

ForumIAS

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## Prelims Marathon

18<sup>th</sup> Apr to 24<sup>th</sup> April, 2022

HISTORY

ECONOMICS

POLITY

SCIENCE AND TECHNOLOGY

GEOGRAPHY AND ENVIRONMENT

## *History/ Art and Culture*

**Q.1) Sixth Century B.C saw rise of intellectual awakening. What is/are the causes of intellectual awakening?**

1. Rigidity of vedic religion.
2. State formations.
3. Non-organized vedic religion.

**Select the correct answer using the codes given below:**

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

**ANS: D**

**Explanation:** Sixth century BCE was a period of intense intellectual ferment. There are several reasons for the emergence of this ferment.

- State formation and the rigidity of the Vedic religion constrained the liberty of thought and action.
- A revolt against religious practice of following dogmas found its articulation in heterodox sects.
- The emergence of territorial identities accelerated the process of sociopolitical and economic changes.
- The elite class, disillusioned with the system in place, began to move in protest towards the heterodox religions blossoming in Magadha or middle Ganges plains.
- As the Vedic religion was not fully organized, its reach did not permeate into the society and hence people did not find it difficult to follow the newly emerging religious sects.

**Source:** Tamil Nadu state board class 11, page 46.

**Q.2) “Samannaphala Sutta” is related to which of the following?**

- a) Buddhist text
- b) Jain text
- c) Ajivika text
- d) Dharmashastras

**ANS: A**

**Explanation:** A Buddhist text, Samannaphala Sutta, while making a reference to Ajatashatru of Magadha meeting Gautama Buddha.

**Source:** Tamil Nadu state board class 11, page 46.

**Q.3) Who among the following composed Aihole inscription of Pulikesin II?**

- a) Ravikirti
- b) Pampa
- c) Nannaya
- d) Appar

**ANS: A**

**Explanation:** The Aihole inscription of Pulikesin II composed by his court poet Ravikirti in Sanskrit is among the most important of Chalukyan inscriptions. Kavirajamarga, a work on poetics in Kannada, Vikramarjuna-vijayam, also called Pampa-bharata, by Pampa in Kannada, which were all of a later period, and Nannaya's Mahabharatam in Telugu also provide useful historical data.

**Source:** Tamil Nadu state board class 11, page 139.

**Q.4) Consider the following statements:**

- 1. The wild boar is the royal insignia of the Pallavas.
- 2. The bull, Shiva's mount was the symbol of Chalukyas.

**Which of the statements given above is/are correct?**

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

**ANS: D**

**Explanation:** The wild boar was the royal insignia of the Chalukyas. It was claimed that it represented the varaha avatar of Vishnu in which he is said to have rescued the Goddess of the Earth. The bull, Siva's mount, was the symbol of the Pallavas.

**Source:** Tamil Nadu state board class 11, page 142.

**Q.5) On banks of which river, Vijayanagara kingdom was established?**

- a) Godavari
- b) Kaveri
- c) Tungabhadra
- d) Musi

**ANS: C**

**Explanation:** Zafar Khan who declared independence in 1345 at Devagiri shifted his capital to Gulbarga in northern Karnataka. He took the title, Bahman Shah and the dynasty he inaugurated became known as the Bahmani dynasty (1347– 1527).

A few years earlier, in 1336, the Vijayanagar kingdom was inaugurated by the Sangama brothers Harihara and Bukka at Vijayanagara (presentday Hampi) on the south bank of Tungabhadra. During the next two centuries these two states fought continually and bitterly, to control the rich Raichur doab, and also the sea ports of Goa, Honavar, etc. on the west coast, which were the supply points of the horses needed for their army.

**Source:** Tamil Nadu state board class 11, part 2, page 2.

**Q.6) Which Bahmani king won the fortress of Golkonda from the state of Warangal?**

- a) Bahman Shah
- b) Mohammed I
- c) Mohammed Gawan
- d) Mohammed III

**ANS: B**

**Explanation:** Rivalry with the Vijayanagar kingdom over the fertile Raichur doab, lying between the Krishna and Tungabhadra rivers, not only marked the early history of the Bahmani kingdom, but continued to be an enduring feature over two centuries. Bahman Shah had also to contend in the east with the rulers of Warangal and Orissa.

Mohammed I succeeded Bahman Shah. There was a decade-long war with Vijayanagar, most of which related to control over the Raichur doab. Neither side gained lasting control over the region, in spite of the huge fatalities in battles. Two bitter wars with Vijayanagar gained him nothing. But his attack on Warangal in 1363 brought him a large indemnity, including the important fortress of Golkonda and the treasured turquoise throne, which thereafter became the throne of the Bahmani kings.

**Source:** Tamil Nadu state board class 11, part 2, page 3.

**Q.7) Who among the following was the ruler of Calicut when Vasco Da Gama arrived in 1498?**

- a) Zamorin
- b) Sikander Lodhi
- c) Yusuf Adil Shah
- d) Krishnadevaraya

**ANS: A**

**Explanation:** The arrival of three ships under Vasco Da Gama, led by a Gujarati pilot named Abdul Majid, at Calicut in May 1498 profoundly affected the course of Indian history.

The Hindu ruler of Calicut, the Zamorin (Samuthiri), however, had no apprehensions as to the European's intentions. As the prosperity of his kingdom was due to Calicut's position as an entrepot, he accorded a friendly reception to Vasco Da Gama.

The Arab traders, who had a good business on the Malabar coast were apprehensive and were not keen on the Portuguese getting a hold there.

**Source:** Spectrum's A Brief History of Modern India, Page 23.

**Q.8) Who among the following is known for Blue Water Policy?**

- a) Vasco Da Gama
- b) Nino Da Cunha
- c) Francisco De Almeida
- d) Alfonso de Albuquerque

**ANS: C**

**Explanation:** In 1505, the King of Portugal appointed a governor in India for a three-year term and equipped the incumbent with sufficient force to protect the Portuguese interests. Francisco De Almeida, the newly appointed governor, was asked to consolidate the position of the Portuguese in India and to destroy Muslim trade by seizing Aden, Ormuz and Malacca.

He was also advised to build fortresses at Anjadiva, Cochin, Cannanore and Kilwa. What Almeida, however, encountered along with the opposition of the Zamorin, was a threat from the Mameluke Sultan of Egypt. Encouraged by the merchants of Venice whose lucrative commerce was now at risk due to the Portuguese interference, the Egyptians raised a fleet in the Red Sea to stop the advance of the Portuguese.

In 1507, the Portuguese squadron was defeated in a naval battle off Diu by the combined Egyptian and Gujarat navies, and Almeida's son was killed. Next year, Almeida avenged his defeat by totally crushing the two navies. Almeida's vision was to make the Portuguese the master of the Indian Ocean. His policy was known as the Blue Water Policy (cartaze system).

**Source:** Spectrum's A Brief History of Modern India, Page 26.

**Q.9) Which among the following treaty was signed the earliest?**

- a) Treaty of Sagauli
- b) Treaty of Lhasa
- c) Treaty of Gandamak
- d) Durand Agreement

**ANS: A**

**Explanation: Relations of British India with Neighbouring Countries**

- Anglo-Nepal Relations (Treaty of Sagauli, 1816)
- Anglo-Burma Relations
  - ✓ First Anglo-Burma War, 1824-26
  - ✓ Second Anglo-Burma War, 1852
  - ✓ Third Anglo-Burma War, 1885
- Anglo-Tibetan Relations
  - ✓ Treaty of Lhasa (1904)
- Anglo-Afghan Relations
  - ✓ Forward Policy of Auckland
  - ✓ First Anglo-Afghan War (1839-1842)
  - ✓ John Lawrence's Policy of Masterly Inactivity
  - ✓ Lytton and the Policy of Proud Reserve
  - ✓ Second Anglo-Afghan War (1870-80)
  - ✓ Treaty of Gandamak (May 1879)
- North-West Frontier
  - ✓ Durand Agreement (1893)

**Source:** Spectrum's A Brief History of Modern India, Page 137.

**Q.10) Heer Ranjha, the romantic epic in Punjabi literature was composed by who among the following?**

- a) Warris shah
- b) Shah Abdul Latif
- c) Mirza Galib
- d) Tayumanavar

**ANS: A**

**Explanation:** A distinct feature of the literary life of the 18th century was the growth of Urdu language and poetry. It was the period of Urdu poets like Mir, Sauda, Nazir and Mirza Ghalib (19<sup>th</sup> century).

In south India, Malayalam literature flourished under the patronage of the Travancore rulers. Kanchan Nambiar was a noted Malayalam poet. The Tamil language was enriched by sittar poetry. Tayumanavar (1706-44), one of the best exponents of sittar poetry, protested against the abuses of temple-rule and the caste system.

Heer Ranjha, the romantic epic in Punjabi literature, was composed by Warris Shah. In Sindhi literature, Shah Abdul Latif composed Risalo, a collection of poems. These are just some examples of literary works in regional languages.

**Source:** Spectrum's A Brief History of Modern India, Page 80.

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## *Scheme/Programs/Institutions*

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**Q.1) Which of the following area (s) is/are addressed in United Nations Conference on Environment and Development (UNCED)?**

1. Alternative sources of energy to replace the use of fossil fuels.
2. The growing scarcity of water.
3. Ozone layer protection.

