# **Forum** AS

# 10 PM Current Affairs Quiz Compilation

**June 2022** 

#### SCIENCE AND TECHNOLOGY

# Q.1) With reference to stem cells and stem cell therapy, consider the following statements:

- 1. Under this therapy, stem cells are manipulated to specialize into specific types of cells.
- 2. It is a non-surgical procedure with no incisions of the body.

# 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

### Answer: c

#### Both statements are correct.

- **Statement 1 is correct**: The basic process of stem cell therapy starts with taking out of stem cells containing bone marrow and processing the stem cells in a lab. Then stem cells are specialized into the necessary adult cell type. These stem cells are manipulated to specialize into specific types of cells, such as heart muscle cells, blood cells or nerve cells.
- **Statement 2 is correct:** Stem cell therapy is a non-surgical procedure with no incisions of the body. Traditional surgeries leave behind scars that require extended time periods to heal.

Source: Article

# Q.2) BRICS plus concept was first proposed by which of the following countries?

- a) China
- b) India
- c) South Africa
- d) Brazil

#### Answer: a

• 'BRICS Plus' was first mooted by Chinese Foreign Minister Wang Yi in March 2017 with the objective of widening the "circle of friends" of BRICS that can bring unity among developing countries and enhance South-South cooperation.

Source: Article

### Q.3) With reference to reservation policy in India, consider the following statements:

- 1. Right to reservation or promotion is a fundamental right under the Indian Constitution.
- 2. The court directed the exclusion of the creamy layer from the benefits of reservation under the Indira Sawhney judgement.

# 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

Answer: b



- **Statement 1 is incorrect**: Reservation is not a fundamental right. It is a settled law, time and again reiterated by the Supreme Court, that there is no fundamental right to reservation or promotion under Article 16(4) or Article 16(4 A) of the Constitution, rather they are **enabling provisions** for providing reservation, if the circumstances so warrant. (**Mukesh Kumar and Another vs State of Uttarakhand & Ors. 2020**)
- **Statement 2 is correct**: Under Indira Sawhney judgement, the Court directed the exclusion of creamy layer by way of horizontal division of every other backward class into creamy layer and non-creamy layer.

Source: Article

# Q.4) With reference to the Public Interest Litigation (PILs), consider the following statements:

- 1. PILs can be filed either before the Supreme Court of India or any High Court.
- 2. Supreme court has in its various judgements ruled that a letter or a postcard addressed to the Chief Justice of India cannot be converted to a PIL

### 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

#### Answer: a

• PILs are extensions of Writ Jurisdiction. Therefore, PILs may be filed either before the Hon'ble Supreme Court of India under Article 32 of the Indian Constitution or any High Court under Article 226 of the Indian Constitution. However, even a simple letter or a postcard addressed to the Chief Justice of India or the Chief Justice of a High Court may suffice. The court may then choose to take cognizance of the letter and convert it into a PIL.

#### Q.5) What is/are the advantages of shifting to natural farming?

- 1. Reduce the dependence on credit.
- 2. Less flexible than organic farming.
- 3. Higher carbon fixation into the soil.

#### Select the correct answer from the codes given below.

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

#### Answer: c

- **Statement 1 is correct**: A panel survey of 260 farm households which were surveyed in 2018-19 and 2019-20, found that natural farming reduced the dependence on credit, freeing many farmers from exploitative and interlinked input and credit markets.
- **Statement 2 is incorrect**: Organic farming is more about certification, while natural farming is a gradual process. But there is relative flexibility in natural farming for adoption. This makes it easier for small farmers to transition.
- **3 is correct**: Natural farming not just creates cost savings for farmers, but also ensures higher carbon fixation into the soil, which can mitigate climate change.





### Q.6) With reference to the West Nile Virus, consider the following statements;

- 1. The Aedes species of mosquito act as the principal vectors for transmission.
- 2. The disease is asymptomatic in 80% of the infected people.

# 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

#### Answer: B

**Statement 1 is incorrect**: Culex species of mosquitoes act as the principal vectors for transmission.

**Statement 2 is correct**: The disease is asymptomatic in 80% of the infected people. The rest develop what is called the West Nile fever. In these 20% cases, the symptoms include fever, headache, fatigue, body aches, nausea, rash and swollen glands. Severe infection can lead to encephalitis, meningitis, paralysis and even death.

Source: <u>Indian Express</u>

# Q.7) With reference to community forest Resource (CFRs) rights, consider the following statement;

- 1. The community uses CFR rights to access resources available within the entire forests.
- 2. The Forest Rights Act provide recognition of right to "protect, regenerate or conserve or manage" the CFR.
- 3. These rights give the authority to the Gram Sabha to adopt local traditional practices of forest conservation.

#### Select the correct answer from the codes given below;

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

#### Answer: C

**Statement 1 is incorrect**: The community uses CFR Rights to access resources available within the traditional and customary boundary of the village.

**Statement 2 is correct**: The Forest Rights Act provide recognition of right to "protect, regenerate or conserve or manage" the CFR.

**Statement 3 is correct**: These rights give the authority to the Gram Sabha to adopt local traditional practices of forest conservation.

Source: Indian Express



### Q.8) With reference to the First Movers Coalition, consider the following statements:

- 1. The coalition aims to decarbonise the heavy industry and long-distance transport sectors.
- 2. It is an initiative of the World Travel & Tourism Council (WTTC).

### 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

#### Answer: A

**Statement 1 is correct**: The coalition aims to decarbonise the heavy industry and long-distance transport sectors that are responsible for 30 percent of global emissions.

**Statement 2 is incorrect**: It is an initiative of President of the USA and the World Economic Forum(WEF).

Source: Business Standard

# Q.9) With reference to the rules governing the behaviour of high officials, consider the following statements;

- 1. All India Service Conduct Rules, 1968 govern all the civil servants in the country.
- 2. Oral direction from superiors is acceptable in certain conditions.

### 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

#### Answer: B

- **Statement 1 is incorrect**: The three All India Services (IAS, IPS, and Indian Forest Service) are governed by the All India Service Conduct Rules, 1968. The other civil services are governed by the Central Civil Services (CCS) Conduct Rules, 1964.
- **Statement 2 is correct**: There is a well-framed Rule about how to act on oral orders given by superiors. It says that the direction of the official superior shall ordinarily be in writing. Where the issue of oral direction becomes unavoidable, the official superior shall confirm it in writing immediately thereafter.

Source: Indian Express

# Q.10) Operations Cactus, which was seen in news recently, is related to which of the following?

- a) An operation by Indian Navy to rescue Indians during Oil crisis.
- b) Indian Army mission to recapture Siachen glacier from the Pakistani Army.
- c) An Indian operation that helped the government of Maldives in neutralization the coup.
- d) Indian mission to provide water for Middle Eastern Countries to avert their water crisis.

Answer: C



Operation Cactus the Indian Armed Forces have helped the government of Maldives in the neutralization of the coup attempt.

Source: PIB

#### **ENVIRONMENT**

# Q.1) With reference to Red Sanders, consider the following statements:

- 1. It is a flora-species that is endemic to a distinct tract of forests in Eastern Ghats region of Andhra Pradesh.
- 2. The export of Red Sanders from India is prohibited as per the Foreign Trade Policy.
- 3. It falls under endangered list in the International Union for Conservation of Nature (IUCN) Red List.

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

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

### Answer: d

- Red Sanders is a flora-species that is endemic to a distinct tract of forests in Eastern Ghats region of Andhra Pradesh
- It falls under 'endangered list' in the International Union for Conservation of Nature (IUCN) Red List. Red Sanders is also listed in Appendix-II of the Convention on International Trade in Endangered Species of Wildlife Fauna and Flora (CITES). Its rich hue and therapeutic properties are responsible for its high demand across Asia, particularly China, for use in cosmetics, medicinal products and high-end furniture/woodcraft.
- The export of Red Sanders from India is prohibited as per the Foreign Trade Policy.

Source: Article

#### Q.2) Consider the following statements:

- 1. Coal emits more carbon dioxide than oil and natural gas.
- 2. India has a greater installed capacity of power generation from natural gas as compared to from renewable energy sources.

# 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

#### Answer: a

- **Statement 1 is correct:** Coal emits nearly twice as much carbon dioxide as natural gas and about 60% more than oil, on a kilogram-to-kilogram comparison.
- Statement 2 is incorrect: As of February 2022, the installed capacity for
  - o **coal-based power generation** across the country accounts for about **51.5**% of power from all sources.

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- Renewable power accounted for 27%
- Natural gas as fuel accounted for 6.3%

Source: Article

# Q.3) With reference to the term Unicorn in the startup ecosystem, consider the following statements:

- 1. These are privately held, venture-capital backed startups that have reached a value of \$1 billion.
- 2. The valuation of a unicorn is largely based on their growth potential as perceived by investors and venture capitalists.

# Which of the statements given above is/are incorrect?

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

# Answer: d

#### Both are correct.

- Unicorns are privately held, venture-capital backed startups that have reached a value of \$1 billion.
- The valuation of unicorns is not expressly linked to their current financial performance, but largely based on their growth potential as perceived by investors and venture capitalists who have taken part in various funding rounds.
- American venture capitalist Aileen Lee is credited with coining the term "Unicorn" in 2013.

**Source**: Article

#### Q.4) With reference to Piezoelectric Effect, consider the following statements:

- 1. It is the ability of certain materials to generate an electric charge in response to applied mechanical stress.
- 2. One of the unique characteristics of the piezoelectric effect is that it is irreversible.

# 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

#### Answer: a

- Statement 1 is correct
- **Statement 2 is incorrect**: The effect is reversible in nature, meaning that materials exhibiting the direct piezoelectric effect (the generation of electricity when stress is applied) also exhibit the converse piezoelectric effect (the generation of stress when an electric field is applied).





# Q.5) What are the advantages of Vertical Farming?

- 1. Increases Photosynthesis
- 2. Reduces transportation cost
- 3. Low Initial capital costs for establishment

# Select the correct answer using the code given below:

- a) 1 and 3 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) All of the above

#### Answer: b

- Statement 1 is correct- By Vertical Farming, food crops can be cultivated easily in urban areas by planting in vertically stacked layers in order to save space and use minimal energy and water for irrigation. Vertical farming can permit crops to be grown throughout the year. It uses L.E.D lights so photosynthesis can occur all day.
- Statement 2 is correct-Since vertical farming system can be easily done in cities so this will reduce transportation costs.
- **Statement 3 is incorrect** High initial capital costs for establishing the vertical farming system is the major problem. In addition, there are costs of erecting the structures along with its automation like automated racking and stacking systems, programmable LED lighting systems, climate control system, etc.

### Q.6) Thiruvananthapuram Declaration was related to which of the following?

- a) To protect the vulnerable areas in Western Ghats
- b) To improve the education in STEM areas
- c) Regarding the women's reservation
- d) To improve the performance of primary health care sector

### Answer: C

The first National Women Legislators Conference concluded with the adoption of Thiruvananthapuram Declaration.

The declaration demanded immediate steps to ensure the passage of the long-pending Women's Reservation Bill, which envisages 33% reservation for women in the Lok Sabha and State legislatures.

Source: The Hindu

# Q.7) With reference Sanjhi Art Panel, consider the following statements;

- 1. The panel is based on the theme of Thakurani Ghat, which is one of the most famous ghats on the banks of Yamuna River.
- 2. The art form originated out of the cult of Krishna.

#### 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

#### Answer: c



#### Both statements are correct.

The intricate sanjhi panel is based on the theme of Thakurani Ghat, which is one of the most famous ghats on the banks of the holy river of Yamuna in Gokul.

The traditional art form that originated out of the cult of Krishna, involves creating stencils based on incidents from the life of the deity and then hand-cutting these on thin sheets of paper using scissors.

Source: Indian Express

# Q.8) With reference to the PM CARES for Children Scheme, consider the following statements;

- 1. The scheme supports children only if they lost both their parents or legal Guardian due to Covid-19.
- 2. The scheme provides assistance for Pre-school and School Education including Boarding and Lodging.

# 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

#### Answer: B

**Statement 1 is incorrect**: The scheme supports children who have lost both their parents or legal Guardian or Adoptive Parents or Surviving Parent to the COVID-19 pandemic during the period starting from 11th March 2020.

**Statement 2 is correct**: The scheme provide assistance for Pre-school and School Education including Boarding and Lodging

Source: PIB

# Q.9) Consider the following pairs

Operation - Related field/task

Operation Rakth Chandan Operation Namkeen Operation Molten Metal Silver smuggling

# Select the correct pairs from the codes given below;

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

#### **Answer: A**

Operation - Related field/task

1. Operation Rakth Chandan - Red Sanders

2. Operation Namkeen - Drugs smuggling

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3. Operation Molten Metal - Gold smuggling

Source: PIB

# Q.10) The terms Param porul, Param Ananta, were recently seen in the news, is related to which of the following?

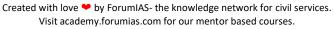
- a) Government new programme to promote Yoga among school children
- b) A new super computer installed under National Supercomputing Mission.
- c) A book on Indian values written in Gupta Period.
- d) Government's new health targets to reduce lifestyle diseases.

#### Answer: B

PARAM ANANTA, a state-of-the art Supercomputer has been commissioned at IIT Gandhinagar.

PARAM PORUL, a state-of-the-art Supercomputer was inaugurated at NIT Tiruchirappalli dedicated to the nation under National Supercomputing Mission (NSM).

Source: PIB





#### SCIENCE AND TECHNOLOGY

# Q.1) With reference to Mission Lucy, consider the following statements:

- 1. It is NASA's first mission to explore the Jupiter Trojan asteroids.
- 2. It is a solar-powered mission.

### Which of the statements given above is/are incorrect?

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

#### Answer: d

#### Both statements are correct.

- Mission Lucy is NASA's first mission to explore the Jupiter Trojan asteroids.
  - o **Named After:** The mission is named after 'Lucy', a 3.2 million-year-old ancestor who belonged to a species of hominins (which include humans and their ancestors).
- It is a solar-powered mission. It is estimated to be over 12 years long, during the course of which the spacecraft will visit eight asteroids covering a distance of about 6.3 billion km to deepen the understanding of the "young solar system".

