in the country.

Q.3) Consider the following statements regarding the **Good Governance Index (GGI)**:

1. Kerala tops the Good Governance Index.
2. Country is divided into five zones for the purpose of rankings.

Which of the statements given above is/are correct?

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

ANS: D

Explanation: Tamil Nadu has bagged the top position in the composite ranking for good governance index (GGI), followed by Maharashtra and Karnataka, according to data provided by the Personnel Ministry.

- The **states and union territories have been divided into three groups** — big states, north-east and hill states, and union territories — for the rankings based on certain indicators separately.
- The objectives of GGI are to provide quantifiable data to compare the state of governance in all states and union territories, enable them to formulate and implement suitable strategies for improving governance and shift to result oriented approaches and administration.

Q.4) Consider the following statements regarding the **National Health Profile (NHP) 2019:**

1. It is a biennial report released by the Central Bureau of Health Intelligence (CBHI).
2. According to NHP 2019, life expectancy has increased from 49.7 years in 1970-75 to 70.2 in 2012-16.

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: The 14th edition of National Health Profile and its e-book (digital version) has been released by the Central Bureau of Health Intelligence (CBHI).

- **CBHI has been publishing (annually)** the National Health Profile since 2005 and its digital version since 2015.
- **Life expectancy in India has increased from 49.7 years in 1970-75 to 68.7 years in 2012-16**, as per the National Health Profile 2019.
- For the same period, the life expectancy for females is 70.2 years and 67.4 years for males.

Q.5) The “**Empowered Action Group (EAG) States**” often seen in news, which of the following states are under EAG?

1. Bihar
2. Uttar Pradesh
3. West Bengal
4. Madhya Pradesh
5. Odisha
6. Assam

Select the correct answer using the code given below:

- a) 1, 2, 3, 4 and 5 only
- b) 1, 2, 3, 4, 5 and 6 only
- c) 1, 2, 4, 5 and 6 only
- d) 1, 2, 3, 4, 5 and 6 only

ANS: B

Explanation: India's MMR has declined from 130 per 1 lakh live births in 2014-2016 to 122 per 1 lakh live births in 2015-2017 as per the recently released Sample Registration System (SRS) 2015-2017 bulletin for MMR. A decline of 8 points (6.2%) has been observed.

- The bulletin categorizes the country into three groups: Empowered Action Group (EAG), Southern States and other states.
- The following states are comes **under EAG are Bihar, Jharkhand, Uttar Pradesh, Uttarakhand, Madhya Pradesh, Chhattisgarh, Orissa and Rajasthan.**

Q.6) The **Healthy States, Progressive India report 2019** is released by which of the following?

- NITI Aayog
- Central Bureau of Health Intelligence (CBHI)
- Sample Registration System
- National Sample Survey Office (NSSO)

ANS: A

Explanation: Healthy States, Progressive India is **an annual report of Niti Aayog** ranks states and Union territories innovatively on their year-on-year incremental change in health outcomes, as well as, their overall performance with respect to each other.

The report has been prepared by Niti Aayog in collaboration with the Ministry of Health and Family Welfare and technical assistance from the World Bank.

Q.7) The **Global Education Monitoring Report** is released by which of the following?

- United Nations Children's Fund (UNICEF)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- World Bank
- World Economic Forum

ANS: B

Explanation: The Global Education Monitoring Report is released by the **United Nations Educational, Scientific and Cultural Organization (UNESCO).**

Q.8) The **Bhilwara model** is recently seen in news is related to which of the following?

- CoVID-19 tackling
- Controlling locust attack
- Migrants mobilization
- None

ANS: A

Explanation: The **Bhilwara COVID-19 containment "model"** refers to the steps taken by the administration in Rajasthan's Bhilwara district to contain the disease, after it emerged as a hotspot for coronavirus positive cases.

- The measures taken by the Rajasthan government include imposing a curfew in the district which also barred essential services, extensive screening and house-to-house surveys to check for possible cases, and detailed contact tracing of each positive case so as to create a dossier on everybody they met ever since they got infected.

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- The Bhilwara model (in Rajasthan) has become a successful example for the world to emulate in tackling the Covid-19 crisis **because of the efforts of local bureaucracy.**
- **This earmarks the importance of the role of civil services** in containing the spread of disease at community level.

Q.9) The **IS 10500:2012** of Bureau of Indian Standards (BIS) deals with which of the following?

- a) Drinking water
- b) Air quality
- c) Packed food standards
- d) Electric appliances

ANS: A

Explanation: The report of the Ministry of Consumer Affairs, Food and Public Distribution red-flagging **tap water quality** in major Indian cities comes as no surprise, given that many official water distribution agencies routinely advise consumers to consume only boiled water.

- Going by the matrix of tests carried out by the Bureau of Indian Standards for the Ministry, Delhi has abysmal water quality, Chennai and Kolkata rank very low, and Mumbai is the only city with acceptable results.
- **City water systems are normatively required to comply with the national standard for drinking water IS 10500:2012**, but most obviously feel no compulsion to do so.

Q.10) Consider the following statements regarding the **Comptroller and Auditor General of India (CAG)**:

1. He is the guardian of the public purse and controls the entire financial system of the country.
2. He is appointed by the President 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: C

Explanation: The Constitution of India (Article 148) provides for an independent office of the Comptroller and Auditor General of India (CAG).