**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:** United Nations Conference on Environment and Development (UNCED) also known as the Rio Summit, Rio Conference, Earth Summit held in Rio de Janeiro in June 1992. The issues addressed included:

- Systematic scrutiny of patterns of production — particularly the production of toxic components, such as lead in gasoline, or poisonous waste including radioactive chemicals.
- Alternative sources of energy to replace the use of fossil fuels which are linked to global climate change.
- New reliance on public transportation systems in order to reduce vehicle emissions, congestion in cities and the health problems caused by polluted air and smog.
- The growing scarcity of water.

**Source:** Shankar page no: 325

**Q.2) Which of the following is/are outcome of earth summit?**

1. Agenda 21.
2. Global Environment Facility.
3. Kyoto Protocol.

**Select the correct answer using the code given below:**

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

**ANS: A**

**Explanation:** The Earth Summit resulted in the following documents:

- Rio Declaration on Environment and Development
- Agenda 21
- Forest Principles

**Source:** Shankar page no: 325



**Q.3) “Cartagena Protocol” is often seen in news is related to which of the following?**

- a) Sustainable agriculture
- b) Renewable energy
- c) Bio-safety
- d) Ozone layer protection

**ANS: C**

**Explanation:** The Cartagena Protocol on Bio-safety is an additional agreement to the Convention on Biological Diversity.

The Protocol establishes procedures for regulating the import and export of LMOs from one country to another.

The Protocol also requires Parties to ensure that LMOs being shipped from one country to another are handled, packaged and transported in a safe manner.

**Source:** Shankar page no: 327

**Q.4) Which of the following addresses traditional knowledge associated with genetic resources with provisions on access, benefit-sharing and compliance?**

- a) Kyoto protocol
- b) Nagoya protocol
- c) Montreal protocol
- d) Basel protocol

**ANS: B**

**Explanation:** The Nagoya Protocol addresses traditional knowledge associated with genetic resources with provisions on access, benefit-sharing and compliance.

It also addresses genetic resources where indigenous and local communities have the established right to grant access to them.

Contracting Parties are to take measures to ensure these communities’ prior informed consent, and fair and equitable benefit-sharing, keeping in mind community laws and procedures as well as customary use and exchange.

**Source:** Shankar page no: 328

**Q.5) Consider the following statements regarding “Ramsar Convention on Wetlands”:**

1. It is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.
2. It is not affiliated with the United Nations system of Multilateral Environmental Agreements.

**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 Convention on Wetlands [waterfowl convention] is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.



It was adopted in the Iranian city of Ramsar in 1971 and came into force in 1975, and it is the only global environmental treaty that deals with a particular ecosystem.

Ramsar is not affiliated with the United Nations system of Multilateral Environmental Agreements, but it works very closely with the other MEAs and is a full partner among the “biodiversity-related cluster” of treaties and agreements.

**Source:** Shankar page no: 330

**Q.6) Consider the following statements regarding “National Green Tribunal”:**

1. It was created for the effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources.
2. It is mandated to dispose the cases within six months of their respective appeals.

**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 Preamble of the act provides for the establishment of a National Green Tribunal for the effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources, including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto (The National Green Tribunal Act, 2010).

NGT is mandated to dispose the cases within six months of their respective appeals.

**Source:** Shankar page no: 310

**Q.7) Consider the following statements regarding “National Wildlife Action Plan (NWAP)”:**

1. It was created by the provisions of the wildlife protection act, 1972.
2. The first National Wildlife Action Plan (NWAP) was adopted in 1983.

**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 first National Wildlife Action Plan (NWAP) was adopted in 1983, based upon the decision taken in the XV meeting of the Indian Board for Wildlife held in 1982.

The plan had outlined the strategies and action points for wildlife conservation which are still relevant.

**Source:** Shankar page no: 313

**Q.8) Consider the following statements with respect to ICEDASH:**

1. ICEDASH is an ease of doing business(EoDB) monitoring dashboard of the Indian Customs
2. It is developed by Department for Promotion of Industry and Internal Trade (DPIIT) in collaboration with National Informatics Centre

**Which of the following below given codes are correct?**

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

**ANS: A**

**Explanation:** ICEDASH is an ease of doing business (EoDB) monitoring dashboard of the Indian Customs helping public see the daily customs clearance times of import cargo at various ports and airports. It will be an effective tool that can help businesses compare clearance times across ports and plan their logistics accordingly. The dashboard has been developed by the Central Board of Indirect Taxes and Customs (CBIC) in collaboration with National Informatics Centre (NIC).

**Source:** ForumIAS

**Q.9) “Economic Outlook for South East Asia, China and India” report is released by which of the following Institution?**

- a) IMF
- b) World Bank
- c) OECD
- d) WEF

**ANS: C**

**Explanation:** The Organization for Economic Co-operation and Development (OECD) has released its report titled Economic Outlook for South East Asia; the report said that India's reliance on consumption will continue due to large informal labor share which indicates that there is room to strengthen the consumption base. China and India. India's gross domestic product (GDP) is projected to grow at 6.6% in 2020-24 lower than its 2013-17 average of 7.4%.

**Source:** ForumIAS

**Q.10) Consider the following statements with respect to G-20:**

1. The G-20's members represent two-thirds of the world's people and 85 percent of its economy
2. The G-20's primary mandate is to prevent future international financial crises

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

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

**ANS: C**

**Explanation:** The G-20 is the G-7 plus developing nations such as Brazil, China, India, and Russia. The G-20's members represent two-thirds of the world's people and 85 percent of its

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economy. Since 2007, the media has covered each G-20 summit. That recognizes the members' role as significant drivers of the world economy. The G-20's primary mandate is to prevent future international financial crises. It seeks to shape the global economic agenda. It lends the perspective of Asian and Latin American growing economies. That "broadens the scope of international economic and financial cooperation."

**Source:** ForumIAS



## *Science and Technology*

**Q.1) Consider the following statements:**

1. National Cyber Exercise (NCX) India was conducted by National Security Council Secretariat (NSCS) to train personnel of Government/Critical Sector organisations on contemporary cyber threats and handling cyber incidents and response.
2. The National Security Council (NSC) is headed by the National Security Advisor (NSA).

**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: About National Security Architecture in India**

- As per the Allocation of Business (AOB) rules, the National Security Advisor (NSA) is “the principal advisor on national security matters to the prime minister”.
- The National Security Council Secretariat (NSCS) reports to National Security Advisor (NSA) and acts as the secretariat for the PM-led National Security Council (NSC).
- The National Security Council (NSC) is headed by the Prime Minister.
- The NSCS was formed two decades ago, as an outcome of the elaborate post-Kargil review. It was formed to assist the then newly created NSA’s post and was housed within the cabinet secretariat. In 2002, it was brought under the PMO.
- NSCS also has the authority to service the Strategic Policy Group (SPG) and the Defence Planning Group (DPG). Both the SPG and DPG are headed by the NSA.
- The Strategic Policy Group (SPG) was created under the cabinet secretary with the NSA as the member. This was changed in 2018 when NSA AjitDoval was made head of a reconstituted SPG and the NSCS was tasked to service it.

**Source:** Forum IAS

**Q.2) Which of the following can be the effects of a Geomagnetic Storm?**

1. It impacts the shape of the earth’s magnetosphere.
2. It can damage satellite electronics and expose high-altitude pilots to increased levels of radiation.
3. It does not cause Voltage surges.
4. It can intensify northern lights visible in the skies of higher latitudes.

**Select the correct answer using the codes given below:**

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

**ANS: C**

**Explanation: About Geomagnetic Storm**

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- A geomagnetic storm is a disturbance in the earth's magnetosphere, which is the area around the planet controlled by its magnetic field.
- The earth's magnetosphere protects its inhabitants from most of the particles emitted by the sun.
- When a coronal mass ejection (CME) or a high-speed stream reaches the earth, it strikes the planet's magnetosphere.
- If the incoming solar magnetic field is directed southwards, it interacts strongly with the earth's own magnetic field that is opposite in direction, causing disturbances.
- A coronal mass ejection is a large expulsion of plasma and magnetic field from the sun's corona. Plasma is the highly ionised gas present on the sun, while corona is the outermost part of the sun's atmosphere.
- The corona is structured by strong magnetic fields. If these fields are closed, the solar atmosphere can release sudden, violent bubbles of gas and magnetic fields which constitute the CME.
- The changes produced in the earth's magnetic field as a result of this interaction allow solar wind particles to stream down the magnetic field lines and hit the atmosphere near the poles.
- Solar winds deeply impact the shape of the earth's magnetosphere, and variations in solar winds cause geomagnetic storms on earth.
- At the surface of the earth, a geomagnetic storm can result in a rapid decline in the earth's magnetic field strength. This decrease can last for around 6 to 12 hours and gradually recovers over several days.
- Geomagnetic storms can impact long-range radio communication and global positioning system (GPS) devices.
- These storms can also damage satellite electronics and expose astronauts and high-altitude pilots to increased levels of radiation.
- Voltage surges due to altered magnetic activity can also affect power supply on the earth and cause outages.
- Geomagnetic storms are also linked with intensified northern lights visible in the skies of higher latitudes.

**Source:** Forum IAS

**Q.3) Consider the following statements regarding e-DAR portal, recently seen in news:**

1. It is an integrated data and instant information provisioning portal on road accidents.
2. It is an extension of Integrated Road Accident Database (iRAD) and will provide geo tagging of the exact accident spot along with the site map.

**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: About e-DAR**

- 'e-DAR' stands for e-Detailed Accident Report. It is an integrated data and instant information provision portal on road accidents.