Source: Article

# Q.2) Which of the following is/are a rare earth element?

- 1. Caesium
- 2. Scandium
- 3. Cerium

# Select the correct answer from the codes given below:

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

### Answer: b

Caesium is not a rare earth element.

• The 17 Rare Earths are cerium (Ce), dysprosium (Dy), erbium (Er), europium (Eu), gadolinium (Gd), holmium (Ho), lanthanum (La), lutetium (Lu), neodymium (Nd), praseodymium (Pr), promethium (Pm), samarium (Sm), scandium (Sc), terbium (Tb), thulium (Tm), ytterbium (Yb), and yttrium (Y)

Source: Article



# Q.3) Logistics Performance Index (LPI) has been developed by which of the following organizations?

- a) UNCTAD
- b) WB
- c) IMF
- d) WTO

#### Answer: b

• The Logistics Performance Index (LPI), developed by the World Bank Group, is an interactive benchmarking tool created to help countries identify the challenges and opportunities they face in their performance on trade logistics and what they can do to improve their performance.

Source: Article

# Q.4) With reference to lotteries in India, consider the following statements:

- 1. Lotteries come within the ambit of betting and gambling activity.
- 2. A State legislature has the right to impose tax on lotteries conducted by other States within its jurisdiction.

### Which of the statements given above is/are incorrect?

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

#### Answer: d

#### Both statements are correct.

- Lottery is a type of gambling activity. Hence, lotteries are within the ambit of 'betting and gambling' as appearing in Entry 34 List II.
- The Supreme Court recently held that a state legislature has the right to impose tax on lotteries conducted by other States within its jurisdiction.

#### Q.5) Which of the following is/are the advantage of Biogas?

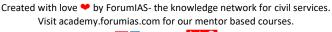
- 1. Provides a stable fuel supply.
- 2. Increase India's oil import bill.
- 3. Act as a source of income for farmers.

# Select the correct answer from the codes given below.

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

#### Answer: c

- **Statement 1 is correct**: Biogas provides a stable fuel supply in the market for oil companies and accessible credit in the market through government schemes and banks for entrepreneurs.
- **Statement 2 is incorrect**: Biogas increase self-reliance in energy utilized for cooking and lighting. So it will reduce India's oil import bill.
- **Statement 3 is correct**: Biogas encourage farmers to consider dung and other waste not just as a waste but as a source of income.





# Q.6) The term 'Killer asteroids' is related to which of the following?

- a. Asteroids which has orbits that pass close to the Earth.
- b. Trojan asteroids that share an orbit with a larger planet.
- c. Asteroids capable of killing thousands when they impact on Earth.
- d. Bigger asteroids that lie between Mars and Jupiter.

#### Answer: C

Killer asteroids, simply mean that they are asteroids capable of killing thousands, if not millions, were they to impact the Earth. It does not necessarily mean that they are on a collision course for Earth.

Source: BBC

# Q.7) With reference gross value added(GVA) and gross domestic product (GDP), consider the following statements;

- 1. If the government earned more from taxes than it spent on subsidies, GDP will be higher than GVA.
- 2. GDP provides the demand side of the economy and GVA the supply side.

### 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

#### Answer: c

#### Both statements are correct.

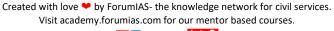
# GDP = GVA + Taxes earned by the government — subsidies provided by the government

For instance, if the government earned more from taxes than it spent on subsidies, GDP will be higher than GVA.

But if the government provided subsidies in excess of its tax revenues, the absolute level of GVA would be higher than that of GDP.

Hence, simply put, GDP provides the demand side of the economy and GVA the supply side.

Source: Livemint





# Q.8) With reference to the Gen Next Democracy Network programme, consider the following statements;

- 1. Under this, youth from democratic countries come to India to get acquainted with India's heritage, culture and functioning of Indian democracy.
- 2. It was launched by the Ministry of External Affairs.

### 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

#### Answer: A

**Statement 1 is correct**: Under this, youth from democratic countries come to India to get acquainted with India's heritage, culture and functioning of Indian democracy.

Statement 2 is incorrect: It is launched by the Indian Council for Cultural Relations (ICCR)

Source: AIR

# Q.9) Which of the following is/are the benefit of liquid nano urea?

- 1. Directly absorbed by plant
- 2. Reduce burden of Urea subsidy
- 3. Higher shelf life

#### Select the correct answer from the codes given below;

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

#### Answer: D

#### The advantages of Liquid Nano Urea over Conventional Urea

**Higher Efficiency:** While conventional urea has an efficiency of about 25%, the efficiency of liquid nano urea can be as high as 85-90%.

**Gets Directly absorbed by plant:** Conventional urea fails to have the desired impact on crops as it is often applied incorrectly and the nitrogen in it is vaporized or lost as a gas. On the other hand, liquid nano urea is sprayed directly on the leaves and gets absorbed by the plant.

**Higher Shelf Life:** Liquid nano urea has a shelf life of a year and farmers need not be worried about "caking" when it comes in contact with moisture.

**No Burden of Urea Subsidy:** Liquid nano urea produced by IFFCO comes in a half-litre bottle priced at Rs 240, and carries no burden of subsidy currently. By contrast, a farmer pays around Rs 300 for a 50-kg bag of heavily subsidized urea.

**Source: Indian Express** 



# Q.10) With reference to the Astra Mk-1 air-to-air missile, consider the following statements;

- 1. The Missile provides shorter stand-off ranges to fighter aircraft.
- 2. It is a beyond visual range (BVR) missile.

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

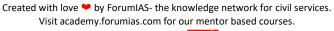
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

#### Answer: B

**Statement 1 is incorrect**: Stand-off range means the missile is launched at a distance sufficient to allow the attacking side to evade defensive fire from the target. Beyond visual range(BVR) airto-air missile (AAM) such as Astra Mk-1 can provide large stand-off ranges to fighter aircraft. This can neutralize adversary airborne assets without exposing themselves to adversary air defence measures.

**Statement 2 is correct**: Astra Mk-1 is a beyond visual range(BVR) air-to-air missile (AAM). BVM missiles are capable of engaging beyond the range of 20 nautical miles or 37 kilometres.

Source: Indian Express





#### **PRELIMS**

# Q.1) With reference to various laws governing firearms in India, consider the following statements:

- 1. Gun license applicants in India must be at least 18 years.
- 2. Converting an imitation firearm into a firearm is punishable by imprisonment.

# 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

# Answer: b

- Statement 1 is incorrect: Gun license applicants in India must be at least 21 years
- Statement 2 is correct: Any act of conversion (such as shortening the barrel of a firearm or converting an imitation firearm into a firearm) or unlawful import-export is **punishable** with an imprisonment term of seven years, which may extend to life imprisonment and be liable to monetary fines.

Source: Article

# Q.2) Potentilla, Delphinium, and Ranunculus sometimes seen in news belong to which of the following species?

- a) Flower
- b) Lizard
- c) Grass
- d) Snake

#### Answer: a

• The valley of flowers in Uttarakhand is home to over 600 flowering species, including some exotic varieties like Brahmkamal, which is also the state flower of Uttarakhand. Other varieties include Blue poppy, described as the Queen of Flowers, Bluebell, Primula, Potentilla, Aster, Lilium, Himalayan Blue Poppy, Delphinium, and Ranunculus. The region also has a rich faunal diversity with species like the leopard, musk deer, and blue sheep.

Source: Article



### Q.3) With reference to Aadhaar, consider the following statements:

- 1. The Aadhaar Act forbids sharing Core Biometric Information for any purpose other than Aadhaar number generation and authentication.
- 2. For an Aadhaar enabled Payment System transaction, only a person's Aadhaar number is required.

### 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

#### Answer: a

- **Statement 1 is correct:** The Aadhaar Act forbids sharing Core Biometric Information (such as finger print, iris scan, among other biometric attributes) for any purpose other than Aadhaar number generation and authentication.
- **Statement 2 is incorrect**: AePS is a facility that lets one perform banking transactions like cash withdrawal and fund transfer. These transactions are done through a mini-ATM carried by a banking correspondent. For an AePS transaction, all you need is a person's Aadhaar number, bank name and fingerprints.

Source: Article

# Q.4) With reference to G20 Grouping, Consider the following statements:

- 1. The G20 does not have permanent offices or employees.
- 2. The Sherpas Channel in G20 covers meetings between finance ministers and central bank governors.

#### 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

#### Answer: a

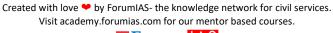
- **Statement 1 is correct**: The G20 does not have permanent offices or employees.
- **Statement 2 is incorrect**: The Finance Channel covers meetings between finance ministers and central bank governors, as well as meetings of their second lines and working groups on financial issues. The Sherpa channel covers non-financial issues.

# Q.5) Uday Kotak Committee sometimes seen in news is related to which of the following?

- a) Corporate governance
- b) Loan restructuring
- c) Monetary policy
- d) Disinvestment

#### Answer: a

 Uday Kotak Committee on Corporate Governance was set up in June, 2017 by SEBI to suggest measures on enhancing the standards of governance of listed companies in India. This committee also had members from government, industry, professional bodies, stock exchanges, academics, lawyers etc.





Source: Article

# Q.6) With reference to the High Mobility Artillery Rocket System(HIMARS), consider the following statements;

- 1. It is a light multiple rocket launcher developed for the US Army.
- 2. It is not capable of firing a longer-range missile.

### 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

#### Answer: A

**Statement 1 is correct**: It is a light multiple rocket launcher developed for the US Army.

**Statement 2 is incorrect**: The HIMARS can launch a medium-range rocket, but is also capable of firing a longer-range missile.

Source: <u>Indian Express</u>

# Q.7) With reference to the UN-Habitat, consider the following statements;

- 1. It is mandated by the United Nations General Assembly to promote socially and environmentally sustainable towns and cities.
- 2. UN-Habitat contributes to reduce poverty and to promote access to safe drinking water and basic sanitation.
- 3. Its partners are either governments or local urban authorities only.

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

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

#### Answer: B

**Statement 1 is correct**: UN Habitat is mandated by the United Nations General Assembly to promote socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all.

**Statement 2 is correct**: UN-Habitat contributes to the overall objective of the United Nations system to reduce poverty and to promote access to safe drinking water and basic sanitation

**Statement 3 is incorrect**: UN-Habitat partners comprises of national governments, local authorities, non-governmental organizations (NGOs), community organizations and the private sector.

Source: The Hindu



### Q.8) With reference to the Indian Dairy Sector, consider the following statements;

- 1. India is the world's largest milk producer.
- 2. Gujarat is the leading milk producing state in India.

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

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

#### Answer: A

**Statement 1 is correct**: India is the world's largest milk producer, with 22% of global production, followed by the United States of America, China, Pakistan and Brazil.

**Statement 2 is incorrect**: The top 5 milk-producing states are: Uttar Pradesh (14.9%), Rajasthan (14.6%), Madhya Pradesh (8.6%), Gujarat (7.6%) and Andhra Pradesh (7.0%).

Source: Indian Express

# Q.9) Which of the following National park is associated with Cheetah reintroduction project?

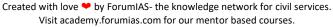
- a) Kanha National Park, Madhya Pradesh
- b) Ranthambore National Park, Rajasthan
- c) Tadoba National Park, Maharashtra
- d) Kuno National Park, Madhya Pradesh

#### Answer: D

The Government is preparing to translocate the first batch of eight Cheetah's from South Africa and Namibia to Kuno National Park in Madhya Pradesh soon after the situation linked to the current third wave of Covid-19 becomes normal,

Further, the government has also launched the 'Action Plan for Introduction of Cheetah in India' under which 50 of these big cats will be introduced in the next five years.

Source: Indian Express





# Q.10) Which of the following is/are the advantages of hydrogen-powered vehicles?

- 1. Less Refuelling Time
- 2. Requires Smaller Battery than EVs
- 3. Faster Charging than EVs

# Select the correct answer from the codes given below;

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

Answer: D

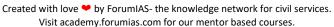
### Hydrogen-powered vehicles have the following advantages:

**Less Refuelling Time:** They can be refuelled like a conventional combustion engine vehicle at a hydrogen station. Refuelling time for the car is five minutes and can run 600 kilometres on a full tank.

**Smaller Battery:** The electric battery in Mirai is 30 times smaller than what conventional electric vehicles use.

**Faster Charging:** They are a lot faster in charging compared to charging a large battery to its full range.

Source: DTE





#### **ENVIRONMENT**

# Q.1) Eublepharis pictus sometimes seen in news is a species of?

- a) Gecko
- b) Frog
- c) Spider
- d) Snake

### Answer: a

 A gecko found in Visakhapatnam in 2017, then thought to belong to a known species, has now been identified as a member of a new species. The species, Eublepharis pictus, also known as the Painted Leopard Gecko, has been described in the journal Evolutionary Systematics.

Source: Article

# Q.2) With reference to India's International Liquid Mirror Telescope (LMT), consider the following statements:

- 1. India has the only liquid-mirror telescope operational anywhere in the world.
- 2. It can be steered to track specific stellar source objects.

### 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

#### Answer: a

- **Statement 1 is correct**: Established on the campus of the Devasthal Observatory of the Aryabhatta Research Institute of Observational Sciences (ARIES) in Nainital, the International Liquid Mirror Telescope (ILMT) is the only liquid-mirror telescope operational anywhere in the world. It will also hold the unique tag of being the maiden liquid-telescope globally to be designed exclusively for astronomical purposes.
- **Statement 2 is incorrect**: Unlike the conventional telescopes that can be steered to track specific stellar source objects, the ILMT will be stationary. It will basically carry out observations and imaging at the zenith, that is, of the overhead sky. This is a survey telescope having high potential for discovering newer objects.