- He is the head of the Indian Audit and Accounts Department.
- **He is the guardian of the public purse and controls the entire financial system of the country at both the levels—the Centre and the state.**
- His duty is to uphold the Constitution of India and laws of Parliament in the field of financial administration.
- The **CAG is appointed by the president of India** by a warrant under his hand and seal.

Science and technology

Q.1) Consider the following statements regarding the **Polar Satellite Launch Vehicle (PSLV)**:

1. It emerged as the reliable and versatile workhorse launch vehicle of India.
2. It has failed only once in her total launch missions till December 2019.

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: Polar Satellite Launch Vehicle (PSLV) is the third generation launch vehicle of India.

- It is the first Indian launch vehicle to be equipped with liquid stages.
- After its first successful launch in October 1994, PSLV emerged as the reliable and versatile workhorse launch vehicle of India with 39 consecutively successful missions by June 2017.
- During 1994-2017 period, the vehicle has launched 48 Indian satellites and 209 satellites for customers from abroad.
- Besides, the vehicle successfully launched two spacecraft – Chandrayaan-1 in 2008 and Mars Orbiter Spacecraft in 2013 – that later traveled to Moon and Mars respectively.

It has failed **twice** in her missions.

- PSLV-D1 was launched from Satish Dhawan Space Centre SHAR, Sriharikota on Sep 20, 1993. IRS-1E Satellite could not be placed in orbit. It is her maiden mission.
- The Polar Satellite Launch Vehicle, in its forty-first flight (PSLV-C39), was suppose to launch IRNSS-1H, the eighth satellite of the Indian Regional Navigation Satellite System (IRNSS) into a Sub-Geosynchronous Transfer Orbit (Sub-GTO).
- Launch of PSLV-C39/IRNSS-1H, Scheduled on Aug 31, 2017 from Satish Dhawan Space Centre, SHAR, Sriharikota was unsuccessful.

Q.2) Consider the following statements regarding the **Small Satellite Launch Vehicle:**

1. It has the capability to deliver payload 500kg at a height of 500km.
2. It has all solid motor stages only.
3. It can accommodate multiple satellites like GSLV and PSLV.

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: D

Explanation: ISRO's Vikram Sarabhai Space Centre (VSSC) at Thumba has completed the design for the Small Satellite Launch Vehicle (SSLV), the '**baby rocket**' billed as the quickest way to space for small-size satellites.

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- On the launchpad, the SSLV will stand 34 metres tall, 10 metres shorter than the Polar Satellite Launch Vehicle (PSLV) and around 15 metres shorter than the Mk-II version of the Geosynchronous Satellite Launch vehicle (GSLV).
- It is also a 'thinner' launch vehicle, possessing a diameter of just two metres.
- **With a lift-off mass of 120 tonnes, the SSLV can place a 500 kg payload at a height of 500 km in the Low Earth Orbit (LEO).**
- **The SSLV has three solid motor stages, and like the PSLV and GSLV, can accommodate multiple satellites, albeit smaller ones.**
- Unlike the PSLV and GSLV, the SSLV can be assembled both vertically and horizontally.

Q.3) The **Human Space Flight Centre (HSFC)**, the hub of ISRO's future manned missions, is located at?

- a) Sriharikota
- b) Bengaluru
- c) Mahendragiri
- d) Thumba

ANS: B

Explanation: The **Human Space Flight Centre (HSFC)**, the hub of ISRO's future manned missions, was inaugurated at ISRO headquarters in Bengaluru.

- HSFC shall be responsible for the implementation of Gaganyaan project — which involves mission planning, development of engineering systems for crew survival in space, crew selection and training and also pursue activities for sustained human space flight missions.
- HSFC will take the support of ISRO centres to implement the first developmental [crewed] flight.

Q.4) The “**ICON Satellite**”, sometimes seen in news is related to which of the following?

- a) Rain forecasting
- b) Probing Earth's upper atmosphere
- c) To study Jupiter satellite
- d) To study Earth's core

ANS: B

Explanation: NASA has recently launched Ionospheric Connection Explorer (ICON) spacecraft from Cape Canaveral Air Force Station.

- It is designed to probe Earth's upper atmosphere (Ionosphere), a massive layer that overlaps with the boundary of space.
- Its measurements will help scientists better understand the link between space weather and terrestrial weather, and how the two interact in the ionosphere.
- It is the region where strange and unique phenomena, such as the auroras and geomagnetic storms are created.

Q.5) The “**Dhanush Regiment**” is recently in news is related to which of the following?

- a) Artillery Guns
- b) Unmanned Aerial Vehicles
- c) Stealth Frigates
- d) Light Weight Helicopters

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ANS: A

Explanation: The Indian Army, which began inducting the indigenously upgraded Dhanush artillery guns, will have the first regiment in place by March 2020 and will get all 114 guns by 2022.

- Dhanush is the indigenously upgraded variant of the Swedish Bofors gun imported in the 1980s.
- Dhanush is a 155 mm, 45-calibre towed artillery gun with a range of 36km and has demonstrated a range of 38 km with specialised ammunition.
- It is an upgrade of the existing 155m, 39 calibre Bofors FH 77 gun.

Q.6) The term “**Losharik**”, sometimes seen in news is related to which of the following?

- Offshore Oil-field
- Nuclear powered submarine
- Research Vessel
- Supersonic Aircraft

ANS: B

Explanation: Losharik is a highly advanced nuclear powered submarine of Russia.

- Recently a fire accident was reported on the submarine within the Russian territorial waters.
- It is a deep-diving special mission’s ship, operated by the Russian Navy.
- It is capable of withstanding high pressures at great depths, enabling it to survey the ocean floor.