- It designed by the government in consultation with insurance companies and will provide instant information on road accidents with a few clicks and help accelerate accident compensation claims, bringing relief to victims' families.
- Digitalised Detailed Accident Reports (DAR) will be uploaded on the portal for easy access.
- The web portal will be linked to the Integrated Road Accident Database (iRAD). From iRAD, applications to more than 90% of the datasets would be pushed directly to the e-DAR. Stakeholders like the police, road authorities, hospitals, etc., are required to enter very minimal information for the e-DAR forms. Thus, e-DAR would be an extension and e-version of iRAD.
- The portal would be linked to other government portals like Vaahan and would get access to information on driving licence details and registration of vehicles.
- For the benefit of investigating officers, the portal would provide geo tagging of the exact accident spot along with the site map. This would notify the investigating officer on his distance from the spot of the incident in the event the portal is accessed from any other location.
- Details like photos, video of the accident spot, damaged vehicles, injured victims, eye-witnesses, etc., would be uploaded immediately on the portal.
- Hotspots for accidents would also be identified so as to obtain solutions to avoid accidents at these hotspots.

**Source:** Forum IAS

**Q.4) With reference to 'Hirudotherapy', consider the following statements:**

1. It is a medicinal leech therapy that can be used for treatment for inflammatory lesions, cystic lesions and tumorigenesis.
2. It finds mention in the 'Sushruta Samhita', a 3,000-year-old treatise on medicine and surgery.

**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: About Hirudotherapy**

- Medicinal Leech Therapy (MLT), also known as Hirudotherapy, has a mention in the 'Sushruta Samhita', a 3,000-year-old treatise on medicine and surgery.
- Hirudomedicinalis, belonging to the phylum Annelida, is used as 'medicinal leech' and it can be used in treatment of chronic eczema, non-healing ulcers, dermatitis, varicose veins, thrombotic piles, diabetic foot and some auto-immune disorders.
- The leeches are first dropped into water laced with turmeric and later kept on the affected portion of the human body. The leech moves around the area, selects the place where to begin from and secretes some of the 36 proteolytic enzymes available in its saliva, facilitating its release into the systemic circulation to counter the disease morbidity.
- Sushruta advised this treatment for inflammatory lesions, cystic lesions and tumorigenesis if the affected area is palm-sized. The weekly process is repeated for five to ten weeks depending on the chronicity of the disorder and pathology.



- The therapy is in great demand in the U.S.A. as it is used post-grafting in plastic surgery procedures to enhance circulation and improve permeability of blood flow. Also, it is used for congestive cardiac failure (CCF) cases to regulate the heart beat and relieve coronary artery blocks.
- The therapy has been recognised by the American Surgical Association and the procedure approved by the Food and Drug Administration (FDA), U.S.A.

**Source:** Forum IAS

**Q.5) Which of the following statements regarding 'Oort Cloud' are correct?**

1. It is a thick-walled bubble made of icy pieces of space debris the sizes of mountains and source to most of the comets.
2. It lies in the same flat disk around the Sun.

**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: About OortCloud**

- The OortCloud is the most distant region of our solar system. Even the nearest objects in the OortCloud are thought to be many times farther from the Sun than the outer reaches of the Kuiper Belt.
- Unlike the orbits of the planets and the Kuiper Belt, which lie mostly in the same flat disk around the Sun, the OortCloud is believed to be a giant spherical shell surrounding the rest of the solar system.
- It is like a big, thick-walled bubble made of icy pieces of space debris the sizes of mountains and sometimes larger. The OortCloud might contain billions, or even trillions, of objects.
- Because the orbits of long-period comets are so extremely long, scientists suspect that the OortCloud is the source of most of those comets.
- The outer limit of the Oort cloud defines the cosmographic boundary of the Solar System and the extent of the Sun's Hill sphere.
- It is proposed to surround the Sun at distances ranging from 2,000 to 200,000 AU
- It is divided into two regions: a disc-shaped inner Oort cloud (or Hills cloud) and a spherical outer Oort cloud. Both regions lie beyond the heliosphere and in interstellar space.
- The OortCloud lies far beyond Pluto and the most distant edges of the Kuiper Belt.
- While the planets of our solar system orbit in a flat plane, the OortCloud is believed to be a giant spherical shell surrounding the Sun, planets and Kuiper Belt Objects.
- It lies far beyond Pluto and the most distant edges of the Kuiper Belt.

**Source:** ForumIAS



**Q.6) With reference to WHO's classification of Variant of Concern (VOC), which of the following statements are correct?**

1. There is an increase in transmissibility
2. There is increase in virulence
3. There is an increase in the effectiveness of public health measures

**Select the correct answer using the codes given below:**

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

**ANS: A**

**Explanation: About Delta Variant of Covid-19:**

- The World Health Organization (WHO) has named B.1.617.1 variant as 'Kappa' and B.1.617.2 variant as 'Delta'. These variants are sub-lineages of B.1.617 which was detected in India in 2021.
- This new nomenclature for the various variants of the coronavirus using Greek alphabets was introduced to simplify public discussions and also help remove the stigma from the names.
- Moreover, WHO has also categorized the Delta variant as a Variant of Concern (VOC).

**What is Variant of Concern (VOC)?**

WHO classifies a variant as a VOC when it is associated with:

- An increase in transmissibility or detrimental change in Covid-19 epidemiology or
- Increase in virulence (Ability to cause severe/life-threatening disease)
- Decrease in the effectiveness of public health measures or available diagnostics, vaccines and therapeutics.

**Why is Delta Variant more dangerous than other variants?**

- This variant has multiple mutations that appear to give it an advantage over other strains.
- The most important advantage is that the mutations may make the strain more transmissible. This will make the delta variant the most dangerous variant yet.
- One study indicated that the Delta variant may be up to 50% more transmissible than the B.1.1.7 (U.K./Alpha) variant.

**Source:** ForumIAS

**Q.7) CHIME Telescope, recently seen in news for detecting 535 Fast Radio Bursts, is located in which of the following country?**

- a) USA
- b) Germany
- c) Canada
- d) Australia

**ANS: C**

**Explanation: About CHIME Telescope**

- Canadian Hydrogen Intensity Mapping Experiment (CHIME) is a radio telescope designed to answer major questions in astrophysics and cosmology.

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- The telescope is a partnership between the University of British Columbia, McGill University, the University of Toronto and the Canadian National Research Council's Dominion Radio Astrophysical Observatory.

### **Working of CHIME Telescope:**

- The CHIME telescope functions a bit differently from others used for radio astronomy. Most radio astronomy is done by rotating a large dish to focus light from different parts of the sky.
- On the other hand, the CHIME telescope comprises four massive parabolic radio antennas. It has no moving parts, and it receives radio signals each day from half of the sky as the Earth rotates.
- The telescope has a powerful digital signaling processor that works at about seven terabits per second – equivalent to a few percent of the world's internet traffic.
- This digital signal processor reconstructs and looks in thousands of directions simultaneously.
- That's what helps it to detect FRBs a thousand times more often than a traditional telescope.
- **Location:** The telescope is located at Dominion Radio Astrophysical Observatory in British Columbia, Canada.

### **Why in news?**

- Scientists from the Canadian Hydrogen Intensity Mapping Experiment (CHIME) have detected 535 Fast Radio Bursts (FRB). It is the largest collection of FRB till date.
- They have detected this in collaboration with India's Tata Institute for Fundamental Research (TIFR) and the National Centre for Radio Astrophysics (NCRA).

### **What are Fast Radio Bursts (FRBs)?**

- FRBs are bright bursts of radio waves (radio waves can be produced by astronomical objects with changing magnetic fields) that blaze for a few milliseconds before vanishing without a trace.
- They are spotted in various and distant parts of the universe as well as in our own galaxy. However, their origins are still unknown, and their appearance is highly unpredictable.
- The first FRB was spotted in 2007. Since then, scientists had only caught sight of around 140 bursts in their telescopes.

**Source:** ForumIAS

### **Q.8) Consider the following statements about Project O2 for India:**

1. It is an initiative of the Office of Principal Scientific Adviser.
2. Under the Project, a National Consortium of Oxygen has been set up.
3. The consortium has been raising funds from public sector organisations.

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

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

**ANS: C**

**Explanation: About Project O2 for India:**

Project O2 for India is an initiative of the Office of Principal Scientific Adviser, Government of India (GoI).

**Purpose:** The project aims to:

- Step up production of medical oxygen to meet the potential increase in demand due to further waves of the pandemic.
- Help the stakeholders working to increase the country's ability to meet the rise in demand for medical oxygen.

**Key Features of the Project O2 for India:**

- Under the Project, a National Consortium of Oxygen has been set up. It has been raising funds from private sector organisations, individuals among others.
- These funds are being used by the consortium to supply critical raw materials. Such as zeolites, setting up of small oxygen plants, manufacturing compressors, ventilators among others.
- Moreover, the consortium is also working to strengthen the manufacturing ecosystem of medical oxygen for long-term preparedness.
- Further, a committee of experts has also been set up to evaluate critical equipment. Such as oxygen plants, concentrators, and ventilators from a pool of India-based manufacturers, start-ups, and MSMEs.

**About Office of the Principal Scientific Adviser (PSA):**

- Setup in: Office of the Principal Scientific Adviser (PSA) was set up in 1999 by the Cabinet Secretariat. It is currently a Secretary level position.
- Mandate: This office is the chief advisor to the government on matters related to scientific policy. The policies focus on critical infrastructure, economic and social sectors.