Source: Article

# Q.3) Durgavati wildlife sanctuary is located in which of the following states?

- a) Uttar Pradesh
- b) Rajasthan
- c) Madhya Pradesh
- d) Haryana

#### Answer: c

Durgavati wildlife sanctuary is in Madhya pradesh.



The final report of Integrated Landscape Management Plan for Greater Panna Landscape
was released recently. The Integrated Landscape Management Plan is expected to
enhance tiger carrying capacity in the landscape by strengthening connectivity with
Nauradehi wildlife sanctuary and Durgavati wildlife sanctuary in MP and Ranipur wildlife
sanctuary in UP.

Source: Article

# Q.4) Krasnopol sometimes seen in news is a?

- a) Laser-guided projectile
- b) Weapon locating radar
- c) Intercontinental Ballistic Missile
- d) A GPS-guided drone

#### Answer: a

• The Krasnopol is a Russian-developed and Russian-produced semiactive laser-guided projectile.

Source: Article

### Q.5) With reference to UN Special Rapporteurs, consider the following statements:

- 1. They are independent experts who work on a country or a thematic mandate specified by the United Nations Human Rights Council.
- 2. They do not receive any financial compensation for their work from the United Nations.

# 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

### Answer: c

Recently, U.N. special rapporteurs seek information from the Government of India on alleged human rights violations in Jammu & Kashmir

#### About U.N. special rapporteurs:

- They are independent experts working on behalf of the United Nations. They work on a country or a thematic mandate specified by the United Nations Human Rights Council.
- They have mandates to report and advise on human rights (civil, cultural, economic, political, and social) from a thematic or country-specific perspective.
- Rapporteurs do not receive any financial compensation for their work from the United Nations.



### Q.6) With reference to Kosi River, consider the following statements;

- 1. Kosi carries the maximum amount of silt and sand in India.
- 2. The river flows through Tibet, Nepal and 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

#### Answer: A

**Statement 1 is incorrect**: Kosi carries the maximum amount of silt and sand after the Brahmaputra in India.

**Statement 2 is correct**: The Kosi is a trans-boundary river which flows through Tibet, Nepal and India. Its three major tributaries, the Sun Kosi, Arun and Tamur meet at one point just upstream of a 10 km gorge cut through the Himalayan foothills.

Source: <u>DTE</u>

# Q.7) With reference to E-transmission Moratorium, consider the following statements;

- 1. The moratorium is on digitizable products like photographic films, music, media, software and video games.
- 2. India wants the Moratorium to continue for longer period.
- 3. The Moratorium benefits developed countries more than the developing countries.

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

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

#### Answer: A

**Statement 1 is correct**: WTO members have agreed not to impose customs duty on electronic transmission since 1998 and the moratorium has been periodically extended at the Ministerial Conferences, which is the highest decision-making body of the WTO.

The moratorium is on digitizable products like photographic films, cinematographic films, printed matter, music, media, software and video games.

**Statement 2 is incorrect**: At the 12th Ministerial Conference(MC) in June 2022, many WTO members are seeking a temporary extension of the moratorium till the 13th MC, but India does not want this time to continue this further.

Allowing the moratorium to lapse is important for developing nations like India to preserve policy space for their digital advancement, to regulate imports and generate revenue through customs duties.

**Statement 3 is correct**: It has been argued that the percentage of customs revenue lost due to foregoing duty on e-transmission for developing nations is 4.35% while that of the developed countries is a mere 0.24%.

Source: The Hindu



# Q.8) Agriculture land price index is released by which of the following organisation/Institute?

- a) Department of Agriculture and Farmers Welfare
- b) IIM-Ahmedabad(IIM-A)
- c) Small Farmers Agribussiness Consotium
- d) Indian Council of Agricultural Research (ICAR)

#### Answer: B

IIM-Ahmedabad(IIM-A) has joined hands with SFarms India (an e-marketplace for agricultural land) to launch a farm land price index called IIM-Ahmedabad SFarmsIndia Land Price Index (ISALPI).

The index will track the price movements in the marketplace and come up with a composite pricing mechanism on a monthly basis which will be updated twice a year.

The index has been started on a pilot basis in Andhra Prade<mark>sh, Karnataka, M</mark>ah<mark>arashtra, T</mark>amil Nadu, Telangana, and Uttar Pradesh.

Source: **Business Standard** 

### Q.9) With reference to Airbags in cars, Consider the following statements;

- 1. Dual airbags became mandatory on all M1 category vehicles in India.
- 2. Front airbags are designed to inflate in order to prevent a person's head and chest from contacting hard structures in the vehicle.

# 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

#### Answer: C

Both the statements are correct.

'Category M' covers motor vehicles with at least four wheels, used for carrying passengers.

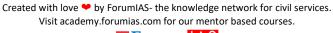
Sub-category 'M1' defines "a motor vehicle used for the carriage of passengers, comprising not more than eight seats in addition to the driver's seat". This category effectively subsumes the bulk of the passenger vehicles on India's roads.

Dual airbags (driver and passenger) became mandatory on all M1 category vehicles this January. A driver airbag has been compulsory for all passenger vehicles since July 1, 2019. (**Statement 1 is correct**)

Additional airbags are proposed in the 'M1' category of vehicles, with the aim of minimising the impact of "frontal and lateral collisions" to the occupants of both the front and rear compartments. As per the proposal, two side or side torso airbags, and two side curtain or tube airbags covering all outboard passengers, will be made mandatory.

Front airbags are designed to inflate in order to prevent a person's head and chest from contacting hard structures in the vehicle. (**Statement 2 is correct**)

**Source:** Indian Express





# Q.10) With reference to the 'Use and File' system, consider the following statements;

- 1. Under this system, Companies are permitted to market products without the regulator's prior approval, thus avoiding a long wait.
- 2. The system is mostly used in Fast-moving consumer goods (FMCG) sector.

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

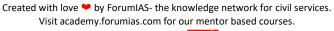
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

#### Answer: D

**Statement 1 is incorrect**: Under 'Use and File', insurance firms are permitted to market products without the regulator's prior approval, thus avoiding a long wait.

**Statement 2 is incorrect**: The system is mostly used in Insurance sector. The system will facilitate insurance firms to quickly introduce new schemes with innovative features, enabling people to participate and cover their health expenses.

**Source:** Indian Express





#### **SCHEMES AND PROGRAMS**

# Q.1) With reference to Shrestha Scheme, consider the following statements:

- 1. The students belonging to Scheduled Castes studying in class 8th and 10th in the current academic year are eligible for availing the benefits of scheme.
- 2. Ministry of Social Justice and Empowerment is the nodal ministry for the scheme.

### 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

#### Answer: c

**Statement 1 is correct:** The students belonging to Scheduled Castes studying in class 8th and 10th in the current academic year are eligible for availing the benefits of scheme.

• However, students belonging to marginalized income groups within the SC community are eligible only if their parental annual income is up to Rs.2.5 Lakh.

**Statement 2 is correct:** Ministry of Social Justice and Empowerment is the nodal ministry for the scheme.

Source: Article

# Q.2) With reference to Cantor's Giant Softshell Turtle, consider the following statements:

- 1. It is a freshwater species.
- 2. Its habitat ranges from Malaysia to India.
- 3. It is listed as vulnerable in the IUCN red list of species.

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

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

#### Answer: a

- **Statement 1 is correct:** Cantor's giant softshell turtle (*Pelochelys cantorii*) also known commonly as Asian giant softshell turtle and the frog-faced softshell turtle is a species of freshwater turtle in the family Trionychidae.
- **Statement 2 is correct**: Its habitat ranges from Malaysia to India. Its presence in India has been recorded only a dozen times in 20 years with sightings being reported anecdotally from Odisha, Tamil Nadu and West Bengal.
- **Statement 3 is incorrect**: It is listed as Critically Endangered in the IUCN red list of species.

Source: Article



### Q.3) Consider the following statements:

- 1. He was a Bairagi sadhu.
- 2. He was the first Sikh military leader to wage an offensive war against the Mughal rulers of India thereby temporarily extending Sikh territory.
- 3. He was martyred near a gate en-route to the tomb of so-called Sufi saint Qutub-ud-din Bakhtiar kaki at Mehrauli.

# Which of the following personalities is being talked about in the statements given above?

- a) Ranjit Singh
- b) Banda Bahadur
- c) Kharak Singh
- d) Baba Deep Singh

#### Answer: b

- Baba Banda Singh Bahadur was born in the Rajput family (1670, Rajouri). His original name was Baba Madhav Das and he was a Bairagi Sadhu.
- He was the first Sikh military leader to wage an offensive war against the Mughal rulers of India thereby temporarily extending Sikh territory.
- Baba Banda Singh Bahadur and his son Ajai Singh were martyred on 9 June,1716 A.D. along with his other 18 companions near a gate en-route the tomb of so-called Sufi saint Outub-ud-din Bakhtiar kaki at Mehrauli.
  - o His glorious martyrdom validates Bhagat Kabir's rendition in Guru Granth Sahib.

Source: Article

# Q.4) With reference to Eco-Sensitive Zones, consider the following statements:

- 1. Eco-Sensitive Zones (ESZ) is areas in India notified by the Ministry of Environment, Forests and Climate Change (MoEFCC).
- 2. Environment Protection Act, 1986 mentions the word Eco-Sensitive Zones.

#### 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

#### Answer: a

#### **Eco-Sensitive Zones:**

- Eco-Sensitive Zones (ESZ) or Ecologically Fragile Areas (EFAs) are areas in India notified by the Ministry of Environment, Forests and Climate Change (MoEFCC) around protected areas such as national parks and wildlife sanctuaries.
- The objective of declaring an area as ESZ is to create some kind of "shock absorbers" to the protected areas by regulating and managing the activities around such areas.
- ESZs also act as the buffer zones from areas of high protection to areas accorded relatively milder protection.
- It is to be noted that though Environment Protection Act, 1986 does not mention the word "Eco-Sensitive Zones", the government uses section 3(2)(v) of the Environment Protection Act, 1986 and rule 5(1) of the Environment (Protection) Rules, 1986 to declare ESZs and EFAs.





### Q.5) With reference to Enforcement Directorate (ED), consider the following statements:

- 1. It is mandated with the task of enforcing the provisions of the Foreign Exchange Management Act and the Prevention of Money Laundering Act.
- 2. It is a statutory body.
- 3. Like CBI, Enforcement directorate can also register a case on its own.

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

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

#### Answer: a

- Statement 1 is correct
- Statement 2 is incorrect: It is not a statutory body. It is an agency under Min of Finance.
- **Statement 3 is incorrect:** ED, unlike CBI, cannot register a case on its own. It is required by the agencies such as CBI or state police to register an offense based on which the ED Case Information Report is filed by Enforcement Directorate.

# Q.6) With reference to Puneet Sagar Abhiyan, consider the following statements:

- 1. One of its objectives is to increase awareness amongst the local population about the importance of keeping the beaches and river fronts clean.
- 2. It has been launched by Indian army in collaboration with Indian navy.

# 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

#### Answer: a

- **Statement 1 is correct**: Its objective is to clean Sea Shores/Beaches and other water bodies including rivers & lakes of plastic & other waste and increase awareness amongst the local population about the importance of keeping the beaches and river fronts clean.
- **Statement 2 is incorrect:** The Abhiyan has been launched by NCC (National Cadet Corps).

Source: Article

# Q.7) With reference to Direct-to-Mobile (D2M) Broadcasting technology, consider the following statements:

- 1. It doesn't require an active internet connection for broadcasting.
- 2. It will help the telecom service providers to decongest valuable mobile spectrum.

# 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

# Answer: c



- **Statement 1 is correct**: Direct-to-Mobile'(D2M) Broadcasting technology allows broadcast of video and other forms of multimedia content directly to mobile phones, without needing an active internet connection.
- **Statement 2 is correct**: One of the advantages of D2M technology is that it can enable telecom service providers to offload video traffic from their mobile network onto the broadcast network thus helping them to decongest valuable mobile spectrum. This will also improve usage of mobile spectrum and free up bandwidth which will help reduce call drops, increase data speeds etc.

**Source**: Article

# Q.8) Forest bathing sometimes seen in news is associated with which of the following countries?

- a) India
- b) Japan
- c) Indonesia
- d) China

#### Answer: b

• Under the practice of '**forest bathing**' which originated in Japan — this means stepping away from our work and screens, going outside to a place with trees and plants and taking time to absorb the freshness, colours, textures and fragrances of that experience.

Source: Article

# Q9 Which of the following is/are the potential use cases of Virtual Private Networks (VPNs)?

- 1. End to end encryptions for corporate communications
- 2. Opening geo-blocked websites.
- 3. Accessing online banking services only available to residents of a given country.

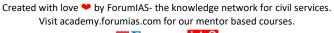
# Select the correct answer from the codes given below:

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

#### Answer: d

By surfing through a VPN, users can mask a large proportion of personal data, obfuscate location, and conceal surfing patterns. This makes them useful to people with many different use-cases. For instance: They can be used by the following -

- Human rights activists who don't wish to be tracked by hostile regimes
- **Corporates** seeking end-to-end encryption for communications. Also, in the WFH era, corporates routinely give a geographically widespread set of employees secure log-ins tied to a single VPN-based location
- People who wish to **access geo-blocked websites**, and content. VPNs allow users to communicate privately, and to access websites that autocrats block. For instance: Russia, Iran and China block and ban VPNs, and hand out jail-time and fines for anybody caught using them.





- People who wish to access online banking services only available to residents of a given country
- Those who simply wish to protect their data
- People who want to access Netflix or Amazon Prime content from, let's say, Mexico, while sitting in Delhi.

VPN providers offer combinations of **privacy**, and **data security**. Most keep no logs of users, and maintain as little user-data as possible.

**Source**: Article

# Q.10) With reference to Pardoning power of president, Consider the following statements:

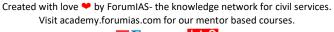
- 1. Respite means delay allowed in the execution of a sentence especially that for a death sentence for a temporary period.
- 2. Remission means reducing the quantum or degree of punishment of the convicted person considering special circumstances.