Q.7) The terms “**Rani Rashmoni, Rani Abbakka, Rani Avanti Bai, Rani Durgavati and Rani Gaidinliu**” often seen in news is related to which of the following?

- Deep sea research vessels
- Patrolling vessels
- Corvettes
- Diesel submarines

ANS: B

Explanation: Rani Rashmoni is a fast patrol vessel, indigenously built by Hindustan Shipyard.

- It is built under the Fast Patrol Vessel (FPV) project of Indian Coast Guard.
- Under the first phase of the project, 5 FPV’s has been built.
- The first four such ships are ICGS Rani Abbakka, ICGS Rani Avanti Bai, ICGS Rani Durgavati and ICGS Rani Gaidinliu.

Q.8) The **SCOJtEx-2019** is a four-day long exercise, sometimes seen in news is related to which of the following?

- Army exercise
- Naval exercise
- Urban Earthquake Search and Rescue exercise

ANS: D

Explanation: India had always been the first respondent in situations of Humanitarian Assistance and Disaster Management (HADR) in the subcontinent said by Indian Home Minister.

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- Addressing the 10th meeting of the Heads of Departments of SCO member-States, he called on the Shanghai Cooperation organisation (SCO) members to make a concerted, synchronised effort towards securing people from disasters.
- Minister expressed the confidence that the four-day Joint Exercise on Urban Earthquake Search and Rescue (SCOJtEx)-2019, held in November 2019, and the ministerial meeting would help in finalizing an action plan for managing disasters for the year 2020-21.

Q.9) Consider the following statements regarding the microdot technology:

1. It involves spraying of thousands of nano dots carrying registration information on vehicles.
2. The microdots are adhesive and they become permanent fixtures which cannot be removed without damaging the asset.

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 microbot technology involves spraying of thousands of nano dots carrying registration information on vehicles.

- These nano-size metal particles carry information like the registration number and chassis number of the vehicle.
- The dots are sprayed at many different spots on the vehicle, so that even if the vehicle is stolen and sold for parts, it can be traced.
- The microdots are adhesive and will become permanent fixtures/affixation which cannot be removed without damaging the asset, which is the vehicle itself.

Q.10) The **Elastocaloric effect** is recently seen in news is related to which of the following?

- a) Cooling
- b) Aero-dynamics
- c) Nuclear power
- d) Wind energy

ANS: A

Explanation: When rubbers bands are twisted and untwisted, it produces a cooling effect. This is called the “elastocaloric” effect, and researchers have suggested that it can be used in a very relevant context today.

- Researchers from multiple universities, including Nankai University in China, have found that the elastocaloric effect, if harnessed, may be able to do away with the need of fluid refrigerants used in fridges and air-conditioners.
- These fluids are susceptible to leakages, and can contribute to global warming. In the elastocaloric effect, the transfer of heat works much the same way as when fluid refrigerants are compressed and expanded.
- When a rubber band is stretched, it absorbs heat from its environment, and when it is released, it gradually cools down.
- In order to figure out how the twisting mechanism might be able to enable a fridge, the researchers compared the cooling power of rubber fibres, nylon and polyethylene fishing lines and nickel-titanium wires.
- They observed high cooling from twist changes in twisted, coiled and super-coiled fibres.

Geography

Q.1) Consider the following statements regarding the **isarithmetic maps/lines**:

1. It is a type of thematic map that represents a continuous field using line and/or region symbols to connect places of similar value.
 2. Contour maps, Isotherm maps and Isobar maps are the examples of isarithm maps.
- 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: An **Isarithmic map** is a type of thematic map that represents a continuous field using line and/or region symbols to connect places of similar value.

- It is sometimes called a heat map, although the term heat map should only be used for one type of isarithmic map that represents density.
- In general, these maps are used to help visualize continuous data sets by utilizing color, especially hue and value.
- There are a number of ways to symbolize isarithmic maps; no matter the design method, the phenomenon being represented must be a quantitative continuous field.
- **Contour maps, Isotherm maps and Isobar maps are the examples of isarithm maps.**

Q.2) Which of the following **port city** is nearest to tropic of cancer in India?

- a) Kandla
- b) Bharuch
- c) Bhavnagar

ANS: A

Explanation: Kandla port city is the nearest to tropic of cancer in India.



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Q.3) Arrange the following **Buddhist sites/monasteries** from south to North direction:

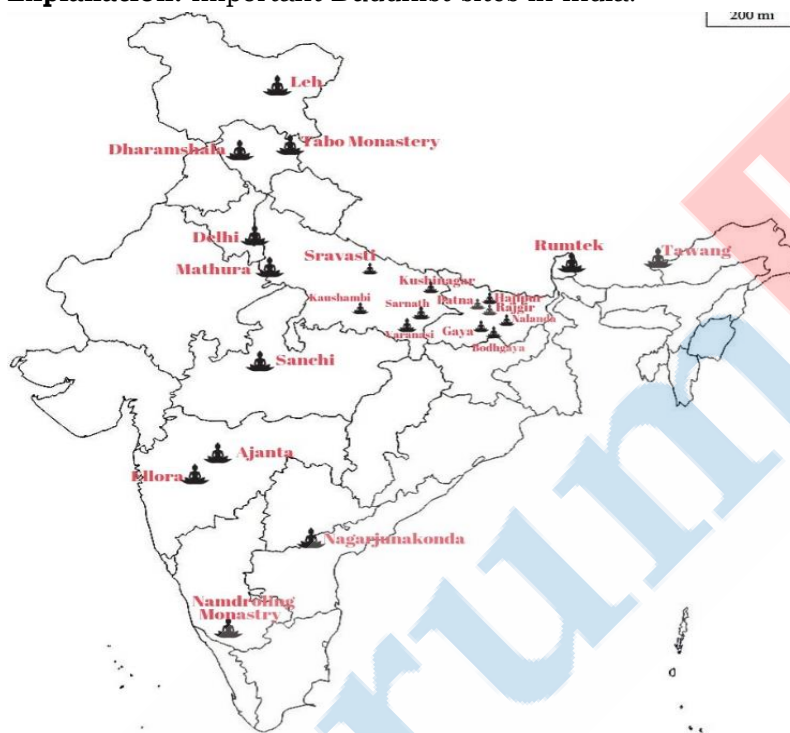
1. Ajanta
2. Sanchi
3. Namdroling monastery
4. Tabo monastery

Select the correct answer using the code given below:

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

ANS: B

Explanation: Important Buddhist sites in India.



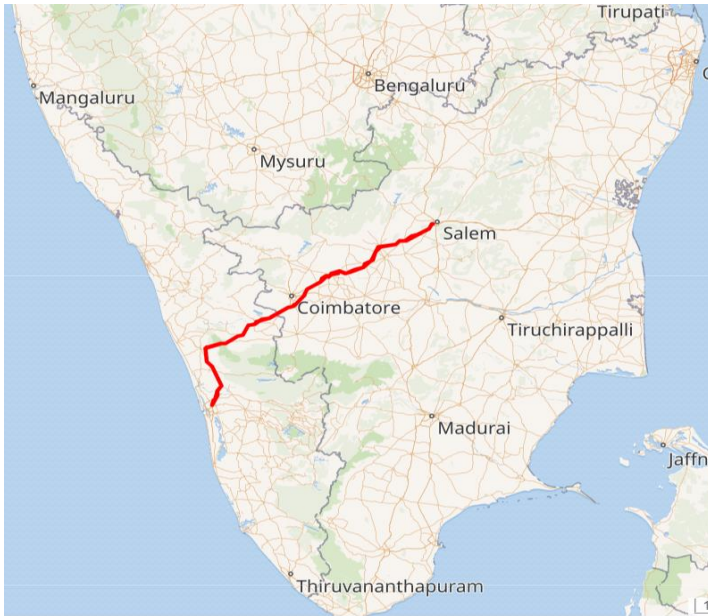
Q.4) Recently **National Highway (NH) 544**, often seen in news is connecting/drives through which of the following states?

- a) Andhra Pradesh & Telangana
- b) Kerala & Karnataka
- c) Tamil Nadu & Andhra Pradesh

ANS: D

Explanation: National Highway 544, commonly referred to as NH 544, is a 340-kilometre-long National Highway in South India connecting Salem city in Tamil Nadu to the city of Kochi in Kerala. It is also called the Salem-Kochi Highway.

The Central Vigilance Commission has asked the Chief Vigilance Officer of the National Highway Authority of India to look into the complaint filed by Thrissur DCC general secretary Shaji J. Kodankandath about delay and corruption in the construction of Mannuthy-Wadakkanchery stretch of National Highway 544.



Q.5) Arrange the following **national parks** of Andaman & Nicobar Islands from north to south direction:

1. Saddle Peak
2. Mount Harriett
3. North Button
4. Mahatma Gandhi Marine

Select the correct answer using the code given below:

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

ANS: D

Explanation:



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Q.6) Recently **pothamala hills** are in news for sighting of new menhirs (possible existence of a major prehistoric necropolis) is located in which of the following state?

- a) Telangana
- b) Odisha
- c) Karnataka
- d) Kerala

ANS: D

Explanation: The sighting of new menhirs, perhaps the largest-ever recorded in Kerala, on the Pothamala hills in Udumbanchola taluk on the Kerala-Tamil Nadu border, has thrown light on the possible existence of a major prehistoric necropolis there.

- The menhirs were identified by a team of historians led by Rajeev Puliyoor, assistant professor at the Government Teachers' Training College, Elanthoor.
- The menhirs were planted in a specific geometrical pattern on a cluster of hills, Mr Puliyoor said.
- He said the exquisite natural settings of the hills and dales at Pothamala made the yet-to-be explored megalithic site different from similar sites spotted in other parts of the State.
- Most of these structures were oriented in the east-west direction.
- The megalithic stone sentinels at Pothamala might hold the key to hitherto unexplored facets of a civilisation that dated back around 3,000 years, said Mr. Puliyoor.

Q.7) Which of the following countries of Europe is/are **landlocked**?

1. Serbia
2. Poland
3. Croatia

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: A landlocked country is a country which has no connection to a sea or ocean.

- There are 17 landlocked countries in Europe: **Andorra, Armenia, Austria, Belarus, Kosovo, Czech Republic, Hungary, Liechtenstein, Luxembourg, Macedonia, Moldova, San Marino, Serbia, Slovakia, Switzerland and Vatican City.**
- Liechtenstein is unique in Europe because it is doubly-landlocked meaning it is both landlocked and surrounded by countries which are also landlocked, a situation it only shares with Uzbekistan which is the second country in the world surrounded only by landlocked countries (Turkmenistan, Kazakhstan, Kirgizstan, Tajikistan and Afghanistan).