**Source:** ForumIAS

**Q.9) SAGE Portal, recently seen in news is launched for which of the following?**

- a) Elderly person
- b) Disabled person
- c) Anaemic Women
- d) Orphan Children

**ANS: A**

**Explanation: About SAGE Initiative and SAGE Portal:**

- SAGE Initiative and SAGE Portal have been launched with an aim to provide “one-stop access” for elderly care. The portal will provide access to all elderly care products and services developed by credible start-ups.
- Launched by: Ministry of Social Justice and Empowerment (MoSJ&E) Key Features of the Initiative:
  - Helping start-ups: The initiative aims to help startups that are interested in the field of providing services for elderly care.
    - Selection of start-ups: Start-ups will be selected by an independent screening committee of experts.
    - Basis of selection: The committee will select the startups on the basis of their innovative products and services across sectors. Such as health, housing, care centres and technological access linked to finances, food, wealth management and legal guidance.

- Fund: A fund of up to Rs 1 crore as one-time equity will be granted to each selected start-up.
- Ministry will act as a facilitator: After the product is made, the Ministry of Social Justice will act as a facilitator enabling the elderly to access these products

**Source:** ForumIAS

**Q.10) Consider the following statements with regarding benefits of Gene Editing:**

1. It can treat many human diseases & genetic disorders.
2. It can be used to grow healthier food and increasing harvest.
3. It can be used to bring to life extinct species.

**Which of statements given above is/are correct?**

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

Source: ForumIAS

## *Location/IR/Geography*

**Q.1) Which of the following is/are tributaries of “Brahmaputra River”?**

1. Teesta River
2. Sankosh River
3. Manas River
4. Subansiri River

**Select the correct answer using the codes given below:**

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

**ANS: A**

**Explanation:** Primary Tributaries of the Brahmaputra River are:

- The Dhansiri River.
- The Dibang River.
- The Subansiri River.
- The Kameng River.
- The Manas River.
- The Sankosh River.
- The Teesta River.

**Source:** ForumIAS

**Q.2) In how many years the world population increased from 5 billion to 6 billion?**

- a) 10 years
- b) 12 years
- c) 18 years
- d) 24 years

**ANS: B**

**Explanation:** It took more than a million years for the human population to attain the one billion mark. But it took only 12 years for it to rise from 5 billion to 6 billion.

**Source:** NCERT – XII Fundamentals of Human Geography

**Source:** ForumIAS

**Q.3) The minimum population needed to term a settlement as mega city?**

- a) 1 million
- b) 10 million
- c) 50 million
- d) 100 million

**ANS: B**

**Explanation:** A mega city or megalopolis is a general term for cities together with their suburbs with a population of more than 10 million people.

**Source:** NCERT – XII Fundamentals of Human Geography

**Q.4) With reference to the wetland farming, which of the following statements is/are Correct?**

1. In wetland farming, the rainfall is less than soil moisture requirement of plants during rainy season.
2. These areas grow various water intensive crops such as rice, jute and sugarcane.

**Select the correct answer using the codes given below:**

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

**ANS: B**

**Explanation:** In wetland farming, the rainfall is in excess of soil moisture requirement of plants during rainy season.

- Such regions may face flood and soil erosion hazards.
- These areas grow various water intensive crops such as rice, jute and sugarcane and practice aquaculture in the fresh water bodies.

**Source:** NCERT – XII India People and Economy

**Q.5) With reference to the wheat, which of the following statements is/are correct?**

1. Almost 50 per cent of total area under this crop is concentrated in southern regions of the country.
2. About 20 per cent of the total cropped area in the country is under wheat cultivation.

Select the correct answer using the codes given below:

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

**ANS: D**

**Explanation:** In India after rice, India produces about 12.3 per cent of total wheat production of world (2016).

- It is primarily a crop of temperate zone. Hence, its cultivation in India is done during winter i.e. rabi season.
- About 85 per cent of total area under this crop is concentrated in north and central regions of the country i.e. Indo-Gangetic Plain, Malwa Plateau and Himalayas up to 2,700 m altitude.
- About 14 per cent of the total cropped area in the country is under wheat cultivation.

**Source:** NCERT – XII India People and Economy



**Q.6) Which of the following port in India is known as twin dock systems?**

- a) Vishakhapatnam Port
- b) Mangalore Port
- c) Tuticorin Port
- d) Kolkata Port

**ANS: D**

**Explanation:** Kolkata is the only riverine major port in India. Known for twin dock systems viz., Kolkata Dock System (KDS) on the eastern bank and Haldia Dock Complex (HDC) on the western bank of river Hooghly.

Vishakhapatnam is India's deepest landlocked port handling crude oil and petroleum products.

**Source:** NCERT – XII India People and Economy

**Q.7) Koderma, Ajmer and Nellore areas are famous for which of the following?**

- a) Copper
- b) Iron ore
- c) Mica
- d) Bauxite

**ANS: C**

**Explanation:** Mica is a mineral made up of a series of plates or leaves. It splits easily into thin sheets.

- These sheets can be so thin that a thousand can be layered into a mica sheet of a few centimeters high.
- Mica can be clear, black, green, red yellow or brown. Due to its excellent di-electric strength, low power loss factor, insulating properties and resistance to high voltage, mica is one of the most indispensable minerals used in electric and electronic industries.
- Mica deposits are found in the northern edge of the Chota Nagpur plateau. Koderma Gaya – Hazaribagh belt of Jharkhand is the leading producer.
- In Rajasthan, the major mica producing area is around Ajmer. Nellore mica belt of Andhra Pradesh is also an important producer in the country.

**Source:** NCERT – XII India People and Economy

**Q.8) Which of the following state has largest resource of Bauxite in India?**

- a) Gujarat
- b) Chattisgarh
- c) Odisha
- d) Maharashtra

**ANS: C**

**Explanation:** By States, Odisha alone accounts for 51% of country's resources of bauxite followed by Andhra Pradesh (16%), Gujarat (9%), Jharkhand (6%), Maharashtra (5%) and Madhya Pradesh & Chhattisgarh (4% each).

Major bauxite resources are concentrated in the East Coast bauxite deposits in Odisha and Andhra Pradesh.

**Source:** NCERT – XII India People and Economy



**Q.9) Which of the following river (s) is/are NOT an antecedent origin?**

1. Ganga
2. Satluj
3. Kosi

**Select the correct answer using the codes given below:**

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

**ANS: A**

**Explanation:** The drainage pattern was already present before a period of uplift and folding that formed the present structure.

- As the uplift took place, the rivers were able to cut down at approximately the same rate and so maintain their courses.
- This process is called antecedence and the drainage system thus developed is called antecedent drainage.
- Many of the Himalayan Rivers have antecedent origin i.e. these rivers existed even before the Himalayan ranges were uplifted.
- These rivers originate in the Tibetan side beyond the mountain ranges of Himalayas.
- The Indus, Satluj, Alaknanda, Gandak, Kosi, Brahmaputra all has an antecedent origin.
- Since these rivers are antecedent, they run transverse to the mountain ranges cutting deep V-shaped, steep-sided valleys (deep gorges).

**Source:** NCERT XI – India Physical Environment

**Q.10) The Jog falls is located in which of the following state?**

- a) Maharashtra
- b) Goa
- c) Kerala
- d) Karnataka

**ANS: D**

**Explanation:** Jog Falls, also called Gersoppa Falls, cataract of the Sharavati River, western Karnataka state, southwestern India.

The Jog Falls are located 18 miles (29 km) upstream from Honavar at the river's mouth on the Arabian Sea.

**Source:** NCERT – XI India Physical Environment

## *Economy*

**Q.1) Consider the following statements about National Export Insurance Account (NEIA) Trust:**

1. NEIA Trust was set up in 2006 by the Ministry of Finance.
2. It aims to promote Medium and Long Term (MLT) /project exports from India that are of strategic and national importance.

**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: About the National Export Insurance Account (NEIA) Trust**

NEIA Trust was set up in 2006 by the Ministry of Commerce and Industry.

**Aim:** To promote **Medium and Long Term (MLT) /project exports** from India that is of strategic and national importance. It provides additional support to the insurance cover provided by ECGC for project exports.

It will support the projects that are desirable from the point of view of national interest but which Export Credit Guarantee Corporation of India (ECGC) is unable to underwrite due to capacity constraints or unfavorable terms.

**Source:** [Indian Economy \(core\)](#)

**Q.2) Which of the following statements about certificate of origin (CoO) are correct?**

1. It is a document issued by the importers.
2. It is the authentication declaring in which country a commodity or good was manufactured.
3. The certificate of origin contains information regarding the product, its destination, and the country of export.

**Select the correct answer using the codes given below:**

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

**ANS: C**

**Explanation: About the Certificate of Origin (CoO)**

A certificate of origin (CoO) is a document issued by the exporters. It is the authentication declaring in which country a commodity or good was manufactured.

The certificate of origin contains information regarding the product, its destination, and the country of export. For example, a good may be marked "Made in the USA" or "Made in China".

**Why is CoO mandated?**

The CoO is often mandated by importing countries because it can help determine whether certain goods are eligible for import and to what extent they are subject to duties.

**Source:** [Indian Economy \(core\)](#)

**Q.3) With respect to public debt- to-GDP ratio, consider the following statements:**

1. It measures the financial leverage of an economy and is used to gauge a country's ability to repay its debt.
2. A higher ratio indicates a higher risk of default.
3. Public debt consists of external debt only.