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

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

#### Answer: d

- A reprieve means a delay allowed in the execution of a sentence especially that for a death sentence for a temporary period. The purpose of it enables the guilty person to seek presidential pardon or any other legal remedy to prove himself innocent.
- Respite which means reducing the quantum or degree of punishment of the convicted person considering special circumstances such as in the case of pregnancy, the death penalty may be commuted to imprisonment for life.
- Remission means changing the quantum of the punishment without changing its nature.
- Section 432 of the Code of Criminal Procedure, 1973 provides the power to suspend or remit sentences of punishment by the appropriate government. It states that the appropriate government with or without conditions may at any time accept, suspend or remit the punishment for an offence wholly or any part of the punishment.





#### **PRELIMS**

# Q.1) Which of the following can be categorized under Assistive Technology (AT)?

- 1. Software program
- 2. Continence pads
- 3. Portable ramps

# Select the correct answer from the codes given below:

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

#### Answer: d

Assistive Technology (AT) may include any item, piece of equipment, software programme or product system that is used to **increase**, **maintain**, **or improve** the **functional capabilities** of persons with disabilities.

These aids could also be

- **Physical products** such as wheelchairs, eyeglasses, hearing aids, prostheses, walking devices or continence pads;
- **Digital products** such as software and apps that support communication and time management; or
- Adaptations to the physical environment, for example, portable ramps or grab-rails.

**Source**: Article

# Q.2) Which of the following is/are the possible effects of Open Network for Digital Commerce (ONDC)?

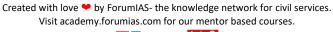
- 1. Reducing the cost of doing business.
- 2. Curb digital monopolies.
- 3. Elimination of middleman like small retailers.

#### Select the correct answer from the codes given below:

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

### Answer: a

- Statements 1 and 2 are correct.
- **Statement 3 is incorrect**: ONDC does not eliminate the middlemen like small retailers, instead it provides a way to them, to get discovered online. It is an open model where consumers can potentially discover any seller, product or service nearby, using any





ONDC compatible application or platform, thus increasing freedom of choice for consumers. Consumer can thus choose a nearby retailer for the faster delivery.

### Q.3) With reference to Green Hydrogen, consider the following statements:

- 1. Green Hydrogen can be produced using coal or natural gas.
- 2. Fuel cell is a device that generates electricity through Combustion.

# 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

#### Answer: d

- **Statement 1 is incorrect** Green hydrogen is produced with the help of electrolysis through electricity generated from renewable sources of energy such as solar and wind. In electrolysis, electric current splits water into hydrogen and oxygen. This process has no greenhouse gas emissions as the only by product of this process is oxygen.
- **Statement 2 is incorrect** Fuel cell is a device that generates electricity through an electrochemical reaction, not combustion.

A fuel cell is composed of an anode, cathode, and an electrolyte membrane. A typical fuel cell works by passing hydrogen through the anode of a fuel cell and oxygen through the cathode.

# Q.4) Sakhalin oil field sometimes seen in news is located in which of the following countries?

- a) China
- b) Russia
- c) France
- d) Ukraine

# Answer: b

• It is located in Siberia (Russia)

Source: Article



# Q.5) With reference to Fishing cat, consider the following statements:

- 1. It is traditionally found in South and South East Asia's rivers.
- 2. It is listed under Schedule I of the Wildlife Protection Act 1972.
- 3. The species is etched on the 900-yearold Angkor Wat complex in Cambodia.

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

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

#### Answer: d

#### All statements are correct.

- Conservation status:
  - o **Schedule 1** of the Wildlife Protection Act, 1972.
  - o **IUCN status**: It is listed as "vulnerable (VU)" under IUCN red list
  - o CITES status: The fishing cat is included on CITES Appendix II
- **Habitat** It prefers wetland ecosystem and traditionally found in the **South** and **Southeast Asia's rivers** such as Ganga, Brahmaputra, Godavari, Krishna, Irrawaddy and Chao Phraya.
- The fishing cat is etched on the 900-yearold **Angkor Wat complex in Cambodia** and captured on relics of the **Khmer empire**, which flourished between the 9th and 15th centuries on the mighty Mekong's floodplains.

# Source: Article

#### Q.6) With reference to light and biological cycles, consider the following statements;

- 1. Light plays a crucial role in the regulation of biological clocks.
- 2. Using artificial light, the mosquitoes can be tricked to behave as if it's daytime.

# 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

#### Answer: C

Both the statements are correct.

Light plays a crucial role in the regulation of biological clocks such as timing of breeding among birds, hunting by lions and sleeping patterns of humans.

Melatonin hormone is a gene responsible for regulating the sleep-awake cycles. It is found in plants as well as animals.





Artificial light can alter mosquito biology. Using artificial light, the mosquitoes can be tricked to behave as if it's daytime.

A short pulse of Light Emitting Diode (LED) light, commonly can delay the onset of biting by hours in the mosquito "Anopheles". Therefore, it reduces biting rates and malaria transfer.

Source: DTE

# Q.7) With reference to the LiFE Movement, consider the following statements;

- 1. The Movement aims to utilise the power of collective action and nudge individuals across the world to undertake simple climate-friendly actions in their daily lives.
- 2. The idea of LiFE was introduced by the US during UN Climate Change Conference (COP21) in Paris.

### 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

#### Answer: A

**Statement 1 is correct**: The Movement aims to utilise the power of collective action and nudge individuals across the world to undertake simple climate-friendly actions in their daily lives.

It also seeks to leverage the strength of social networks to influence social norms surrounding climate. The Mission plans to create and nurture a global network of individuals, namely 'Pro-Planet People' (P3).

**Statement 2 is incorrect**: The idea of LiFE was introduced by India during the 26th United Nations Climate Change Conference of the Parties (COP26) in Glasgow in 2021.

Source: PIB

# Q.8) With reference to the Eco Sensitive Zones(ESZs), consider the following statements;

- 1. Felling of trees, establishment of hotels and resorts, commercial use of natural water were prohibited in ESZs.
- 2. The purpose of declaring ESZs is to create some kind of a "shock absorber" for the protected areas.

# 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

# Answer: B

#### Statement 1 is incorrect:



**Prohibited activities in ESZs**: Commercial mining, sawmills, industries causing pollution, the establishment of major hydroelectric projects (HEP), and commercial use of wood.

**Regulated activities in ESZs**: Felling of trees, establishment of hotels and resorts, commercial use of natural water, erection of electrical cables, drastic change of agriculture system.

**Statement 2 is correct**: The purpose of declaring ESZs around national parks, forests and sanctuaries is to create some kind of a "shock absorber" for the protected areas.

Source: The Hindu

# Q.9) Which of the following is/are the benefits of Direct-to-Mobile'(D2M) Broadcasting technology?

- 1. Directly broadcast content related to citizen-centric information.
- 2. Used to broadcast live news, sports.
- 3. Can counter fake news and issue emergency alerts.

# Select the correct answer from the codes given below;

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

#### Answer: D

The technology is based on the convergence of broadband and broadcast using which mobile phones can receive terrestrial digital TV.

It would be similar to how people listen to FM radio on their phones where a receiver within the phone can tap into radio frequencies.

Applications of D2M Technology are:

It can possibly be used to directly broadcast content related to citizen-centric information and can be further used to counter fake news, issue emergency alerts and offer assistance in disaster management among other things.

Apart from that, it can be used to broadcast live news, sports etc. on mobile phones.

Source: Indian Express



# Q.10) With reference to Electric Vertical Take off and Landing(eVTOL) aircraft, consider the following statements;

- 1. Distributed electric propulsion technology is associated with eVTOL aircrafts.
- 2. These aircrafts are free from cyberattacks.

# 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

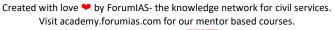
#### Answer: A

**Statement 1 is correct**: eVTOL Aircraft is one that uses electric power to hover, take off, and land vertically.

Most eVTOLs also use what is called distributed electric propulsion technology, which means integrating a complex propulsion system with the airframe.

**Statement 2 is incorrect**: eVTOL has following challenges, **a)** Ensuring safety in case of a power plant or rotor failure, **b)** Aircraft protection from cyberattacks is another area of focus and c) Navigation and flight safety.

Source: The Hindu





#### **PRELIMS**

## Q.1) Consider the following statements:

- 1. More than fifty per cent of India's crude imports come from Persian Gulf countries.
- 2. Mexico has the largest diaspora population 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

#### Answer: a

- **Statement 1 is correct**: The share of Persian Gulf countries in India's crude imports has remained at around **60**% over the last 15 years.
- Statement 2 is incorrect: India has the world's largest diaspora population.

Source: Article

# Q.2) With reference to Liquefied petroleum gas and import parity price (IPP), consider the following statements:

- 1. Liquefied petroleum gas (LPG) is mainly composed of lighter methane and ethane.
- 2. LPG price in India can be calculated based on the import parity price (IPP).
- 3. IPP is a function of the LPG prices in the domestic market and is decided by the forces of demand and supply.

## Which of the statements given above is/are incorrect?

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

#### Answer: c

• LPG is composed mainly of propane and butane, while natural gas is composed of the lighter methane and ethane. LPG price in India can be calculated based on the import parity price (IPP). The IPP is based on the LPG price in the international market given that country imports the fuel.



## Q.3) With reference to the Surrogacy act, consider the following statements:

- 1. Single men are not allowed to resort to surrogacy under the Act.
- 2. Only a close relative of the couple can be a surrogate mother.

## 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

#### Answer: c

- **Statement 1 is correct**: Single men are not allowed.
- **Statement 2 is correct:** Only a close relative of the couple can be a surrogate mother, one who is able to provide a medical fitness certificate. She should have been married, with a child of her own, and must be between 25 and 35 years, but can be a surrogate mother only once.

Source: Article

## Q.4) With reference to India-Japan relations, consider the following statements:

- 1. India and Japan are a part of the multilateral "Malabar exercise", including USA and Australia.
- 2. India and Japan share a ministerial-level 2+2 dialogue.

## Select the correct code from the answers given below:

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

## Answer: c

- In August 2021, QUAD nations (USA, India, Japan, Australia) participated in 25th edition of Malabar exercise. It is a multilateral war-gaming naval exercise that was started in 1992. It began as a bilateral exercise between the navies of India and the United States.
- Since 2014, India, the US and Japan have participated in the exercise every year. In 2020 Australia joined the Malabar Exercise on India's request in order to contain China in the Indo-Pacific region. The first 2+2 meeting of their Foreign and Defence Ministers was held in November 2019, in New Delhi.



## Q.5) Consider the following statements:

- 1. A formal education or minimum educational is not necessary to be considered literate according to definition of literacy as used in census operations in India.
- 2. According to the census 2011 figures, female literacy rate in India is less than 60 percent...

## 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

#### Answer: a

- Literacy, as defined in Census operations, is the ability to read and write with understanding in any language. A person who can merely read but cannot write is not classified as literate. Any formal education or minimum educational standard is not necessary to be considered literate.
- The results of 2011 census reveal that there has been an increase in literacy in the country. The literacy rate in the country is 74.04 per cent, 82.14 for males and 65.46 for females.

# Q.6) Arignar Anna Zoological Park, which was seen in the news recently, is located in which of the following states?

- a) Karnataka
- b) Goa
- c) Tamil Nadu
- d) Kerala

## Answer: C

Recently, Arignar Anna Zoological Park, Chennai has introduced a novel method to check the littering of plastic bottles inside its premises.

The authorities of the state's biggest zoo have begun collecting a deposit of ten rupees each for every bottle of water from the visitors.

The money is refunded if they return the empty bottle. The officials say the initiative has begun yielding good results.

Source: AIR



## Q.7) With reference Norovirus, consider the following statements;

- 1. It is a highly contagious virus that is also referred to as the 'stomach flu' or the 'winter vomiting bug'.
- 2. Vaccine is the only medicine available against Norovirus disease.
- 3. The virus can survive many common hand sanitisers.

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

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

#### Answer: C

**Statement 1 is correct**: Norovirus is a highly contagious virus that is also sometimes referred to as the 'stomach flu' or the 'winter vomiting bug'.

**Statement 2 is incorrect**: The disease is self-limiting. The infection normally lasts only two or three day.

No vaccines are available for the disease. The basic precaution is repeatedly washing hands with soap after using the lavatory or changing diapers. It is important to wash hands carefully before eating or preparing food.

**Statement 3 is correct**: Norovirus is resistant to many disinfectants and can withstand heat up to 60°C. Therefore, merely steaming food or chlorinating water does not kill the virus. The virus can also survive many common hand sanitisers.

Source: Indian Express

#### Q.8) With reference to Posidonia Australis, consider the following statements;

- 1. It is an apex fish predator that will hunt and eat almost anything they come across.
- 2. One of the unique characteristics of this species is, it takes 100% of the genome of each of their parents.

## 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

#### Answer: B

**Statement 1 is incorrect**: Posidonia Australis is also known as ribbon weed is a species of seagrass.

It was discovered in the shallow waters of the World Heritage Area of Shark Bay in Western Australia.





**Statement 2 is correct**: his plant is unique from others as it has twice as many chromosomes as its relatives. This makes it what scientists call a "polyploid".

Polyploids instead of taking half-half genome from both parents, take 100% genome of each of their parents, something not unheard of in plants.

Source: <u>Indian Express</u>

## Q.9) Consider the following pairs;

	Statues	- Depiction
1.	Sambandar -	One of the Muvar and Child saint
2.	Kankalamurti -	Fearsome aspect of Lord Shiva
3.	Dvarapala -	Depiction of Shiva in tribhanga posture
4.	Nandikeshvara	- Depiction of Vishnu with four hands

## How many pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All four pairs

#### Answer: B

Sambandar - One of the Muvar and Child saint
 Kankalamurti - Fearsome aspect of Lord Shiva

3. Dvarapala - Depiction of gate guardian often portrayed as a warrior

4. Nandikeshvara - Depiction of Nandi

Source: <u>Indian Express</u>

## Q.10) With reference to heavy metals, consider the following statements;

- 1. Heavy Metals not naturally present in the earth's crust.
- 2. Heavy metals have the property of long persistent in plants, animals and environment.