Q.8) Arrange the following **capital cities** of West Asia from west to east direction:

1. Ankara
2. Damascus
3. Tbilisi
4. Muscat

Select the correct answer using the code given below:

- a) 1 – 2 – 3 – 4

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

ANS: A

Explanation:



Q.9) Arrange the following **coal basins** of India from east to west direction:

1. Koel Valley basin
2. Rajmahal basin
3. Deogarh - Hazaribagh basin
4. Sone Valley basin

Select the correct answer using the code given below:

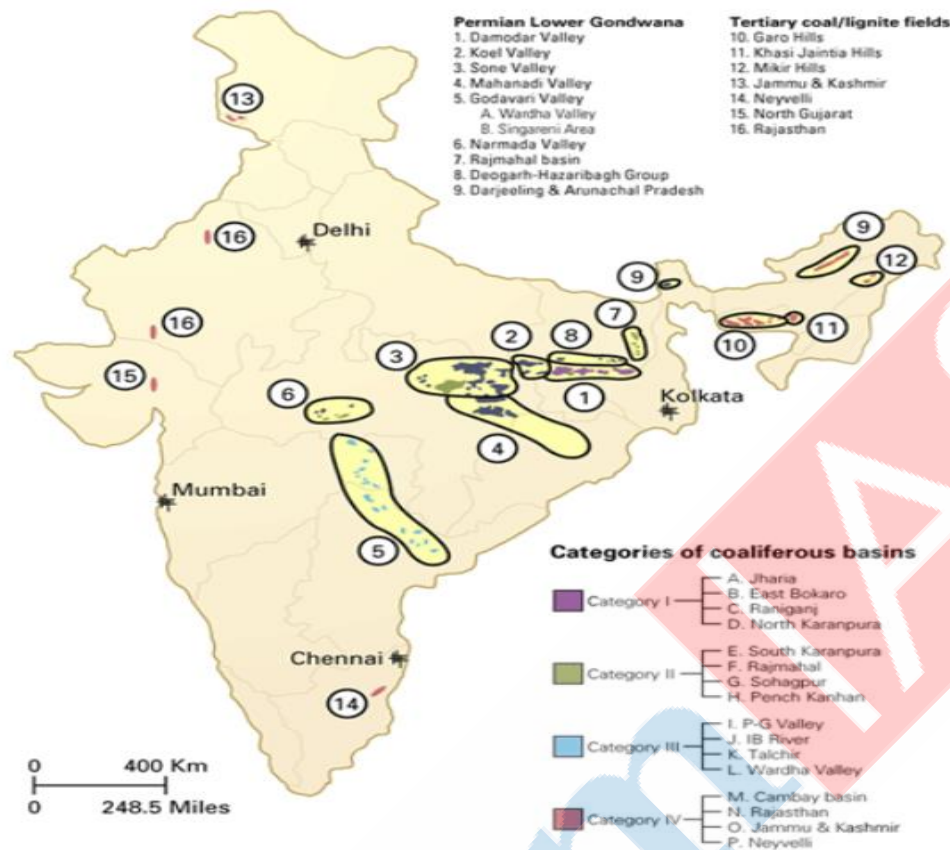
- a) 2 – 1 – 3 – 4
- b) 2 – 3 – 1 – 4
- c) 3 – 2 – 1 – 4
- d) 3 – 1 – 2 – 4

ANS: B

Explanation:

INDIA'S COAL BASINS AND FIELDS

Fig. 3



Q.10) The **Shatrunjaya hills** are located in which of the following state?

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

ANS: C

Explanation: Shatrunjaya hills are considered as an ancient tirtha or pilgrimage especially by the Jain community. It is also known as Jain's sacred hills.

- The name of the hill basically means “place of victory”. This beautiful range of mountains stands tall scaling height up to 164 feet above sea level.
- **They are located in the city of Palitana in Bhavnagar district, Gujarat, India.**
- **Shetrunji River flows along the side of the hills.**
- **As Mecca is to Muslims and Jews' to Jerusalem, Shatrunjaya is for Jain community of India.**
- Every year cents of people scale this mountain to secure a place in heaven. Jainism comprises a small ratio of the Indian population with just about 4 million individuals.
- **It is believed that the hills were first sanctified when the first Tirthankara namely Rishaba gave the sermon on the top of the hills.**
- Shatrunjaya hills have almost 865 temples on the top.

Environment

Q.1) The Central Government provides financial support to the States for supporting conservation of wildlife and biodiversity. Which of the following **scheme (s)** is/are supported by central government?

1. Development of National Parks and Sanctuaries (DNPS).
2. National tiger conservation authority (Project tiger).
3. Project Elephant (PE).

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 Central Government provides financial support to the States for supporting conservation of wildlife and biodiversity, through the following umbrella schemes:

1. **Development of National Parks and Sanctuaries** (DNPS);
2. **Project Tiger** (PT)
4. **Protection of Wildlife Outside Protected Areas** (PWOPA).

Q.2) Consider the following statements regarding the **Central Zoo Authority (CZA)**:

1. It was established in 2002 under executive resolution.
2. It regulates the exchange of animals of endangered category listed under Schedule I and II of 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: B

Explanation: The **Central Zoo Authority (CZA)** was created in February, 1992 under an **Act of Parliament (Section 38A of Wild Life (Protection) Act, 1972 as amended in 1991) to control mushrooming of ill-conceived/ ill planned zoos.**

- And to monitor and evaluate the existing zoos and to suggest ways and means for the improvement of zoos in the country.
- So that they can be transformed into potent centres for the ex-situ conservation of endangered wild fauna.
- The **Central Zoo Authority regulates the exchange of animals of endangered category listed under Schedule I and II of Wildlife protection act, 1972.**

Q.3) The **Biodiversity Finance Initiative – BIOFIN** was launched by which of the following institution?