**Which of the statements given above are correct?**

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

**ANS: A**

**Explanation: About public debt- to-GDP ratio**

- The Debt-to-GDP ratio is the ratio between a country's government debt and its Gross Domestic Product (GDP).
- It measures the financial leverage of an economy and is used to gauge a country's ability to repay its debt.
- Public debt consists of external debt (which has been borrowed from foreign lenders) and internal debt (like government securities, treasury bills, and short-term borrowings).

**Impacts of public debt- to-GDP ratio**

A high debt-to-GDP ratio is undesirable for a country, as a higher ratio indicates a higher risk of default. In such scenarios, creditors seek higher interest rates during lending. A very high debt-to-GDP ratio may deter creditors from lending money altogether. It,

- a) Deprives the government of its ability to undertake development and welfare measures,
  - b) Impacts the outlook of rating agencies for the country,
  - c) Widens fiscal deficit and creates pressure on the market interest rate.
- This impacts private firms, thereby increasing per unit cost that is passed on to consumers. It results in cost-push inflation.

**What debt- to-GDP ratio is considered stable?**

- A country able to continue paying interest on its debt-without refinancing, and without hampering economic growth, is generally considered to be stable.
- A low debt-to-GDP ratio indicates an economy that produces and sells goods and services sufficient to pay back debts without incurring further debt.
- According to the recommendations of the **N.K. Singh Committee (2016)**, Debt-to-GDP ratio should have been 38.7% for the Centre and 20% for states by 2022-23 (FY23).

**Source:** [Indian Economy \(core\)](#)

**Q.4) With respect to Capital Gains Tax, which of the following statement is/are correct?**

1. The percentage of Capital Gains Tax changes on the basis of the overall tax slab.
2. It is levied on the profit that is received through the sale of a capital asset.

**Select the correct answer using the codes given below:**

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

**ANS: B**

**Explanation: About Capital Gains Tax**

**Definition:** Capital Gains Tax is levied on the profit that is received through the sale of a capital asset. It covers real estate, gold, stocks, mutual funds, and various other financial and non-financial assets.

**Types:** It is divided into long-term capital gains tax (LTCG) and short-term capital gains tax (STCG) depending on how long one has held the investment in question.

**Why is Capital Gains Tax so complicated?**

Capital gains tax is complicated for a few primary reasons.

**First,** the rate changes from asset to asset. LTCG tax on stocks and equity mutual funds is 10% but on debt mutual funds is 20% with indexation.

**Second,** the holding period changes from asset to asset. The holding period for LTCG tax is two years in real estate, one year for stocks, and three years for debt mutual funds and gold.

**Third,** exemptions are available under complex conditions. For instance, buying a house after selling one can get you an exemption, but the new house must be bought within two years or built-in three years of the sale.

**How is Capital Gains Tax different from Income Tax?**

- Unlike income tax, the percentage of Capital Gains Tax does not change on the basis of the overall tax slab. For example, the LTCG tax excluding surcharge on equity is the same for gains of ₹10 lakh or ₹10 crores.
- Moreover, there is also a separate set of deductions that apply to LTCG which do not apply to ordinary income.

**Source:** [Indian Economy \(core\)](#)

**Q.5) Which of the following is/are “special and differential treatment provisions” given to developing countries under WTO?**

1. Measures to increase trading opportunities for these countries.
2. Support to help developing countries build the infrastructure to undertake WTO work.
3. Longer time periods for implementing agreements and commitments.

**Select the correct answer using the codes 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: About the Special and differential treatment (S&DT) under WTO**

WTO agreements contain special provisions which give developing countries special rights and allow other members to treat them more favorably. These are called “special and differential treatment provisions” (*abbreviated as S&D or SDT*). These special provisions include:

- Longer time periods for implementing agreements and commitments
- Measures to increase trading opportunities for these countries
- Provisions requiring all WTO members to safeguard the trade interests of developing countries
- Support to help developing countries build the infrastructure to undertake WTO work, handle disputes and implement technical standards.
- Provisions related to Least-Developed Country (LDC) members

**About the problem with S&DT under WTO**

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- Currently, any WTO member can designate itself as a developing country and avail S&DT benefits.
- As a result of the self-selection process, there is competition among members to get the developing country status. Several advanced countries have also taken developing country status.
- Hence, the US had submitted its suggestions to the WTO that self-declaration puts the WTO on a path to failed negotiations, and it is also a path to institutional irrelevance.

**Source:** [Indian Economy \(core\)](#)

**Q.6) The US Federal Reserve has raised interest rates subsequently. Which among the following statement correctly explains its impact on Indian Economy?**

1. When interest rates rise in the US, Foreign Institutional Investors (FII) starts more investments (also called portfolio flows) into India.
2. It will strengthen Indian Rupee.

**Select the correct answer using the codes given below:**

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

**ANS: D**

**Explanation:**

- The US Federal Reserve has announced that it would end its pandemic-era bond purchases and raise interest rates subsequently.
- Both these measures are aimed at taming inflation, currently at a four-decade high of around 7%.
- This is likely to impact emerging market economies such as India.

**How do US Fed actions impact India?**

**Outflow of Foreign Capital:** When interest rates rise in the US, Foreign Institutional Investors (FII) start pulling out investments (also called portfolio flows) from India. This means foreign capital outflows can happen not only from equity but also from debt.

**Impact on Rupee:** FPIs pulling money out of the equity and bond markets could weaken the rupee even as the dollar gets stronger with the rate hikes.

**Highest Cost of Fund Mobilization from Overseas Markets:** The rise in rates also means a higher cost of funds, and fund mobilization in overseas markets will be costly. The increase in the cost of funds may not only increase the cost of capital expenditure for India but will also strain the profit margins of companies.

**Source:** [Indian Economy \(core\)](#)

**Q.7) e-Rupi Voucher, recently seen in news has been developed by which of the following?**

- a) RBI
- b) National Payments Corporation of India
- c) NITI Aayog
- d) MeitY

**ANS: B**

**Explanation: About e-Rupi Voucher:**



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- Thus e-RUPI is a one-time contactless, cashless voucher-based mode of payment.
- It helps users redeem the voucher without a card, digital payments app, or internet banking access.

**For example,** if the Government wants to cover a particular treatment of an employee in a specified hospital, it can issue an e-RUPI voucher to that employee. The employee will receive an SMS or a QR Code on his feature phone / smart phone. He/she can go to the specified hospital, avail of the services and pay through the e-RUPI voucher received on his phone.

**Purpose:** It is designed to be a person and purpose-specific digital payment solution. It seeks to ensure that government schemes reach intended beneficiaries in a targeted and leak-proof manner, with **limited touchpoints** between the government and the beneficiary.

**Developed by:** National Payments Corporation of India (NPCI) in collaboration with the Department of Financial Services (DFS), the Union Health Ministry, and the National Health Authority (NHA).

### **What is the significance of e-Rupi?**

- Unlike other digital payment formats, e-Rupi does not require beneficiaries to have a bank account.
- e-Rupi works on basic phones also and hence it can be used by people who do not own smartphones or in places that lack an internet connection, thereby promoting offline payments.
- It will ensure leak-proof delivery of welfare services. It can be used for delivering services under schemes, meant for providing drugs and nutritional support like Ayushman Bharat fertilizer subsidies, etc.
- The private sector can leverage these digital vouchers as part of its employee welfare and corporate social responsibility programs.

**Source:** [Indian Economy \(core\)](#)

### **Q.8) Consider the following statements about Shrinkflation:**

1. It is the practice of reducing the size of a product while maintaining its sticker price.
2. Shrinkflation makes it harder to accurately measure price changes or inflation.

### **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: About Shrinkflation:**

- Shrinkflation is a combination of two words, “shrink” and “inflation”.
- It is the practice of reducing the size of a product while maintaining its sticker price.
- Shrinkflation is basically a form of hidden inflation.

**Examples of Shrinkflation:** Shrinkflation is done most commonly in the food and beverage sector, though it may occur in any industry:

1. The size of a chocolate bar is reduced from 60 grams to 55 grams, with no resultant decrease in price.
2. The pages of a notebook are changed from 1000 to 800 and the price remains unaltered.
3. The size of the cold drink bottle is dropped to 750ml from 800ml and no change in price is done.

### **Causes of Shrinkflation**

The main reasons for shrinkflation are:

**Increase Production Costs:** Due to the increase in the various elements of production costs such as raw materials, labour, power cost, and so on, the manufacturers are compelled to follow shrinkflation as the increasing costs eat up their profit margins.

**Strong level of Competition:** Another main reason that leads to shrinkflation is high competition in the industry. To attract customers by maintaining the prices, the producers can maintain their profit margins by adopting this strategy.

### **Implications of Shrinkflation**

- Shrinkflation runs the risk of turning customers away from a product or brand if they notice they are getting less for the same price.
- Shrinkflation makes it harder to accurately measure price changes or inflation. The price point becomes misleading since the product size cannot always be considered in terms of measuring the basket of goods.

**Source:** [Indian Economy \(core\)](#)

**Q.9) UPI123Pay, recently seen in news has been launched by which of the following?**

- a) Ministry of finance
- b) NITI Aayog
- c) RBI
- d) NPCI

**ANS: C**

### **Explanation:**

- Reserve Bank of India has launched a new UPI service for feature phones called UPI123Pay.
- It has also launched a 24×7 helpline for digital payments called 'Digisaathi'.