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

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

#### Answer: B

**Statement 1 is incorrect**: Heavy Metals are naturally present in the earth's crust. Rocks are the natural source of heavy metals. Heavy Metals are present in the rocks in the form minerals. Examples: arsenic, copper, lead etc.

**Statement 2 is correct**: Heavy metals have the property of long persistent in plants, animals and environment.

Source: The Hindu





#### **PRELIMS**

## Q.1) With reference to a bad bank, consider the following statements:

- 1. A bad bank is an Asset Reconstruction Company (ARC) or an Asset Management Company (AMC) that takes over the bad loans of commercial banks.
- 2. It is involved in lending and taking deposits.

## 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

#### Answer: a

- **Statement 1 is correct**: Technically, a bad bank is an Asset Reconstruction Company (ARC) or an Asset Management Company (AMC) that takes over the bad loans of commercial banks, manages them and finally recovers the money over a period of time.
- **Statement 2 is incorrect:** The bad bank is not involved in lending and taking deposits, but helps commercial banks clean up their balance sheets and resolve bad loans.

Source: Article

## Q.2) With reference to National Land Monetization Corporation, consider the following statements:

- 1. It will be set up under the administrative jurisdiction of the Department of Public Enterprise, Ministry of Finance.
- 2. It undertakes monetization of Land assets only.

#### 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

### Answer: a

- **Statement 1 is correct**: It will be set up under the administrative jurisdiction of the Department of Public Enterprise, Ministry of Finance.
- **Statement 2 is incorrect**: It will undertake professional and orderly monetization of land and other non-core assets referred to it.



## Q.3) With reference to the Indian copyright Act, consider the following statements:

- 1. It makes a distinction between commercial and non-commercial infringement.
- 2. It is not mandatory under the Copyright Act to register copyrights as a necessary precondition in order to enforce the same.

## 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

#### Answer: c

- Statement 1 is correct: The Indian Copyright Act makes a distinction between commercial and non-commercial infringement.
- **Statement 2 is correct:** Unlike trademark law, it is **not mandatory** under the Copyright Act to register copyrights as a necessary precondition in order to enforce the same.

Source: Article

## Q.4) Consider the following statements regarding Aerosols:

- 1. Their scattering of sunlight can reduce visibility (haze) and redden sunrises and sunsets.
- 2. Its concentrations in the atmosphere rise and fall with climate.

#### 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

## Answer: c

Aerosols are minute particles suspended in the atmosphere. When these particles are sufficiently large, we notice their presence as they scatter and absorb sunlight.

- Their scattering of sunlight can reduce visibility (haze) and redden sunrises and sunsets.

  Aerosols interact both directly and indirectly with the Earth's radiation budget and climate.
- As a direct effect, the aerosols scatter sunlight directly back into space.
- As an indirect effect, aerosols in the lower atmosphere can modify the size of cloud particles, changing how the clouds reflect and absorb sunlight, thereby affecting the Earth's energy budget
- Aerosols come from both natural and human sources—and sometimes both at once. Dust, for example, is scoured from deserts, the dried-out edges of rivers, dry lakebeds, and more.





• Its concentrations in the atmosphere rise and fall with climate; in cold, dry, periods in the planet 's history like the last ice age, more dust filled the atmosphere than during warmer stretches of Earth 's history.

# Q.5) Environmental Performance Index (EPI) is associated with which of the following organisations?

- a) WB
- b) IMF
- c) UNEP
- d) WEF

#### Answer: d

• EPI is a biennial *index* prepared by Yale University and Columbia University in collaboration with the World Economic Forum.

Source: Article

# Q.6) With reference to Information Technology(IT) Rules, consider the following statements;

- 1. Noncompliance of IT Rules will lead to a banning of social media firms.
- 2. Safe harbour protection is related to IT Rules and IT Act.

## 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

## Answer: B

**Statement 1 is incorrect**: Non-compliance of IT Rules will not lead to a ban of Organization. Even if the platforms don't comply with these rules, the platforms can continue operations in India, but they can't seek safe harbour protections in the case of a suit.

**Statement 2 is correct**: Social Media Intermediaries need to adhere to IT rules in order to be eligible for safe harbour protections mentioned in Section 79 of India's IT Act.

Safe harbour protections are very important for platforms that deal with user-generated content. These protections ensure that the platform cannot be sued for a post, message etc shared by a user using its services.

Source: Livemint



## Q.7) With reference to Rajya Sabha polls, consider the following statements;

- 1. MLAs not voting for the party candidate will attract disqualification under the anti-defection law.
- 2. A party MLA has to show his/her vote only to an authorized agent (Whip).

## 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

#### Answer: B

**Statement 1 is incorrect**: The Supreme Court, while declining to interfere with the open ballot system, ruled that not voting for the party candidate will not attract disqualification under the anti-defection law.

As voters, MLAs retain their freedom to vote for a candidate of their choice. However, the Court observed that since the party would know who voted against its own candidate, it is free to take disciplinary action against the legislator concerned.

**Statement 2 is correct**: A party MLA's show their votes only to an authorized agent (called Whip). The Rajya Sabha polls have a system of open ballots, but it is a limited form of openness.

As a measure to check rampant cross-voting, there is a system of each party MLA showing his or her marked ballots to the party's authorized agent (called Whip), before they are put into the ballot box.

Showing a marked ballot to anyone other than one's own party's authorized agent will render the vote invalid. Not showing the ballot to the authorized agent will also mean that the vote cannot be counted.

Source: Indian Express

## Q.8) With reference to green jobs, consider the following statements;

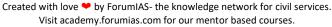
- 1. This refers to a class of jobs that directly have a positive impact on the planet, and contribute to the overall environmental welfare.
- 2. So far, India did not take any initiatives to promote green jobs.

## 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

## Answer: A

**Statement 1 is correct**: 'Green jobs' refer to a class of jobs that directly have a positive impact on the planet, and contribute to the overall environmental welfare.





Jobs involving renewable energy, conservation of resources, and ensuring energy-efficient means are categorized under the green jobs.

**Statement 2 is incorrect**: **Skill Council for Green Jobs** has been setup by the government of India in 2015 as a not-for-profit, independent, industry-led initiative. T

Promoted by: Ministry of New and Renewable Energy(MNRE) and the Confederation of Indian Industry(CII).

Source: Indian Express

## Q.9) Which of the following is/are the potential application of Geo-Spatial Sector?

- 1. Improve efficiency of economy
- 2. Helps in terrestrial, aerial and marine navigation.
- 3. Aid Wildlife management.

## Select the correct answer from the codes given below:

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

## Answer: D

The potential application of Geo-Spatial Sector includes,

**Improve efficiency of economy**: Geospatial mapping can **improve efficiency in** the logistics sector, mining sector, etc.

**Creation of new startups and employment:** The Geospatial sector provides opportunity for the booming startup sector of India.

**Terrestrial, Aerial and Marine Navigation**: Geospatial can be utilised for the promotion of taxi services and home delivery services like **Uber and Flipkart**. The data can also aid in marine and aerial navigations.

**Agriculture, Forestry and Wildlife management**: Geospatial data can be utilised in preparing customized geography specific plans for better management of agriculture, forestry and wildlife.

Source: PIB



## Q.10) With reference Rubber, consider the following statements;

- 1. Lateritic type, alluvial, sedimentary types, and non lateritic red soils are best for the growth of rubber trees.
- 2. Synthetic rubber is preferred over natural rubber for its high tensile strength and vibration dampening properties, tear resistance.
- 3. Hevea brasiliensis is the most important rubber tree.

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

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

#### Answer: C

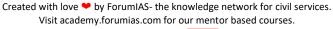
**Statement 1 is correct**: Lateritic type, alluvial, sedimentary types, and non lateritic red soils are best for the growth of rubber trees.

**Statement 2 is incorrect**: Natural rubber is preferred over synthetic rubber due to its high tensile strength and vibration dampening properties, along with tear resistance.

**Statement 3 is correct**: Natural rubber comes from various sources, the most common being the Pará rubber tree (Hevea brasiliensis). It grows well under cultivation and yields latex for several years.

The vines in the genus Landolphia yield the Congo rubber. These vines cannot be grown in cultivation and this led to large-scale exploitation of the wild plants in Congo.

Source: <u>Indian Express</u>





#### **PRELIMS**

## Q.1) Consider the following category of voters in India

- 1) Migrant workers
- 2) Government officials deployed in Embassies outside the country
- 3) Non-Resident Indians
- 4) Persons working in Central Forces

## Which among the above categories are allowed to vote through Electronically Transmitted Postal Ballot System in India?

- a) 1, 3 and 4 only
- b) All of the above
- c) 2, 3 and 4 only
- d) 2 and 4 only

#### Ans. d

## **Explanation**

Persons working in Central Forces under Arms Act and Government officials deployed in Embassies outside the country are classified as Service Voters and are provisioned for online enrolment.

For the first time in 2019, enabled through the dedicated portal https://www.servicevoter.eci.nic.in online registration, the service voters were sent postal ballots electronically one way to save processing time, resources and avoid human errors.

The previous Lok Sabha had passed a bill to extend proxy voting facility to NRIs, but the bill lapsed.

Election commission is looking to provide remote voting facility to migrant workers.

Source: The Times of India

## Q.2) With regard to Indian Economy, what do you understand by the term 'Nondiscretionary spending'?

- a) The payment in terms of indirect taxes in a year.
- b) The expenses made on luxury items by a consumer.
- c) The expenses incurred on essential goods such as food by the consumer.
- d) The reduced value for money due to increasing inflation.

#### Ans c

Non-discretionary spending is essential and non-negotiable spending defined within a budget. Examples of these expenses include: rent, food, or mortgage payments. While the discretionary spending refers to non-essential expenses, such as hobbies and travel. For example, going to a movie or buying an expensive gift for a friend is considered discretionary spending.

Source: Indian Express



## Q.3) Which of the following can be the possible impacts of increase in repo rate by RBI?

- 1) It will reduce the cost of loans for borrowers.
- 2) It will reduce the demand in the economy.
- 3) It will increase the availability of money in the market.

## Answer using the codes given below

- a) 1 and 3 only
- b) 2 only
- c) 1 and 2 only
- d) All of the above

## Ans) b

## What are the implications of increase in Repo Rate for economy?

It makes money expensive, thus discourage demand in the economy. The affect will be more visible in the Non-discretionary spending i.e. essential and non-negotiable spending for example; rent, food, or mortgage payments.

Depositors are also expected to see an increase on the interest rates on their deposits.

It will make the loans expensive for the borrowers and increase the burden of interest on EMIs for loans such as home loans.

RBI is expecting that interest rate hike will prevent any effect on discretionary spending which can slow down the growth rate.

It reduces the availability of money in the market.

Source; Indian Express

# Q.4) With reference to Unified Payments Interface (UPI) and RuPay network, consider the following statements:

- 1. Both are managed by the National Payments Corporation of India (NPCI).
- 2. UPI and RuPay transactions attract zero-Merchant Discount Rate (MDR).

#### Which of the statements given above is/are incorrect?

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

#### Answer: d

• Both the RuPay network and UPI are managed by the same organization – the National Payments Corporation of India (NPCI).





• According to a norm that has been in effect since January 2020, UPI and RuPay attract zero-MDR meaning that no charges are applied to these transactions, which is a key reason behind the prolific adoption of UPI both by users and merchants.

Source: Article

## Q.5) Which one the following species is being reintroduced in India after its extinction?

- a) Grey Wolfs
- b) One-horned Rhino
- c) Cheetah
- d) Lion

## Ans) c

Source

The first batch of cheetahs are expected to arrive in India's Kuno Palpur wildlife sanctuary in Madhya Pradesh by this August.

The Hindu

## Q.6) With reference to Mela Kheer Bhawani Festival, consider the following statements:

- 1. The festival is the largest gathering of Hindus in Kashmir after the annual Amarnath Yatra.
- 2. Mata Kheer Bhawani is a Hindu Temple dedicated to the goddess Ragnya Devi.

## 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

#### Answer: c

- Mela Kheer Bhawani Festival is an annual congregation of Kashmiri Hindus at the Mata
   Kheerbhawani temple.
  - o It is held during *Jyeshtha Ashtami* also spelt as Zyeshta Astami.
  - The festival is the largest gathering of Hindus in Kashmir after the annual Amarnath Yatra.
- Mata Kheerbhawani is a Hindu Temple dedicated to the goddess Ragnya Devi.
  - It is situated 30 km from Srinagar city. It is one of the most sacred pilgrimage sites for Kashmiri Hindus.



## Q.7) With reference to the monoclonal antibodies, consider the following statements:

- 1. These are man-made proteins that act like human antibodies in the immune system.
- 2. Each monoclonal antibody has the ability to bind to multiple antigens.

## 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

## Answer: a

- Statement 1 is correct: Monoclonal antibodies are laboratory-produced molecules. They serve as substitute antibodies that can restore, enhance, modify or mimic the immune system's attack on unwanted cells.
- **Statement 2 is incorrect**: Each monoclonal antibody is designed in a way that binds to only one antigen.

Source: Article

# Q.8) Maneesha Panchakam, Saundaryalahiri and Vivekachudamani, have been authored by which of the following personalities?

- a) Adi Shankaracharya
- b) Ramanuja
- c) Thirumula Nayanar
- d) Akampam Malāthanār

#### Answer: a

- Adi Shankaracharya authored 116 works. Among them, the celebrated commentaries (bhashyas) are on Upanishads, the Brahma Sutra, and the Gita. His famous poetic works include Maneesha Panchakam and Saundaryalahiri.
- He authored the **Vivekachudamani**. It spells out the qualifications required in a student of Vedanta.
- He also composed the **Kanakadhara Stotram**, following which there was a rain of golden amlas which brought prosperity to the household.
- Further, he also composed texts like **Shankara Smrithi** which seeks to establish the social supremacy of Nambuthiri Brahmins.