- a) UNFCCC
- b) United Nations Development Programme (UNDP)
- c) United Nations Environmental Programme (UNEP)

d) Global Environment Facility (GEF)

ANS: B

Explanation: Available evidence and the decisions adopted by Parties to the Convention on Biological Diversity (CBD) indicate that a significant gap remains in finance for biodiversity management, for countries to drastically scale up their efforts and achieve the 20 Aichi Targets defined in the CBD's Strategic Plan for 2011-2020.

- A preliminary assessment conducted under the auspices of the High Level Panel on Global Assessment of Resources for Implementing the CBD Strategic Plan for 2011-2020, estimated that the global investment required amounts to between 130 and 440 billion US\$ annually.
- In this context, **UNDP in October 2012 launched the Biodiversity Finance Initiative – BIOFIN**, as a new global partnership seeking to address the biodiversity finance challenge in a comprehensive manner – building a sound business case for increased investment in the management of ecosystems and biodiversity, with a particular focus on the needs and transformational opportunities at the national level.
- BIOFIN aims to develop a methodology for quantifying the biodiversity finance gap at national level, for improving cost-effectiveness through mainstreaming of biodiversity into national development and sectoral planning, and for developing comprehensive national resource mobilizing strategies.
- India's Vice President Shri Venkaiah Naidu launched India's Biodiversity Finance Plan on 24th May 2019, during celebrations in Chennai for International Day of Biological Diversity.

Q.4) The People's Biodiversity Registers (PBRs) is related to which of the following?

- a) The Indian Forest Act, 1927
- b) The Wildlife Protection Act, 1972
- c) The Forest (Conservation) Act, 1980
- d) The Biological Diversity Act 2002

ANS: D

Explanation: As per the **Biological Diversity Act 2002** and Rules 2004, it is necessary to constitute State Biodiversity Boards (SBBs) and Biodiversity Management Committees (BMCs) and make them functional for documentation, conservation and sustainable utilization of Biodiversity.

Preparation of People's Biodiversity Registers (PBRs) involving locals and BMCs and with guidance from SBBs and NBA is also stipulated in the Act and Rules.

The People's Biodiversity Registers are the one way of documenting traditional knowledge and provide:

- information on availability of traditional knowledge of people relating to biological resources
- details of the access to biological resources and traditional knowledge granted,
- details of collection fee imposed and benefits derived, and
- Mode of sharing the benefits.

Q.5) The Producer Responsibility Organization (PRO), sometimes seen in news, is related to which of the following?

- a) E-waste (Management) Rules, 2016
- b) NITI aayog
- c) The Central Pollution Control Board of India

d) National Green Tribunal

ANS: A

Explanation: E-waste (Management) Rules, 2016, enacted since October 1, 2017, had further strengthened the existing rules.

- Over 21 products (Schedule-I) were included under the purview of the rule. The rule also extended its purview to components or consumables or parts or spares of Electrical and Electronic Equipment (EEE), along with their products.
- The present rule has strengthened the Extended Producer Responsibility (EPR), which is the global best practice to ensure the take-back of the end-of-life products.
- A new arrangement entitled, '**Producer Responsibility Organisation**' (PRO) has been introduced to strengthen EPR further.
- PRO, a professional organisation, would be authorised or financed collectively or individually by producers, to share the responsibility for collection and channelisation of e-waste generated from the 'end-of-life' products to ensure environmentally sound management of such e-waste.

Q.6) Consider the following statements regarding the **fly ash**:

1. It is extremely hydrophilic in nature.
2. Its size varies from 100nanometres to a few microns.
3. It can be used as a resource material for many applications of construction industries.

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: Fly ash, the end product of combustion during the process of power generation in the coal based thermal power plants.

- It is a proven **resource material for many applications of construction industries** and currently is being utilized in manufacturing of Portland Cement, bricks/blocks/tiles manufacturing, road embankment construction and low-lying area development, etc.
- Researchers at the Indian Institute of Technology (IIT) Hyderabad have developed a cheap waterproofing material by coating fly ash, a waste by-product from coal-based thermal power plants, with stearic acid, which is a surfactant.
- **While fly ash is extremely water-loving (hydrophilic), it turns into a highly water-repelling surface once coated with stearic acid.**
- **Fly ash varies in size from 100 nanometres to a few microns and can thus provide surfaces with different roughness based on the size of the particles chosen.**

Q.7) Recently which country **officially banned reef-toxic sunscreen** to protect coral reefs?

- a) New Zealand
- b) Australia
- c) Palau
- d) Solomon Islands

ANS: C

Explanation: In an attempt to protect the coral reefs that divers so admire they have dubbed them the underwater Serengeti.

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- The **Pacific nation of Palau** will soon ban many types of sunscreen.
- President Tommy Remengesau Jr. last week signed legislation that bans “reef-toxic” sunscreen from 2020.
- Banned sunscreens will be confiscated from tourists who carry them into the country, and merchants selling the banned products will be fined up to \$1,000.

Q.8) The “**Mission 175**” is often seen in news is related to which of the following?