### **About the UPI123Pay**

- UPI 123PAY is a three-step offline method to initiate and execute transactions that will work on simple feature phones that do not have internet connectivity.
- It will allow users to use feature phones for almost all transactions except scan and pay.
- For transactions, users just need to link their bank accounts with their phones to use the service.

### **How can transactions be done without the internet?**

UPI123Pay offers users four options to make payments without internet connectivity:

**Interactive Voice Response (IVR):** Users would be required to initiate a secured call from their feature phones to a predetermined IVR number and complete UPI on-boarding formalities to start making financial transactions like money transfer, mobile recharge, EMI repayment, balance check, among others.

**App-based functionality:** One could install an app on feature phones through which several UPI functions, available on smartphones, will be available on their feature phone, except the scan and pay feature which is currently not available.

**Missed call facility:** The missed call facility will allow users to access their bank account and perform routine transactions such as receiving, and transferring funds by giving a missed call on the number displayed at the merchant outlet. The customer will receive an incoming call to authenticate the transaction by entering UPI PIN.



**Proximity sound-based payments:** One could utilize the proximity sound-based payments option, which uses sound waves to enable contactless, offline, and proximity data communication on any device.

**About DigiSaathi:** DigiSaathi has been set up by the National Payments Corporation of India (NPCI). It is a 24 x 7 Helpline for providing information on digital payment products and services. It will use AI technology to answer any questions related to all types of digital transactions. Currently, it is available in English and Hindi language.

**Source:** [Indian Economy \(core\)](#)

**Q.10) Consider the following statements about SWIFT:**

1. SWIFT is a messaging network used by banks and financial institutions globally to quickly, accurately, and securely send and receive information, such as money transfer instructions.
2. It is **overseen by** G-10 central banks.
3. It is headquartered at Washington DC.

**Which of the statements given above is/are correct?**

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

**ANS: A**

**Explanation: About SWIFT:**

- SWIFT is a messaging network used by banks and financial institutions globally to quickly, accurately, and securely send and receive information, such as money transfer instructions.
- SWIFT carries an average of approximately 26 million financial messages each day.

**Headquarters:** Belgium

**Established in:** 1973

**Overseen by:** G-10 central banks (Belgium, Canada, France, Germany, Italy, Japan, The Netherlands, United Kingdom, United States, Switzerland, and Sweden) as well as the European Central Bank (ECB)

**Governance:** SWIFT is owned and controlled by its shareholders (financial institutions) representing approximately 3,500 firms from across the world. The shareholders elect a Board of 25 independent Directors representing banks across the world, which governs the Company and oversees the management of the Company.

**Note:** SWIFT does not hold or transfer assets or money; neither is it a financial institution itself. Rather, it just facilitates secure, efficient communication between member institutions.

**Source:** [Indian Economy \(core\)](#)

## *Economy*

**Q.1) Consider the following statements about Vande Bharat Trains:**

1. It is an indigenous semi-high speed train, with maximum speed of 160 kmph.
2. They are self-propelled trains that do not require an engine.

**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:** About Vande Bharat Trains:

- Vande Bharat is an indigenous semi-high speed train, with maximum speed of 160 kmph. Currently, two Vande Bharat trains are in operation, with routes New Delhi-Varanasi and New Delhi-Katra.
- They are self-propelled trains that do not require an engine. This feature is called a distributed traction power system.
- It means Vande Bharat rake has eight motorised coaches, compared to a 16-coach Shatabdi type train with one source of power at one end of the train in the form of a train locomotive.
- It allows the train higher acceleration and deceleration as compared to locomotive-based trains that take more time to attain top speed or gradually come to a halt.
- It also has an intelligent braking system with power regeneration for better energy efficiency.
- New features in 400 Vande Bharat Trains: according to the budget, the 400 new trains are expected to be more efficient, with superior aerodynamic profile.
- These trainsets will be built with aluminum instead of steel. An aluminum body will make each train set around 40-80 tonnes lighter than a current Vande Bharat. This will mean lower consumption of energy as well as better speed potential.

**Source:** Infrastructure and Energy

**Q.2) Consider the following statements about Coal gasification:**

1. It is a process in which coal is partially de-oxidized.
2. India has the biggest number of coal gasification projects in the world.

**Which of the statements given above is/are correct?**

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

**ANS: D**

**Explanation:** About Coal Gasification:

- Coal gasification is a process in which coal is partially oxidized with air, oxygen, steam or carbon dioxide to form a fuel gas.

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- This gas is then used instead of piped natural gas, methane and others for deriving energy.
- China has the biggest number of coal gasification projects in the world. 5% of China's total coal consumption is from its gasifier.
- The US also has some coal gasification plants running.

### **Significance of coal gasification**

According to the Ministry of Chemicals and Fertilizers, urea is currently produced using pooled natural gas, which comprises of both domestic natural gas and imported LNG. Hence, the usage of locally available coal for making fertilisers would help reduce the import of LNG.

According to the International Energy Agency report, the coal gasification process holds good potential in the future with coal being the most abundantly available fossil fuel across the world and that even low-grade coal can be used in the process.

### **Concerns associated with Coal Gasification**

- Coal gasification actually produces more carbon dioxide than a conventional coal-powered thermal power plant.
- According to CSE estimates, one unit of electricity generated by burning gasified coal generates 2.5 times more carbon dioxide compared to burning the coal directly.
- Coal gasification plants are costlier than conventional power plants.
- Since coal is the main feed for gasification, it in no way helps India's decarbonisation goals.
- Coal gasification is one of the more water-intensive forms of energy production.
- There are concerns about water contamination, land subsidence and disposing of waste water safely

**Source:** Infrastructure and Energy

### **Q.3) 'VIHANGAM' system, recently seen in news is related to which of the following?**

- a) Banking Sector
- b) Taxation
- c) Coalfields
- d) Railways

**ANS: C**

#### **Explanation: About VIHANGAM:**

- VIHANGAM is an Internet-based system integrated with a Remotely Piloted Aircraft System (RPAS).
- The system consists of a Ground Control Station (GCS), an RPAS, internet lease line of 40 Mbps and VIHANGAM portal.
- The system enables **real-time transmission of aerial video** of mining activities from mines to internet platforms, which can be accessed through VIHANGAM portal by authorized personnel only having ID and password.

#### **About Remotely Piloted Aircraft System (RPAS)**

RPAS is considered as one of the subset of the **Unmanned Aircraft System (UAS)**. It consists of a remotely piloted aircraft, its associated remote pilot station(s), the required command and control links and any other components as specified in the type design.

#### **About Mahanadi Coalfields Limited (MCL)**

A **major coal producing company** which is also one of the eight subsidiaries of Coal India Limited. MCL was the **first coal company** to introduce environment-friendly Surface Mining technology in 1999.

**Source:** [Infrastructure and Energy](#)

**Q.4) Sela Tunnel Project, recently seen in news is located in which of the following states/UTs?**

- a) Ladakh
- b) Arunachal Pradesh
- c) Uttarakhand
- d) Jammu and Kashmir

**ANS: B**

**Explanation: About Sela Tunnel Project:**

**Located in:** West Kameng District of Arunachal Pradesh.

- The tunnel is a part of the Balipara-Chariduar-Tawang (BCT) road, one of the key strategic projects near the Chinese border.
- The project comprises two tunnels:
  - a) Tunnel 1 which is a 980 m long single tube tunnel and
  - b) Tunnel 2, which is a 1555 m long twin-tube tunnel. Tunnel 2 has one bi-lane tube for traffic and one escape tube for emergencies.
- The project also includes the construction of an approach road of seven kilometers to Tunnel 1, which takes off from BCT Road and a link road of 1.3 kilometers, which connects Tunnel 1 to Tunnel 2.

**Significance of the tunnel**

Once completed, the tunnel will be the longest twin-lane tunnel above 13,000 feet in the world and will provide all-weather connectivity to Tawang. Moreover, the project will also allow faster deployment of weapons and soldiers to forward areas in the Tawang sector.

**Source:** [Infrastructure and Energy](#)

**Q.5) Consider the following statement about Shale Oil:**

1. It is an unconventional oil produced from oil shale rock fragments.
2. Russia and the US are among the largest shale oil producers in the world.

**Which of the statements given above is/are correct?**

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

**ANS: C**

**Explanation: About Shale Oil:**

Shale oil is an unconventional oil produced from oil shale rock fragments.

**Difference between Shale Oil and conventional crude oil:** The key difference between shale oil (also known as Tight Oil) and conventional crude is that the shale oil is conventional crude deposits. Its extraction requires the creation of fractures in oil and gas rich shale to release hydrocarbons through a process called hydraulic fracking.

**Challenges in Shale Oil Exploration:** Environmental concerns around massive water requirements for fracking and potential for groundwater contamination.

**Largest Producers of Shale Oil:** Russia and the US are among the largest shale oil producers in the world, with a surge in shale oil production in the US having played a key role in turning the country from an importer of crude to a net exporter in 2019.

**Shale Oil Exploration in India:** Currently, there is no large-scale commercial production of shale oil and gas in India.

**Note:** Earlier, State-owned ONGC had found prospects of shale oil at the **Cambay basin in Gujarat and the Krishna Godavari basin in Andhra Pradesh**. However, the company concluded that the quantity of oil flow observed in these basins did not indicate “**commerciality**” and that the **general characteristics of Indian shales are quite different from North American ones**.