## Q.9) Which of the following countries border Vietnam?

- 1. China
- 2. Thailand
- 3. Cambodia

## Select the correct answer from the codes given below:

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

#### Answer: c

Countries bordering Vietnam:

- Cambodia
- Laos
- China

Source: Article

## Q.10) With reference to India, consider the following statements:

- 1. Income taxpayers are the main funder of government.
- 2. At present, India has an official taxpayer's union.

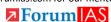
## Which of the statements given above is/are correct?

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

## Answer: d

- **Statement 1 is incorrect**: Presently, less than one-third of the combined spending of state and central governments in India is raised through income tax. At present, taxes on commodities meet more than half the expenditure of the government.
- **Statement 2 is incorrect**: At present, India does not have an official taxpayers union. Recently, the idea has been floated by an income tax officer to have a" taxpayers union"





#### **PRELIMS**

## Q.1) Which of the following countries have legalized recreational Marijuana on a national basis?

- 1. Thailand
- 2. Canada
- 3. Uruguay

## Select the correct answer from the codes given below:

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

## Answer: b

- Thailand recently became the first country to legalize the medicinal and industrial use of Marijuana.
- Canada and Uruguay are the only two countries which have legalized recreational Marijuana.

Source: Article

# Q.2) N Rajagopala Ayyangar Committee sometimes seen in news is related to which of the following?

- a) Revision of the patent system
- b) Long term Food policy
- c) To decide the appropriate level of reserves that the RBI should hold
- d) Review methodology for measurement of poverty

#### Answer: a

• The government appointed the Justice N Rajagopala Ayyangar Committee in 1957 to provide a road map for revising the patent system. In September 1959, the Ayyangar Committee submitted its well argued 397-page report which recommended the retention of the patent system despite its shortcomings



## Q.3) Which of the following tree species are usually found in tropical evergreen forests?

- 1. Rosewood
- 2. Teak
- 3. Shisham

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

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

#### Answer: a

• Species found in Tropical evergreen forests include rosewood, mahogony, aini, ebony, etc. Tropical (moist) deciduous forests are found in the north-eastern states along the foothills of Himalayas, eastern slopes of the Western Ghats and Odisha. Teak, sal, shisham, hurra, mahua, amla, semul, kusum, and sandalwood etc. are the main species of these forests.

## Q.4) Imbrian era is associated with which of the following?

- a) Earth
- b) Moon
- c) Sun
- d) Mars

#### Answer: b

• The lunar geological timescale (or selenological timescale) divides the history of Earth's Moon into five generally recognized periods: the Copernican, Eratosthenian, Imbrian (Late and Early epochs), Nectarian, and Pre-Nectarian.

**Source**: Article

# Q.5) As per the RBI norms, which of the following institutions cannot open a Digital Banking Unit (DBU)?

- 1. Regional rural banks
- 2. Payment banks
- 3. Local area banks

## Select the correct answer from the codes given below:

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

Answer: d



• Commercial banks (other than regional rural banks, payment banks and local area banks) with past digital banking experience are permitted to open DBUs in tier 1 to tier 6 centres without having the need to take permission from the RBI in each case.

Source: Article

## Q.6) World Investment Report is released by which of the following organization?

- a) International Monetary Fund (IMF)
- b) United Nations Conference on Trade and Development(UNCTAD)
- c) World Economic Forum (WEF)
- d) World Trade Organization (WTO)

#### Answer: B

The United Nations Conference on Trade and Development(UNCTAD) has released the World Investment Report.

The United States (\$367 billion) remained the top recipient of FDI in 2021. It was followed by China (\$181 billion) and Hong Kong (\$141 billion).

India jumped one position to 7th among the top recipients of foreign direct investment (FDI) in 2021 despite FDI inflows into the country declining.

Source: <u>Times of India</u>

## Q.7) With reference to Greater One-Horned Rhino, consider the following statements;

- 1. India is the only place one can see Greater One-Horned Rhino.
- 2. The rhino horn is used as an aphrodisiac in Vietnam.

## 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

## Answer: B

**Statement 1 is incorrect**: Greater One-Horned Rhino is restricted to small habitats in Indo-Nepal terai and northern West Bengal and Assam.

India is home to more than 75% of the greater one-horned rhino population of the world.

**Statement 2 is correct**: The rhino horn is used in traditional Chinese medicine to cure a range of ailments, from cancer to hangovers, and it is also used as an aphrodisiac in Vietnam, possessing a rhino horn is considered a status symbol.

Source: The Hindu



## Q.8) With reference to Bonds and Bond Yields, consider the following statements;

- 1. The movements of bond yields and bond prices are opposite to each other.
- 2. The rise in bond yields will result in the outflow of funds from equities.
- 3. The net asset values of debt funds will increase whenever bond yields increase.

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

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

#### Answer: A

**Statement 1 is correct**: Bond Yields are the returns on bonds. The movements of bond yields and prices are opposite to each other. When bond prices rise, yields fall and vice-versa.

**Statement 2 is correct**: Rising bond yields are generally not good news for equity investors as they raise the cost of funds for companies and start hurting their earnings. It thus leads to an outflow of funds from equities towards a less risky debt instrument.

**Statement 3 is incorrect**: When bond yields rise and bond prices fall, net asset values of debt funds which hold a sizable chunk of government securities in their portfolios, will also decline.

# Q.9) Ancovax Vaccine, which was seen in news recently, is related to which of the following?

- a) Vaccine for animals against Trypanosoma evansi infection
- b) Vaccine for Foot and mouth disease
- c) Inactivated Covid-19 vaccine for animals
- d) Vaccine for the prevention of Brucellosis of sheep

### Answer: C

Ancovax Vaccine is an inactivated SARS-CoV-2 Delta (COVID-19) vaccine for animals. The immunity induced by Ancovax neutralizes both Delta and Omicron Variants of SARS-CoV-2. The vaccine is safe for dogs, lions, leopards, mice and rabbits.

Source: PIB



## Q.10) Consider the following statements;

- 1. The Sustainable Development Goals were first proposed in 1972 by a global think tank called the 'Club of Rome'.
- 2. The Sustainable Development Goals have to be achieved by 2030.

## 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

#### Answer: B

Statement 1 is incorrect: The 17 Sustainable Development Goals (SDGs), also known as the Global Goals, are a universal call for action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity.

They are built upon the success of the Millennium Development Goals, including new areas such as climate change, economic inequality, innovation, sustainable consumption, peace and justice, among other priorities.

Statement 2 is correct: Adopted in 2015, SDGs came into effect in January 2016. They are meant to be achieved by 2030.

Source: DTE



#### **ENVIRONMENT**

## Q.1) Chelonoidis phantasticus sometimes seen in news is a species of?

- a) Lizard
- b) Frog
- c) Spider
- d) Tortoise

#### Answer: d

• Chelonoidis phantasticus means "fantastic giant tortoise". Commonly called the Fernandina Island Galápagos giant tortoise, the species was so far known only from a single individual, collected in 1906.

Source: Article

## Q.2) Consider the following statements:

- 1. He was a Bhakti saint.
- 2. He is known for his community-oriented worship with spiritual songs called as kirtans.
- 3. His message about a casteless society and his denial of rituals had led to a social movement.

## Which of the following personalities is being referred to in the statements above?

- a) Sant Tukaram Maharaj
- b) Kabir
- c) Vallabhacharya
- d) Nimbarka

#### Answer: a

- Sant Tukaram Maharaj was a 17<sup>th</sup> century Bhakti saint and Marathi poet from Maharashtra.
- Tukaram is best known for his devotional poetry called Abhanga and community-oriented worship with spiritual songs known as kirtans.
- His work is central to the Warkari sect spread across Maharashtra. He is also credited with starting the Wari pilgrimage.
- His message about a casteless society and his denial of rituals had led to a social movement.



## Q.3) With reference to Mission Sarovar, consider the following statements:

- 1. Its aim is to develop and rejuvenate water bodies in each district of the country.
- 2. The mission encourages the mobilization of both citizen and non-govt resources.

## Which of the statements given above is/are incorrect?

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

#### Answer: d

- **Statement 1 is correct**: Its aim is to develop and rejuvenate 75 water bodies in each district of the country as a part of the celebration of Azadi ka Amrit Mahotsav. In total, it would lead to the creation of 50,000 water bodies of a size of about an Acre or more.
- Statement 2 is correct: The Mission works through the States and Districts through refocusing of various schemes such as MGNREGA, 15th Finance Commission Grants, PMKSY sub-schemes such as Watershed Development Component, Har Khet Ko Pani besides States own schemes.
  - o The mission also encourages the mobilization of citizens and non-govt resources for supplementing these efforts.

Source: Article

## Q.4) Great Gatsby Curve is associated with which of the following?

- a) relationship between cross-sectional income inequality and persistence of income across generations.
- b) graphical representation of income inequality or wealth inequality.
- c) displays how household expenditure on a particular good or service varies with change in household income.
- d) Inflation and unemployment have a stable and inverse relationship.

#### Answer: a

• The Great Gatsby Curve is the positive empirical relationship between cross-sectional income inequality and persistence of income across generations.



# Q.5) Which among the following Indian cities is/are a part of UN Creative Cities Network (UNCCN)?

- 1. Chennai
- 2. Jaipur
- 3. Kochi

## Select the correct answer from the codes given below:

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

#### Answer: a

Kochi is not a part of UCCN.

Following Indian cities are part of UNESCO Creative Cities Network (UCCN)

- Chennai and Varanasi Cities of music;
- Jaipur City of crafts and folk arts;
- Mumbai City of film and
- Hyderabad City of gastronomy.
- Srinagar Crafts and Folk Arts category.

## Q.6) With reference to the Aravali range, consider the following statements:

- 1. It predates the formation of Himalayan ranges.
- 2. It acts as a barrier to check further spread of desertification to the east of 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

## Answer: c

## Both statements are correct.

- The Aravalli Range, formed by folding, an orogenic process, is one of the oldest mountain ranges of the world and predates the formation of the Himalayan ranges.
- It acts as a barrier to check further spread of desertification to the east of Rajasthan and subsequently to Gangetic plains.



## Q.7) With reference to IN-SPACe, consider the following statements:

- 1. It has been established as a single window nodal agency, with its own cadre.
- 2. Indian Space Association (IsPA) works under administrative control of IN-SPACe.

## 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

#### Answer: a

- Statement 1 is correct: IN-SPACe has been established as a single window nodal agency with its own cadre.
- Statement 2 is incorrect: IsPA act as an independent and "single-window" agency for enabling the opening up of the space sector to start-ups and the private sector. The association will also work with IN-SPACe, which acts as a regulator facilitating the use of government facilities by private companies.

Source: Article

## Q.8) With reference of system of President's Election in India, Consider the following statements

- 1) Only a Minister of Parliament can be a candidate for Presidential elections.
- 2) Nominated MPs are not part of the Electoral College.

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

- a) 1 only
- b) 2 only
- c) 1 and 2 only
- d) None of the above

## Ans) b

Statement 1 is incorrect. Any person who can get at least 50 proposers and 50 seconders has a valid candidature for the election for President.

Statement 2 is correct. The President is elected by an electoral college consisting of MPs of both Houses of Parliament and MLAs of the states and Delhi and Puducherry. Nominated members of Rajya Sabha, Lok Sabha and the Assemblies, and members of state Legislative Councils, are not part of the electoral college.

Source- Indian Express



## Q.9) Which of the following are the activities contributed by Microbes?

- 1. Conversion of Nitrogen in the air to ammonia, urea or other compounds for plants
- 2. Conversion of carbon Dioxide and Water in the ocean into carbohydrates and Oxygen.
- 3. Digestion of natural milk in the babies.

## Answer using the codes given below

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

## Ans.) d

## **Explanations**

To make plant growth possible, you need a certain amount of nitrogen. But the nitrogen in the atmosphere can't be used by plants for growth. That must be made accessible or fixed into ammonia, urea or some compound plants can use — only microbes can do that.



Source: Times of India



## Q.10) With regard to Amrit Sarovar Scheme, consider the following statements:

- 1) The Mission is aimed at developing and rejuvenating 75 water bodies in each district of the country.
- 2) Each Amrit Sarovar will have approx. area of 1 acre.

## Select the correct answer from the codes given below

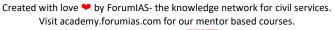
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

## Ans) c

Statement 1 is correct. The Mission is aimed at developing and rejuvenating 75 water bodies in each district of the country as a part of celebration of Azadi ka Amrit Mahotsav. In total, it would lead to creation of 50,000 water bodies of the size of about an Acre or more.

Statement 2 is correct. Around 50,000 Amrit Sarovar may be constructed in the country. Each of these Amrit Sarovar will have approx. area of 1 acre with a water holding capacity of 10,000 cubic meter.

Source: The Times of India





#### **PRELIMS**

## Q.1) With reference to Financial Action Task Force (FATF), consider the following statements:

- 1. It conducts regular peer-reviewed evaluations called Mutual Evaluations (ME) of countries to check their performance on standards prescribed by it.
- 2. For countries under its Grey list, the FATF calls on members and non-members to apply enhanced due diligence.

## 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

#### Answer: a

**Statement 1 is correct:** It conducts regular peer-reviewed evaluations called Mutual Evaluations (ME) of countries to check their performance on standards prescribed by it. The reviews are carried out by FATF and FATF-Style Regional Bodies (FSRBs), which then release Mutual Evaluation Reports (MERs).

**Statement 2 is incorrect:** For Grey list countries, the FAT does not tell other members to carry out due-diligence measures vis-a-vis the listed country but does tell them to consider the risks such countries possess.

• For countries under Black list, the FATF calls on members and non-members to **apply enhanced due diligence**. In the most serious cases, members are told to **apply countermeasures** such as sanctions on the listed countries.