- a) Renewable energy
- b) Controlling heavy metal contamination
- c) Protection of Endangered and near extinct species
- d) None

ANS: A

Explanation: Mission 175 is a global platform to explore strategies for development and deployment of renewables.

- It is hosted by the Ministry of New and Renewable Energy (MNRE), the event showcases India’s renewable energy potential and the Government’s efforts to scale up capacity to meet the national energy requirement in a socially, economically and ecologically sustainable manner.
- In the year 2015, the Government of India announced a target for 175 GW cumulative renewable power installed capacity by the year 2022.

Q.9) Consider the following statements regarding the **Tropical Forest Alliance**:

1. It is global public-private partnership action to realize opportunities based on reduced deforestation and sustainable land use management in tropical forest countries.
2. It is funded and hosted by United Nations Convention to Combat Desertification (UNCCD).

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: Protecting forests is critical to averting the most dangerous climate change and achieving the Sustainable Development Goals and the Paris Climate Agreement.

- Avoiding further deforestation could reduce carbon dioxide emissions by three to four billion metric tons per year – the equivalent of taking half the world’s cars off the road.
- Natural climate solutions represent more than 30% of cost effective emissions reductions.
- **The Tropical Forest Alliance is a global public-private partnership dedicated to collaborative action to realize sustainable rural development and better growth opportunities based on reduced deforestation and sustainable land use management in tropical forest countries.**
- The Alliance includes more than 150 partners representing the private sector, governments, civil society organizations, indigenous peoples groups and multilateral organizations who are committed to reducing tropical deforestation associated with the production of palm oil, soy, beef and pulp and paper.

PRELIMS MARATHON COMPILATION FOR THE MONTH OF JULY (THIRD WEEK), 2020

- **TFA is funded by the governments of Norway, the United Kingdom and the Netherlands, Germany, and the Gordon and Betty more Foundation and hosted at the World Economic Forum.**

Q.10) Consider the following statements regarding the **Ramsar sites** in India:

1. Ramsar classification of wetlands includes Coastal and Inland wetlands only.
2. All coastal states of India have Ramsar sites.

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: The Ramsar Convention signed on February 2, 1971, is one of the oldest inter-governmental accord signed by members countries to preserve the ecological character of their wetlands of international importance.

The aim of the Ramsar list is to develop and maintain an international network of wetlands, which are important for the conservation of global biological diversity and for sustaining human life through the maintenance of their ecosystem components, processes and benefits.

The Ramsar Convention has adopted a Ramsar Classification of Wetland Type which includes 42 types, grouped into three categories:

1. **Marine and Coastal Wetlands,**
2. **Inland Wetlands,**
3. **Human-made Wetlands.**

Except Goa and Karnataka all coastal states have Ramsar sites.

Q.11) Consider the following statements regarding the recently discovered mineral **Goldschmidtite**:

1. It was discovered in deep sea mines of Arctic Ocean.
2. It has high concentrations of elements like magnesium, iron, niobium and potassium.

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: A new, curious mineral has been discovered inside a diamond unearthed from a **mine in South Africa**.

- The **mineral has been named goldschmidtite**, after Victor Moritz Goldschmidt, the Norwegian scientist acknowledged as the founder of modern geochemistry.
- Goldschmidtite has an unusual chemical signature for a mineral from Earth's mantle, according to the University of Alberta, a student of which discovered it.
- While the mantle is dominated by elements such as magnesium and iron, **goldschmidtite has high concentrations of niobium, potassium and the rare earth elements lanthanum and cerium.**
- PhD student Nicole Meyer found a single grain of the mineral in the diamond, unearthed in Koffiefontein, South Africa.
- The university described it as dark green and opaque.

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Q.12) Consider the following statements regarding the **Rare Earth Elements (REE)**:

1. The rare earth elements are all metals.
2. Rare earth element Cerium Oxide is used for polishing Granite and Marble stones.

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: Rare earth elements are a group of seventeen chemical elements that occur together in the periodic table.

- The group consists of yttrium and the 15 lanthanide elements (lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, and lutetium).
- Scandium is found in most rare earth element deposits and is sometimes classified as a rare earth element.
- **The rare earth elements are all metals** and the group is often referred to as the "rare earth metals."
- These metals have many similar properties, and that often causes them to be found together in geologic deposits.
- They are also referred to as "rare earth oxides" because many of them are typically sold as oxide compounds.
- A large number of alloys are made more durable by the addition of rare earth metals.
- **Glass, granite, marble, and gemstones are often polished with cerium oxide powder.** Many motors and generators contain magnets made with rare earth elements.
- Phosphors used in digital displays, monitors, and televisions are created with rare earth oxides. Most computer, cell phone, and electric vehicle batteries are made with rare earth metals.

Q.13) The **Placer deposits** of India mostly/highly located at which of the following?

- a) Coastal areas
- b) Deccan Plateau
- c) Himalayas
- d) Northern Plains

ANS: A

Explanation: The **costal land forms of east and west coasts of the Nation contain significantly important placer mineral deposits.**

- The minerals like ilmenite, rutile, garnet, zircon, monazite and sillimanite are occurring in these deposits.
- The controls like source rock geology, coastal geomorphology effective drainage network and favorable climatic conditions favored the formation of rich placer deposits in coastal environments.
- Important deposits occur in the coastal environments of Kerala (Chavara), Tamil Nadu (Manavalakurichi, Midalam, Vayakallur), Andhra Pradesh (Kakinada, Pentakota, Bhimunipatnam, Konada – Kandivalasa – Mukumpeta – Bendi creek – Donkar), (Sanaekasangi – Gopalpur, Chatrapur, Bajarkot, Satpara and Puri) and Maharashtra (Kalbadevi, Newre and Malgund).