**Source:** [Infrastructure and Energy](#)

**Q.6) Consider the following statement about Zoji La Tunnel:**

1. It is a single-tube road tunnel under Zoji La pass in the Himalayas
2. The tunnel will connect Baltal in Kashmir with Minamarg in Ladakh.

**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: About the Zoji La Tunnel**

- Zoji La Tunnel is a single-tube road tunnel under Zoji La pass in the Himalayas
- The tunnel will connect **Baltal in Kashmir with Minamarg in Ladakh**. This will reduce travel time by two-and-a-half hours.
- Once completed, Zojila tunnel will be India's longest road tunnel and Asia's longest bidirectional tunnel.

**Strategic significance of the Zoji La Tunnel**

The need for Zoji La tunnel was first felt during the 1999 Kargil war, and the recent incursions by China made it an urgent necessity. The tunnel will provide logistics flexibility and operational mobility to the Army.

**About the Zoji La Pass**

- Zoji La is a high mountain pass located in the Kargil district of Ladakh. Zoji la is also known as the “Mountain Pass of Blizzards”.
- The pass links Leh and Srinagar and provides an important link between the Union Territories of Ladakh and Kashmir.
- Zojila pass remains closed during winters due to heavy snowfall, cutting off the Ladakh region from Kashmir.

**Source:** [Infrastructure and Energy](#)



**Q.7) National Generic Document Registration System has been launched by which of the following?**

- a) NITI Aayog
- b) Ministry of Rural Development
- c) Ministry of Home Affairs
- d) Ministry of Finance

**ANS: B**

**Explanation:**

**Launched by:** Department of Land Resources, Ministry of Rural Development

**Purpose:** It is a common, generic, and configurable application developed for registration departments across the country.

**The application is specifically designed for the use of** sub registrars, citizens, and apex users from registration departments. It also facilitates states to create state-specific instances and configure the software as per requirements.

**Significance:** After NGDRS, a person had to go only once or twice to the office to complete the registration of the properties, whereas earlier he was expected to visit 8 to 9 times different offices to complete the registration process.

**Source:** [land reforms and agriculture](#)

**Q.8) Consider the following statement about the Unique Land Parcel Identification Number (ULPIN) scheme:**

1. Under the scheme, authorities issue a 10-digit identification number to every plot of land in the country.
2. The longitude and latitude of a land parcel will be the basis for its identification.

**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 Unique Land Parcel Identification Number (ULPIN) scheme** was launched in 10 States in 2021. It will roll out across the country by March 2022.

**Key Features of the Scheme:**

- Under the scheme, authorities issue a **14-digit identification number** to every plot of land in the country.
- Also called the “**the Aadhaar for land**”, it is a unique number to identify every surveyed parcel of land. It will prevent land fraud, especially in rural India where proper land records are not available.
- **The longitude and latitude of a land parcel will be the basis for its identification.** It will depend on detailed surveys and geo-referenced cadastral maps.
- The **land records database** will gradually integrate with the records of revenue courts and banks on a voluntary basis.
- **Significance:** The scheme might also be the next step in the Digital India Land Records Modernisation Programme (DILRMP). It began in 2008.

**Source:** [land reforms and agriculture](#)

**Q.9)** Consider the following statement about National Land Monetization Corporation (NLMC):

1. It will be a wholly-owned Government of India company.
2. It will be set up under the administrative jurisdiction of Ministry of Rural Development.

**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: About National Land Monetization Corporation (NLMC):**

NLMC will be a wholly-owned Government of India company with an initial authorized share capital of Rs 5000 crore.

**Nodal Ministry:** It will be set up under the administrative jurisdiction of the Department of Public Enterprise, Ministry of Finance.

**Composition:** A chairman will be appointed to head the NLMC through a 'merit-based selection process. The Board of Directors will comprise senior Central Government officers and eminent experts to enable professional operations and management of the company. The Board of NLMC can also hire, pay, and retain experienced professionals from the private sector.

**Functions of NLMC**

To **undertake monetization of surplus land and building assets** of Central public sector enterprises (CPSEs) as well as other government agencies.

To **own, hold, manage and monetize surplus land and building assets of CPSEs** under closure and the surplus non-core land assets of Government-owned CPSEs under strategic disinvestment.

To advise other government entities to identify their non-core surplus assets and 'generate maximum value' by monetising them 'in a professional and efficient manner'.

To act as a repository of best practices in land monetization, assist and provide technical advice to the Government in the implementation of asset monetization programs.

**Significance of NLMC**

**Firstly**, with the monetization of non-core assets, the Government would be able to generate substantial revenues by monetizing unused and under-used assets.

**Secondly**, it will speed up the closure process of CPSEs and smoothen the strategic disinvestment process of Government-owned CPSEs.

**Source:** [land reforms and agriculture](#)



**Q.10) Consider the following statement about Purple Revolution:**

1. It was launched by the Union Ministry of Science & Technology through the Council of Scientific & Industrial Research (CSIR) Aroma Mission.
2. It aims to increase lavender cultivation in Jammu and Kashmir.

**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: About Purple Revolution:**

Purple or Lavender Revolution was launched by the Union Ministry of Science & Technology through the Council of Scientific & Industrial Research (CSIR) Aroma Mission.

**Aim:** To increase lavender cultivation in Jammu and Kashmir.

**Objective:** To empower domestic farmers and support India's aromatic crop-based agro-economy by reducing imports of aromatic oils and increasing home-grown varieties.

**Under the mission,** first-time farmers were given free lavender saplings, while those who had cultivated lavender before were charged Rs. 5-6 per sapling.

**Source:** [land reforms and agriculture](#)

## *Art and Culture*

**Q.1) Ramna Kali temple, recently seen in news is located in which of the following country?**

- a) Vietnam
- b) Sri Lanka
- c) Bangladesh
- d) Nepal

**ANS: C**

**Explanation: About Ramna Kali temple:**

- Ramna Kali Temple is a temple in Dhaka. The temple is dedicated to the Goddess Kali and is believed to have been built during the Mughal period.
- The temple gained prominence in the early 20th century when the **renowned saint Ma Anandamayi** built her ashram within the temple premises.
- Anandamayi was popularly addressed as “Shahbag-er ma”, or the Mother of Shahbag.
- The temple was destroyed in 1971 by the Pakistani Army during the Bangladesh Liberation War. In 2017, the Government of India had pledged money for reconstruction efforts of the temple.
- And now the temple has been inaugurated by the President of India after reconstruction got completed.

**Source:** [Architecture of India](#)

**Q.2) Consider the following statements about Kashi Vishwanath Temple:**

1. The Hindu temple dedicated to Lord Vishnu.
2. The Temple stands on the eastern bank of the holy river Ganga.

**Which of the statements given above is/are correct?**

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

**ANS: D**

**Explanation: About Kashi Vishwanath Temple Corridor project:**

- The Kashi Vishwanath Temple Corridor project in Varanasi connects the iconic Kashi Vishwanath temple and the ghats along the river Ganga.
- The project will **ensure easy movement of pilgrims and devotees** between the ghats and the temple.
- Earlier, they had to pass through congested streets to reach the temple. The corridor will be 320 km long and 20 km wide walkway.
- This improvement of the infrastructure in Varanasi is **expected to give a boost to tourism** in the region.

**About Kashi Vishwanath Temple:**

- Kashi Vishwanath Temple is one of the most famous Hindu temples dedicated to Lord Shiva. It is located in Varanasi, Uttar Pradesh.
- The main deity is known by the name Vishvanatha or Vishveshvara meaning *Ruler of The Universe*.
- The Temple stands on the **western bank of the holy river Ganga**.
- It is **one of the twelve Jyotirlingas**, the holiest of Shiva Temples. The temple was rebuilt and renovated by Maharani Ahilyabai Holkar of the Indore in the year 1780.
- A Jyotirlinga is a shrine where Lord Shiva is worshipped in the form of a Jyotirlingam, a holy representation of Lord Shiva. Other 11 Jyotirlingas include;
  - Somnath Jyotirlinga in Gir, Gujarat
  - Mallikarjuna Jyotirlinga in Srisailem, Andhra Pradesh
  - Mahakaleshwar Jyotirlinga in Ujjain, Madhya Pradesh
  - Omkareshwar Jyotirlinga in Khandwa, Madhya Pradesh
  - Baidyanath Jyotirlinga in Deogarh, Jharkhand
  - Bhimashankar Jyotirlinga in Maharashtra
  - Ramanathaswamy Jyotirlinga in Rameshwaram, Tamil Nadu
  - Nageshwar Jyotirlinga in Dwarka, Gujarat
  - Trimbakeshwar Jyotirlinga in Nasik, Maharashtra
  - Kedarnath Jyotirlinga in Rudrapur, Uttarakhand
  - Ghreshwar Jyotirlinga in Aurangabad, Maharashtra

Source: [Architecture of India](#)

**Q.3) Consider the following statements about Somnath Temple:**

1. It is believed to be the first among the twelve jyotirlinga shrines of Shiva.
2. The present temple was reconstructed in the Chaulukya style of Hindu temple architecture.