**Source**: Article

## Q.2) Which of the following countries are members of G7?

- a) Germany, USA, China and UK
- b) Italy, UK, India and Australia
- c) Canada, UK, USA and Russia
- d) Italy, Japan, France and Germany

#### Answer: d

• G7 currently consists of US, UK, Germany, Japan, Italy, France and Canada. The major purpose of the G-7 currently is to discuss and sometimes act to help resolve global problems, with a special focus on economic issues. The group has discussed financial crises, monetary systems, and major world crises such as oil shortages.



## Q.3) With reference to the Organization of Islamic Cooperation (OIC), consider the following statements:

- 1. UN Members with Muslim majority can join the organization.
- 2. It is the second largest intergovernmental organization after the United Nations.

## Which of the statements given above is/are incorrect?

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

#### Answer: d

#### Both statements are correct.

- UN Members with Muslim majority can join the organization
- It is the second largest intergovernmental organization after the United Nations. It has a membership of 57 states spread over four continents.

Source: Article

## Q.4) With reference to supermassive black holes, consider the following statements:

- 1. They have more mass than our Sun.
- 2. They typically exist at the edges of large galaxies.

## 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

#### Answer: a

- **Statement 1 is correct**: Supermassive black holes contain between one hundred thousand and ten billion times more mass than our Sun.
- **Statement 2 is incorrect**: They typically exist at the centre of large galaxies, including the centre of our own galaxy, the Milky Way.





## Q.5) Which of the following missiles have been developed under the Integrated Guided Ballistic Missiles Programme (IGBMP)?

- 1. Prithvi
- 2. BrahMos
- 3. Nag

## Select the correct answer from the codes given below:

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

#### Answer: c

Missiles developed under the IGBMP are:

- Prithvi, Agni, Trishul, Akash and Nag

Source: Article

## Q.6) With reference to Sacred Relics of Buddha, consider the following statements;

- 1. His relics from the funeral pyre were collected and divided into eight shares.
- 2. The Mallas of Kushinagar cremated his body with ceremonies befitting a universal king.

## 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

#### Answer: C

Both the statements are correct.

At the age of 80, Buddha attained salvation in Uttar Pradesh's Kushinagar district.

The Mallas of Kushinagar cremated his body with ceremonies befitting a universal king.

His relics from the funeral pyre were collected and divided into eight shares to be distributed among the Ajathsatrus of Magadha, the Licchavis of Vaishali, the Sakyas of Kapilavastu, Mallas of Kushinagar, Bullies of Allakappa, the Mallas of Pava, the Koliyas of Ramagrama and a Brahmana of Vethadipa. The purpose was to erect stupas over the sacred relics.

Stupas erected over the bodily relics of Buddha (Saririka stupas) are the earliest surviving Buddhist shrines.

It is also said that Ashoka (272–232 BC), being an ardent follower of Buddhis, opened up seven of these eight stupas and collected a major portion of the relics for enshrinement within 84,000 stupas built by him in an effort to popularize Buddhism as well as the cult of the stupas.

Source: PIB



## Q.7) With reference to Ain-i-Akbari, consider the following statements;

- 1. It is the detailed explanation of Mughal art and architecture under Emperor Akbar
- 2. It was written by his court historian, Abu'l Fazl in the Persian language.

## 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

#### Answer: B

**Statement 1 is incorrect**: It is a 16th-century detailed document recording the administration of the Mughal Empire under Emperor Akbar.

**Statement 2 is correct**: It was written by his court historian, Abu'l Fazl in the Persian language.

Source: PIB

## Q.8) Which of the following bodies does not/do not find mention in the Constitution?

- 1. National Development Council
- 2. Planning Commission
- 3. Zonal Councils

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

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

#### Answer: C

None of the above mentioned bodies are not mentioned in the Constitution.

Source: PIB

## Q.9) Nanhi Pari Programme, which was seen in the news. Is related to which of the following?

- a) A new programme to provide financial benefits to the elderly
- b) A programme to enhance rural health access
- c) A scheme to protect the birth of a girl child
- d) A programme to provide nutritional supplements to remote areas

#### Answer: C

'Nanhi Pari' is a scheme to provide a one-stop solution to parents, eliminating their need to visit various offices to obtain documents.

The programme aims to complete essential services such as provision of a birth certificate, Aadhaar card registration, and opening a bank account for girls delivered in government hospitals in the district before mother and baby are discharged.

**Source:** Indian Express





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#### **Environment**

## Q.10) With reference Vermin, consider the following statements;

- 1. The Wildlife Protection Act does not define the word Vermin.
- 2. Both Centre and State governments have the power to declare wild animal as vermin.
- 3. An animal can be declared as vermin for any specifed area and a specified period of time.

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

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

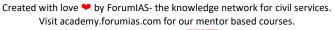
Answer: C

**Statement 1 is correct**: The Wildlife Protection Act does not define the word Vermin.

**Statement 2 is incorrect**: The 62nd section of the Wildlife Protection Act grants the central government the power to declare any wild animal as vermin.

**Statement 3 is correct**: An animal can be declared as vermin for any specified area and a specified period of time. For instance, the Center declared rhesus monkeys in Himachal Pradesh, wild boar in Uttarakhand and Nilgai in Bihar to be vermin.

Source: Down To Earth





#### **PRELIMS**

## Q.1) Which of the following schemes have been approved to provide fortified rice as a component?

- 1. Integrated Child Development Services (ICDS)
- 2. Pradhan Mantri Poshan Shakti Nirman (PM-POSHAN) scheme
- 3. Targeted Public Distribution System (TPDS)

## 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) All of the above

## Ans) d

## Explanation)

The Cabinet Committee on Economic Affairs, has accorded its approval for supply of fortified rice throughout the Targeted Public Distribution System (TPDS) under the National Food Security Act (NFSA), Integrated Child Development Services (ICDS), Pradhan Mantri Poshan Shakti Nirman-PM POSHAN [erstwhile Mid-Day Meal Scheme (MDM)] and Other Welfare Schemes (OWS) of Government of India in all States and Union Territories (UTs) by 2024 in a phased manner.

## Q.2) Which of the following statements correctly describe the term 'Plurilateral Agreements', with regard to WTO?

- a) It is an agreement where a limited number of members with a particular interest have to agree for its enforcement.
- b) It is an agreement where all members have to agree for its enforcement
- c) This agreement requires votes of at least 80% of members present and voting.
- d) None of the above

#### Ans) a

#### **Explanation**

A plurilateral treaty is a special type of multilateral treaty. A plurilateral treaty is a treaty between a limited number of states with a particular interest in the subject of the treaty. The primary difference between a plurilateral treaty and other multilateral treaties is that the availability of reservations is more limited under a plurilateral treaty. Due to the limited nature of a plurilateral treaty, the full cooperation of the parties to the treaty is required in order for the object of the treaty to be met. As a result, reservations to plurilateral treaties are not allowed without the consent of all other parties to the treaty. This principle is codified in international law by article 20(2) of the Vienna Convention on the Law of Treaties:

Source: Down to Earth



## Q.3) Corvettes are equipped with which of the following statements are correct regarding Corvettes?

- 1) They are categorized as anti-submarine ships.
- 2) They belong to the warship class of a frigate

## 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) a

Statement 1 is correct. These are highly agile ships and are categorised as missile boats, anti-submarine ships, coastal patrol crafts and fast attack naval vessels. The word corvette itself is derived from French and Dutch origin.

Statement 2 is incorrect. A Corvette is the smallest class of naval ships and it falls below the warship class of a frigate.

Source: Indian Express

## Q.6) With reference to the Biomass Co-firing, consider the following statements;

- 1. In this Coal and biomass are combusted together in boilers that have been designed to burn coal without any retrofitting.
- 2. It is a cost-effective method for decarbonising a coal fleet.
- 3. Biomass pellets can be stored for long durations at the plant.

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

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

### Answer: C

**Statement 1 is incorrect**: Coal and biomass are combusted together in boilers that have been designed to burn coal. For this purpose, the existing coal power plant has to be partly reconstructed and retrofitted.

**Statement 2 is correct**: Biomass co-firing is a globally accepted cost-effective method for decarbonising a coal fleet.

**Statement 3 is incorrect**: It is challenging to store biomass pellets for long durations at the plant sites since they absorb moisture from air quickly, rendering them useless for co-firing. Only pellets with up to 14% of moisture can be used for combustion along with coal.

Source: <u>DTE</u>



## Q.7) Vyommitra, which is recently seen in news, is related to which of the following?

- a) It is a binary supermassive black hole system in the Blazar
- b) It is a spacefaring human robot developed by ISRO
- c) It is an ancient Buddhist relic identified in Mangolia
- d) It is a unique set of fossilized dinosaur eggs with one egg nesting within the other

#### Answer: B

Gaganyaan, major missions like the test vehicle flight for the validation of crew escape system performance and the first uncrewed mission of Gaganyaan are scheduled in the second half of 2022.

This will be followed by the second uncrewed mission at the end of 2022 carrying "Vyommitra", a spacefaring human robot developed by ISRO, and finally the first crewed Gaganyaan mission will takeplace in 2023.

Source: Times of India

## Q.8) With reference to Ramsay Hunt Syndrome, consider the following statements;

- 1. Ramsay Hunt Syndrome is caused by reactivation of varicella zoster virus.
- 2. There is no treatment available for Ramsay Hunt Syndrome.

## 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

#### Answer: A

**Statement 1 is correct**: Ramsay Hunt Syndrome is caused by reactivation of varicella zoster virus that has previously caused chickenpox and shingles in the patient.

**Statement 2 is incorrect**: Antiviral therapies and corticosteroids (anti-inflammatory drug) are commonly used to treat the condition.

Source: Indian Express

## Q.9) With reference to Microplastics, consider the following statements;

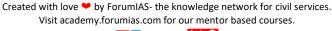
- 1. These are solid plastic particles of less than one micrometer in their largest dimension.
- 2. Microplastics reduces the growth and reproductive output in marine animals.

#### 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

#### Answer: B

**Statement 1 is incorrect**: Microplastics are solid plastic particles of less than one millimeter in their largest dimension.





These are used in cosmetics and personal care products, industrial scrubbers which are used for aggressive blast cleaning, microfibers used in textiles and virgin resin pellets used in plastic manufacturing processes.

**Statement 2 is correct**: Microplastics damage aquatic creatures including turtles and birds. It blocks digestive tracts, and alters feeding behavior. Subsequently, it reduces the growth and reproductive output in marine animals.

Source: The Hindu

## Q.10) Consider the following pairs related to various martial art forms in India;

Martial Arts - State

Thang Ta
 Lathi Khela
 Gatka
 Manipur
 Bihar
 Punjab

4. Mallakhamb - Uttar Pradesh

## How many pairs given above are correctly matched?

a) Only one pair

b) Only two pairs

c) Only three pairs

d) All four pairs

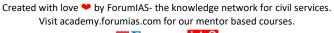
#### Answer: B

Martial Arts - State

Thang Ta - Manipur
 Lathi Khela - West Bengal
 Gatka - Punjab

4. Mallakhamb - Madhya Pradesh

Source: PIB





### **PRELIMS**

## Q.1) Nixtamalisation technique is associated with which of the following?

- a) Carbon Capture and Storage
- b) Fortification of Maize
- c) Production of Green Hydrogen
- d) Cultivation of wheat

#### Answer: b

Nixtamalisation is a method by which the ancient peoples of Mesoamerica like the Maya
used to soak and cook their maize in an alkaline solution and make it more palatable,
nutritious and non-toxic. Nixtamal is derived from the Nahuatl word nextamalli, meaning
'nixtamalised maize dough'.

Source: Article

## Q.2) With reference to the Agnipath scheme, consider the following statements:

- 1. Of the total annual recruits, only twenty five per cent will be allowed to continue for another fifteen years under permanent commission.
- 2. The recruitment will be done on all India, all class recruitment to the services.

## 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

### Answer: c

- Of the total annual recruits, 25 per cent will be allowed to continue for another 15 years under permanent commission.
- The recruitment will be done on "all India, all class" recruitment to the services (from any caste, region, class or religious background). Currently, recruitment is based on 'regiment system' based on region and caste bases.

Source: Article

### Q.3) With reference to Gaganyaan mission, consider the following statements:

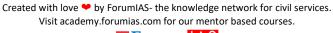
- 1. GSLV Mk III would be the launch vehicle used in this mission.
- 2. Vyommitra a space rover has been developed to accompany the Gaganyaan crew.

## 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

### Answer: a

• Statement 1 is correct: GSLV Mk III will be the launch vehicle used for this mission.





Statement 2 is incorrect: Vyommitra is a spacefaring human robot, not a rover.

### Q.4) With reference to Ambergris, consider the following statements:

- 1. It is a solid, inflammable substance produced in the digestive system of all whales.
- 2. It is used to produce perfumes and traditional medicines.

## 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

### Answer: b

- **Statement 1 is incorrect**: Ambergris is a solid, waxy, flammable substance of a dull grey or blackish color produced in the digestive system of sperm whales.
- Statement 2 is correct.

# Q.5) With reference to National Clean Air Programme (NCAP), consider the following statements:

- 1. Non-attainment cities, under NCAP, are those that have fallen short of the National Ambient Air Quality Standards (NAAQS) for over five years.
- 2. The NCAP targets are non-binding.

### Which of the statements given above is/are incorrect?

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

#### Answer: d

- **The plan includes 102 non-attainment cities,** across 23 states and Union territories, which were identified by the Central Pollution Control Board (CPCB) on the basis of their ambient air quality data between 2011 and 2015.
  - O **Non-attainment cities:** These are those that have fallen short of the National Ambient Air Quality Standards (NAAQS) for over five years.
- Targets under the NCAP are legally non-binding.

Source: Article



### Q.6) Consider the following pairs

### Terms - Context/Topic

Belle II experiment - Artificial Intelligence
 Blockchain technology - Digital/Cryptocurrency

3. CRISPR-Cas9 - Bio-technology

## Which of the pairs given above is/are correctly matched?

a) Only one pair

b) Only two pairs

c) All three pairs

d) None of the above

### Answer: B

## Terms - Context/Topic

Belle II experiment - Particle physics experiment
 Blockchain technology - Digital/Cryptocurrency

3. CRISPR-Cas9 - Bio-technology

Source: The Hindu

# Q.7) Language Model for Dialogue Applications (LaMDA), which was seen in news recently, is related to which of the following?