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Q.14) Recently Scientists discovered a **paleochannel or ancient channel**, which are filled with younger sediments is located in which of the following state?

- a) Madhya Pradesh
- b) Andhra Pradesh
- c) Arunachal Pradesh
- d) Uttar Pradesh

ANS: D

Explanation: The Union Water Ministry has excavated an old, **dried-up river in Prayagraj (formerly Allahabad) that linked the Ganga and Yamuna rivers.**

- The “**ancient buried river**” as it was described at a conference organised by the Ministry, is around 4 km wide, 45 km long and consisted of a 15-metre-thick layer buried under soil.
- These paleochannels reveal the course of rivers that have ceased to exist.
- The aim is to develop it as a potential groundwater recharge source, according to officials at the National Mission for Clean Ganga (NMCG), a body under the Union Jal Shakti Ministry that coordinates the cleaning of the Ganga.

Q.15) The **White Island Volcano**, sometimes seen in news is located in which of the following country?

- a) Australia
- b) Indonesia
- c) Philippines
- d) New Zealand

ANS: D

Explanation: The White Island Volcano, also called Whakaari, in **New Zealand** has recently erupted.

- White Island is New Zealand’s most active cone volcano.
- About 70% of the volcano lies under the sea.
- It is the country's most active volcano situated in the east coast in the Bay of Plenty.

Q.16) The “**CAFE norms**” often seen in news are related to which of the following?

- a) Cyber rules
- b) E-waste regulations
- c) Fuel efficiency norms
- d) Storage regulations

ANS: C

Explanation: **CAFE (Corporate Average Fuel Efficiency/Economy) norms aim at lowering fuel consumption (or improving fuel efficiency) of vehicles.**

- The government expects that a strict CAFE target will provide incentives to auto makers to produce and sell more EVs, to improve their average fuel efficiency.

Q.17) According to Greenpeace, which of the following country is the **largest emitter of sulphur dioxide** in the world?

- a) China
- b) Russia
- c) India

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d) United States of America

ANS) C

Explanation: India is the world's largest emitter of anthropogenic sulphur dioxide, which is produced from coal burning, and greatly contributes to air pollution, a study claimed on August 19.

- According to an analysis of a National Aeronautics and Space Administration (NASA) data released by environmental NGO Greenpeace on August 2019, India has more than 15% of all anthropogenic sulphur dioxide (SO₂) hotspots in the world detected by the OMI (Ozone Monitoring Instrument) satellite.
- The major SO₂ emission hotspots in India are Singrauli in Madhya Pradesh, Neyveli and Chennai in Tamil Nadu, Talcher and Jharsuguda in Odisha, Korba in Chhattisgarh, Kutch in Gujarat, Ramagundam in Telangana and Chandrapur and Koradi in Maharashtra.
- The vast majority of plants in India lack flue-gas desulfurization technology to reduce their air pollution.
- The NASA data also highlights other hotspots across the globe, with the **Norilsk smelter complex in Russia being the largest SO₂ emission hotspot in the world, followed by Kriel in Mpumalanga province in South Africa and Zagros in Iran.**
- However, as **per country-wise world rankings**, India was found at the top position in emitting SO₂ as it has the maximum hotspots.

Q.18) Consider the following statements regarding the **winter-grade diesel**:

1. It has been developed by the Indian Oil Corporation Limited (IOCL).
2. It does not meet the Bharat Standard – VI norms.
3. It addresses the problem of loss of fuel during extreme winter conditions.

Which of the statements given above is/are correct?

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

ANS: C

Explanation: Indian Oil (IOCL) has come up with an innovative solution to this problem by introducing a special winter-grade diesel with a low pour-point of -33 degree Celsius, which does not lose its fluidity function even in extreme winter conditions.

This **winter-grade diesel also meets BIS specification of BS-VI grade** and was successfully produced and certified for the first time by the Panipat Refinery.

Q.19) Which of the following **national park** area is formed entirely by alluvial deposits?

- a) Namdapha National park
- b) Kaziranga National park
- c) Nagarhole National park
- d) Silent Valley National park

ANS: b

Explanation: Assam is traditionally flood prone, and the 1,055 sq km KNPTR — sandwiched between the Brahmaputra River and the Karbi Anglong Hills — is no exception.

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- Among experts there is a consensus that floods are necessary for Kaziranga by virtue of its ecosystem.
- “It is a riverine ecosystem, not a solid landmass-based ecosystem,” said by Director, KNPTR, “The system won’t survive without water.”
- The entire area of Kaziranga — formed by alluvial deposits from the Brahmaputra and its tributaries — is centred around the river.

Q.20) The **process** under which farmers grow trees for commercial and non-commercial purposes on their farm lands is termed as?

- a) Rural forestry
- b) Agro-forestry
- c) Farm forestry
- d) Social forestry

ANS: C

Explanation: Farm forestry is a term applied to the process under which farmers grow trees for commercial and non-commercial purposes on their farm lands.

- Forest departments of various states distribute seedlings of trees free of cost to small and medium farmers.
- Several lands such as the margins of agricultural fields, grasslands and pastures, land around homes and cow sheds may be used for raising trees under non-commercial farm forestry.