**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: About Somnath Temple:**

- Somnath temple is located on the western coast of Gujarat. It is believed to be the **first among the twelve jyotirlinga shrines** of Shiva.
- It was reconstructed several times in the past after repeated destruction by several Muslim invaders and rulers.
- This temple is also referred to as **Ahilyabai Temple** since it was built by **Queen Ahilyabai** of Indore when she found that the old temple was in ruins.
- The present temple was reconstructed in the **Chaulukya style** of Hindu temple architecture, with a shikhara nearly 50 m tall.
- It was completed in May 1951. The reconstruction was completed by **Vallabhbhai Patel**.
- The temple's imposing architecture includes intricate carvings, silver doors, an impressive Nandi idol and the central shivalinga.

**Chalukyan Style of temple architecture:**

- It is a blend of Nagara and Dravidian styles, and evolved its own distinctive style. It is sometimes referred to as the 'Vesara' style of architecture.

**PRELIMS MARATHON COMPILATION FOR THE MONTH OF APRIL (THIRD WEEK), 2022**

- Style included **vimana** of Dravidian style and faceted walls of Nagara style.
- The Ladh Khan and Durga temples at Aihole are the best examples of Chalukyan architecture.

**Source:** [Architecture of India](#)

**Q.4) The British Gazette states, which of the following forts, as the Gibraltar of the East?**

- a) Raigarh Fort
- b) Aguada Fort
- c) Chitradurga Fort
- d) Jaisalmer Fort

**ANS: A**

**Explanation: About Raigad Fort:**

- It is a hill fort situated in the Raigad district in Maharashtra.
- The British Gazette states the fort was known to early Europeans as the **Gibraltar of the East**.
- Its distinctive feature is a mile and a half flat top, which has adequate room for buildings. In its prime, the fort had 300 stone houses and a garrison of 2,000 men.
- **Brief history of Raigad Fort:** The fort, which was earlier called Rairi, was the seat of the Maratha clan Shirke in the 12th century.
- The fort changed hands a number of times from the dynasty of Bahaminis to the Nizam Shahis and then the Adil Shahis.
- In 1656, Chhatrapati Shivaji captured it.
- The fort not only helped Shivaji in challenging the supremacy of the Adil Shahi dynasty but also opened up the routes toward Konkan for the extension of his power.
- In 1662, Shivaji formally changed the fort's name to Raigad.

**Importance of Raigad Fort**

- Raigad fort became the seat of Chhatrapati Shivaji's government by 1664.
- Also, Shivaji was coronated as Chhatrapati at Raigad by Gagabhatt.
- Now the Maharashtra Government is also **seeking the World Heritage Site tag** for Raigad Fort along with 13 other forts from the era of 17th century Maratha king Chhatrapati Shivaji Maharaj on the theme of **Maratha Military Architecture** in Maharashtra.

**Source:** [Architecture of India](#)

**Q.5) Ministry of Culture inaugurated one of its kind conferences on Indian temple architecture, 'Devayatanam', at which of the following places?**

- a) Khajuraho Temple
- b) Hampi
- c) Mahabaleshwar
- d) Konark Temple

**ANS: B**

**Explanation: About Devayatanam**

**Organized by:** Archaeological Survey of India (ASI) of Ministry of Culture

**Purpose:** It is a conference on the journey of Indian Temple Architecture, held at **Hampi**, Karnataka.

**Aim:** It provides a platform to discuss, deliberate and disseminate to the world the philosophical, religious, social, economic, technical, scientific, art and architectural aspects of the Indian temples.

It also aims to initiate a dialogue on the evolution and development of the various styles of temple architecture such as the Nagara, Vesara, Dravida, Kalinga and others.

**Other important aspects linked to conference**

The conference is in line with 5 V's, i.e. Vikas (development), Virasat (heritage), Vishwas (trust), Vignan (knowledge) of Prime Minister to make India a vishwaguru.

**Source:** [Architecture of India](#)

**Q.6) Consider the following statements about Perini Dance form:**

1. It is an ancient dance form from Telangana.
2. This dance form prospered during the Satvahanas dynasty.

**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: About Perini Dance:**

- Perini is an ancient dance form from Telangana. This dance form prospered during the **Kakatiya dynasty**.
- This dance form is also called '**Dance of Warriors**'. It is believed that in ancient times, this dance form was performed before the soldiers were sent to war.
- It is usually performed by males in honour of **Lord Shiva**.
- One can find evidence of this dance in the sculptures **near Garbha Gudi (Sanctum Sanctorum) of the Ramappa Temple at Warangal**.
- **It finds mention in Bharataarnavam by Nandikeshwara, an early medieval work.**
- This dance form was almost forgotten until the early 1970s. However, Padmasri Dr. Nataraja Ramakrishna was the person who revived this art form recently.

**About Kakatiya dynasty:**

- This dynasty ruled most of **eastern Deccan region** between 12<sup>th</sup> and 14<sup>th</sup> century.
- The region included present day Telangana and Andhra Pradesh, and parts of eastern Karnataka and southern Odisha.
- Early Kakatiya rulers served as feudatories to Rashtrakutas and Western Chalukyas. They assumed sovereignty under **Prataparudra I in 1163 CE** by suppressing other Chalukya subordinates in the Telangana region.

**Source:** [Paintings, festivals and dance forms of India](#)

**Q.7) Consider the following statements about Kaavi Art:**

1. Kaavi is a form of wall art found in Malabar region.
2. The painting is done in bright red and white shades on the walls of temples and homes that depict the ancient history 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: About Kaavi Art:**

Kaavi is a form of **wall art** found in **Konkan region**, especially in temples of Goa, parts of coastal **Maharashtra** and **Karnataka**.

The art was introduced by the **Portuguese** who ruled Goa until 1961.

The art takes its name from **Kaav in Konkani** which refers to **Indian red pigment**, found in laterite soil, the only color used in this painting. The **red pigment** is obtained from the laterite soil.

The painting is done on wet plaster in a manner similar to frescoes [*Fresco is a technique of mural painting executed upon freshly laid (wet) lime plaster*].

The painting is done in **bright red and white shades**. It is usually done on the walls of temples and homes that depicts the ancient history of India.

**Source:** [Paintings, festivals and dance forms of India](#)

**Q.8) Sohrai Art Form, is popular in which of the following state/UT?**

- a) Meghalaya
- b) Himachal Pradesh
- c) Jharkhand
- d) Uttar Pradesh

**ANS: C**

**Explanation: About Sohrai Art Form:**

- A Sohrai mural is an indigenous art form practised by tribal women of Santhal community in the Hazaribagh district of Jharkhand.
- The paintings are done on mud walls to **welcome the harvest and to celebrate the cattle**.
- The women clean their houses and decorate their walls with murals of Sohrai arts.
- This art form has continued since 10,000-4,000 BC. It was prevalent mostly in caves, but shifted to houses with mud walls.

**Note:** [Sohrai Khovar](#) painting received the Geographical Indication (GI) tag in 2020.

**Key Features of Sohrai Art Form**

- The Sohrai murals can be **monochromatic or colorful**. The colours used in this picture (red, black, yellow, and white) are natural earth colours. Chewing twigs are used as paint brushes, while cloth rags are used to apply the base coat.
- Popular Sohrai motifs are animals, birds, lizards, elephants and Pashupati (the creator of all animals), who is usually riding on the back of an animal.



- The artists are spontaneous in their drawings. The designs are usually drawn from the artist's memory. The personal experience of the artist and their interaction with nature are the biggest influence.

**Source:** [Paintings, festivals and dance forms of India](#)

**Q.9) Consider the following statements about National Gallery of Modern Art:**

1. It is a premium art gallery under the Ministry of Culture.
2. It is headquartered at Jaipur, Rajasthan.

**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: About Kala Kumbh:**

- Kala Kumbh is organized by the **National Gallery of Modern Art (NGMA)**.

**Purpose:** It is an artist workshop for painting scrolls representing the tales of valour of unsung heroes of India's freedom movement.

**Aim:** To amalgamate varied forms of visual and performing arts of the country to represent the true essence of unity and diversity in India.

The works of art done on the gigantic scrolls **will form an integral part of the Republic Day celebrations 2022**. This workshop marks a unique collaboration between the **Ministry of Culture and the Ministry of Defence**.

The paintings at these workshops were done by more than **five hundred artists spread over two locations, Odisha and Chandigarh**.

**Significance:** The workshop will garner the interest of each individual to dig deep into the history of the unsung heroes of India's freedom struggle. It would also draw attention towards the unified visual aspects of modern, indigenous and contemporary arts of India.

**About the National Gallery of Modern Art**

It is a premium art gallery under the Ministry of Culture.

It was established in 1954 by then vice-president **Dr. S Radhakrishnan** in the presence of Prime Minister **Jawaharlal Nehru**.

It is a repository of the cultural ethos of the country and showcases the changing art forms through the passage of the last hundred and fifty years, starting from about 1857 in the field of Visual and Plastic arts.

**Headquarters:** Jaipur House, New Delhi.

**Source:** [Paintings, festivals and dance forms of India](#)

**Q.10) Namda Craft, recently seen in news, hails from which of the following region?**

- a) Andhra Pradesh
- b) Uttarakhand
- c) Arunachal Pradesh
- d) Kashmir

**ANS: D**

**Explanation: About Namda Craft:**

It is widely thought to have originated in the 11th century during the reign of Mughal emperor Akbar. It is a rug made of sheep wool through a felting technique instead of the normal weaving process.

It is extensively used in Kashmir households for floor covering and mattresses.

**Reasons for Decline of Namda Craft**

The export of Namda craft declined almost 100% between 1998 and 2008 due to the low availability of raw materials, lack of skilled manpower, and marketing techniques.

**Source:** [Paintings, festivals and dance forms of India](#)