- a) A new language model to promote linguistic diversity of India
- b) A new model app to provide basic sentence in all Indian Languages
- c) An artificial intelligence-based chatbot of Google
- d) An innovative platform to teach language to school children

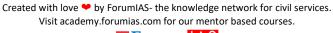
#### Answer: C

LaMDA is short for 'Language Model for Dialogue Applications'. It is Google's modern conversational agent enabled with a neural network capable of deep learning.

Recently, Language Model for Dialogue Applications (LaMDA) was engaged to test for bias/hate speech. The tester claimed that the updated software is now sentient.

He argues that consent from the software must be obtained before experiments are run on it. But, Google and many tech experts have dismissed the comment.

Source: IE





### Q.8) With reference to Neobanks, consider the following statements;

- 1. A neobank is a kind of digital bank without any branches.
- 2. They leverage technology and artificial intelligence to offer personalised services to customers while minimising operating costs.
- 3. In India, Neobanks have a bank licence of their own.

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

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

### Answer: A

**Statement 1 is correct**: A neobank is a kind of digital bank without any branches. Rather than being physically present at a specific location, neobanking is entirely online.

**Statement 2 is incorrect**: They leverage technology and artificial intelligence to offer personalised services to customers while minimising operating costs.

**Statement 3 is incorrect**: In India, these firms don't have a bank licence of their own. They rely on bank partners to offer licensed services. That's because the RBI doesn't allow banks to be 100% digital yet.

Source: TOI

# Q.9) With reference to Lumpy Skin Disease, consider the following statements;

- 1. Lumpy skin disease is primarily spread between animals by biting insects (vectors), such as mosquitoes and biting flies.
- 2. There are no specific antiviral drugs available for the treatment of lumpy skin disease.

## 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

#### Answer: C

Lumpy skin disease is primarily spread between animals by biting insects (vectors), such as mosquitoes and biting flies.

There are no specific antiviral drugs available for the treatment of lumpy skin disease. The only treatment available is supportive care of cattle. This can include treatment of skin lesions using wound care sprays and the use of antibiotics to prevent secondary skin infections and pneumonia.

Source: DTE



## Q.10) With reference to Tree Transplantation, consider the following statements;

- 1. It is a good method to protect young plants from diseases and pests until they mature.
- 2. It is convenient and most affordable technique.

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

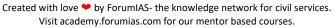
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

### Answer: A

**Statement 1 is correct**: Ramsay Hunt Syndrome is caused by reactivation of varicella zoster virus that has previously caused chickenpox and shingles in the patient.

Statement 2 is incorrect: It is a relatively convenient but less affordable technique.

Source: Indian Express





### **PRELIMS**

# Q.1) Thin film deposition is an important manufacturing step in the production of which of the following?

- 1. Semiconductor lasers
- 2. Precision optics
- 3. LED displays

### Select the correct answer from the codes given below:

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

### Answer: d

- A Thin Film is a layer of material ranging from fractions of a nanometer(monolayer) to several micrometers in thickness.
- Thin film deposition is the process of creating and depositing thin film coatings onto a substrate material. These coatings can be made of many different materials, from metals to oxides to compounds.
- Thin film deposition is an important manufacturing step in the production of many optoelectronic, medical devices and products including consumer electronics, semiconductor lasers, LED displays, semiconductors, precision optics and medical implants.

**Source:** Article

# Q.2) With reference to Lumpy Skin Disease (LSD), consider the following statements:

- 1. It is an infectious disease in cattle caused by Neethling virus.
- 2. There is no treatment available for the virus.

### 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

### Answer: c

- Lumpy skin disease (LSD) is an infectious disease in cattle caused by a virus of the family *Poxviridae* also known as Neethling virus.
- There is no treatment for the virus, so prevention by vaccination is the most effective means of control.

Source: Article



Q.3) It is an ecological phenomenon triggered by the addition or removal of top Predators and involving reciprocal changes in the relative Populations of predator and Prey through a Food chain. Which of the following term describes this phenomenon most appropriately?

- a) Trophic Cascade
- b) Regeneration
- c) Ecological succession
- d) Biomagnification

Answer:

Trophic cascade, an ecological phenomenon triggered by the addition or removal of top predators and involving reciprocal changes in the relative populations of predator and prey through a food chain, which often results in dramatic changes in ecosystem structure and nutrient cycling

# Q.4) With reference to Base Erosion and Profit Shifting (BEPS), consider the following statements:

- 1. It involves tax avoidance by exploiting loopholes in taxation system of the countries
- 2. BEPS has been deemed illegal globally.

### Which of the above statements is/are correct?

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

#### Answer: a

- **Statement 1 is correct**: BEPS refers to "tax planning strategies that exploit gaps and mismatches in tax rules to make profits 'disappear' for tax purposes or to shift profits to locations where there is little or no real activity but the taxes are low resulting in little or no overall corporate tax being paid
- **Statement 2 is incorrect**: As per OECD, in most cases BEPS strategies are not illegal. Largely they just take advantage of current rules that are still grounded in a bricks and mortar economic environment rather than today's environment of global players which is characterized by the increasing importance of intangibles and risk management. That said, some of the schemes used are illegal and tax administrations are fighting them.

## Q.5) World Competitiveness Index is released by?

- a) Institute for Management Development
- b) World Bank
- c) The Economist Intelligence Unit
- d) IBRD

### Answer: a

• India witnessed the sharpest rise among the Asian economies, with a six-position jump from 43rd to 37th rank on the annual World Competitiveness Index compiled by the Institute for Management Development, largely due to gains in economic performance.

Source: Article



# Q.6) Which of the following terms is /are associated with the implementation of 5G technology?

- 1. massive Machine Type Communication (mMTC)
- 2. Ultra-Reliable Low-Latency Communication (URLLC)
- 3. enhanced Mobile BroadBand (eMBB)

### Select the correct answer from the codes given below.

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

### Answer: D

With the enhanced mobile broadband (eMBB) feature of 5G, the full potential of digital education.

Ultra-reliable low-latency communication (URLLC) feature of 5G will enable user-friendly point-of-care diagnostics and the creation of much-needed connected ambulances.

The massive machinetype communication (mMTC) feature of 5G can help in integrating initiatives across transit systems, like FASTag for toll and entry tax. This can not only improve efficiency within the transportation sector but also reduce our carbon footprints.

Source: TOI

# Q.7) Which of the following rights is violated by misleading advertisements?

- 1. Right to choose
- 2. Right to be safeguarded against potentially unsafe products and services
- 3. Right to be informed

### Select the correct answer from the codes given below.

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

## Answer: D

Misleading advertisements violate various rights of consumers such as right to be informed, right to choose and right to be safeguarded against potentially unsafe products and services.

Source: PIB



### Q.8) With reference to 22-degrees halo, consider the following statements;

- 1. A 22-degree halo develops when light enters one side of a columnar ice crystal and exits through another side.
- 2. It is formed only in the presence of Mid-level Clouds especially Altostratus clouds.

### 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

### Answer: A

**Statement 1 is correct**: A 22-degree halo develops when light enters one side of a columnar ice crystal and exits through another side.

**Statement 2 is incorrect**: A 22-degree halo is a ring of light 22 degrees from the sun (or moon) and is the most common type of halo observed and is formed by hexagonal ice crystals with diameters less than 20.5 micrometres.

Halos form when light from the sun or moon is refracted by ice crystals associated with thin, high-level clouds (like cirrostratus clouds).

Source: Telangana Today

## Q.9) Consider the following statements;

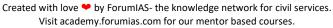
- 1. He was a Warkari saint and poet.
- 2. His Abhangs became the strong weapon against the Brahmanical dominance of society.
- 3. He composed a Marathi genre of literature which fused folk stories with spiritual themes.

### Which of the following personality is described in the lines above?

- a) Sant Vallabhacharya
- b) Sant Sur Das
- c) Sant Tukaram
- d) Chaitanya Mahaprabhu

Answer: C

Source: <u>Indian Express</u>





## Q.10) With reference to the Presidential Election, consider the following statements;

- 1. Presidential and Vice-Presidential Elections Act vests the superintendence, direction and control of the conduct of election to the office of the President in the Parliament.
- 2. The votes are weighted, their value determined by the population of each state as per Census 1971.

### 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

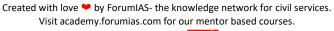
### Answer: B

**Statement 1 is incorrect**: Article 324 of the Constitution read with the Presidential and Vice-Presidential Elections Act, 1952, and the Presidential and Vice - Presidential Elections Rules, 1974 vests the superintendence, direction and control of the conduct of election to the office of the President of India in the Election Commission of India.

**Statement 2 is correct**: Article 55 (3) of the Constitution provides that the election shall be held in accordance with the system of proportional representation by means of the single transferable vote and the voting at such election shall be by secret ballot.

The votes are weighted, their value determined by the population of each state as per Census 1971.

Source: PIB





### **PRELIMS**

# Q.1) Ex SAMPRITI-X is a joint bilateral military exercise between India and which of the following countries?

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

Answer: b

It is a joint military exercise between India and Bangladesh.

Source: Article

# Q.2) With reference to Microplastics, consider the following statements:

- 1. Secondary microplastics are formed through exposure to environmental factors, like radiation from the sun, wind and ocean waves.
- 2. Scavenging results in microplastics being able to travel and further pollute land and water.

### 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

## Answer: c

- **Statement 1 is correct:** Secondary microplastics are formed through the degradation of larger plastic items like bottles, fishing nets and plastic bags. This occurs through exposure to the environment, like radiation from the sun, wind and ocean waves.
- **Statement 2 is correct:** When snow travels in the atmosphere, it binds itself to airborne particles and pollutants, which are then deposited on Earth's surfaces. This phenomenon is called "scavenging". Hence, this is a significant way in which microplastics are able to travel and further pollute land and water.

Source: Article

## Q.3) With reference to Crypto lending, consider the following statements:

- 1. This form of lending is done through Decentralized Finance (DeFi) platforms.
- 2. In India, the Crypto lenders are under the regulatory supervision of the RBI.

### 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

Answer: a



- Crypto lending has boomed over the past two years as decentralized finance or "DeFi," platform.
- Crypto lenders aren't overseen by financial regulators. That means that customers who hold their crypto at the platforms could lose access to their funds –

Source: Article

### Q.4) With reference to Microfinance Institutions, consider the following statements::

- 1. MFIs are financial companies that provide small loans to people who do not have any access to banking facilities.
- 2. NBFC-MFIs in India are regulated by 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

### Answer: a

- Statement 1 is correct: MFIs are financial companies that provide small loans to people who do not have any access to banking facilities.
- **Statement 2 is incorrect**: NBFC-MFIs in India are regulated by the Non-Banking Financial Company -Micro Finance Institutions (Reserve Bank) Directions, 2011 of the Reserve Bank of India

# Q.5) With reference to the Environment (Protection) Act, 1986, consider the following statements:

- 1. It authorizes the central and state governments to protect and improve environmental quality.
- 2. It lays down standards for emission or discharge of environmental pollutants from various sources.

### 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

Answer:

The Environment (Protection) Act, 1986 authorizes the central government to protect and improve environmental quality, control and reduce pollution from all sources, and prohibit or restrict the setting and /or operation of any industrial facility on environmental grounds.

- The Environment (Protection) Act was enacted in 1986 with the objective of providing for the protection and improvement of the environment.
- It empowers the Central Government to establish authorities charged with the mandate of preventing environmental pollution in all its forms and to tackle specific environmental problems that are peculiar to different parts of the country. The Act was last amended in 1991.
- The Environment (Protection) Rules lay down p





### Q.6) With reference to Sentience, consider the following statements;

- 1. Sentient means the ability to feel, perceive things and have some consciousness.
- 2. Sentience is more based on emotions, while sapience is most based on wisdom.

### 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

### Answer: C

Both the statements are correct.

Recently, Google engineers claim that Language Models for Dialog Applications or LaMDA is sentient AI.

Sentient intelligence or a sentient life is the type of cognitive intelligence that is directed towards experiencing feelings and sensations. Sentient intelligence means the ability to feel, perceive things and have some consciousness.

The key difference between sentient and sapient is the type of intelligence developed by individuals. Sentience is more based on emotions, while sapience is most based on wisdom.

Source: Indian Express

## Q.7) With reference to Handicraft Sector, consider the following statements;

- 1. It is one of the largest employment generators after agriculture.
- 2. In the last five years, exports of Indian handicrafts have reduced significantly due to cheaper Chinese products.

### 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

### Answer: A

**Statement 1 is correct**: Handicraft Sector is one of the largest employment generators after agriculture, providing a key means of livelihood to the country's rural and urban population.

**Statement 2 is incorrect**: In the last five years, exports of Indian handicrafts have gone up by more than 40%, as three-fourths of handicrafts are exported.

Indian handicrafts are majorly exported to more than a hundred countries, and the US alone constitutes about a third of India's handicrafts exports.

Source: PIB



### Q.8) With reference to Agni-IV Missile, consider the following statements;

- 1. It is a surface-to-surface missile.
- 2. It is fuelled by liquid propellant alone.
- 3. It can deliver one-tonne nuclear warheads about 4000 kms.

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

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

### Answer: C

**Statement 1 is correct**: Agni-IV is a nuclear-capable long-range ballistic missile of India, with a strike range of 4,000 km. The indigenously developed Agni-IV is a two-stage surface-to-surface missile.

**Statements 2 is incorrect**: It is a two stage solid fuelled system.

**Statement 3 is correct**: Agni-IV can carry a one-tonne nuclear warhead over a distance of 4,000 kilometres.

Source: Indian Express

## Q.9) Digital News Report is published by which of the following organisation/Institute?

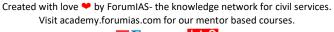
- a) Reporters without Borders
- b) Associated Press
- c) Agence France-Presse
- d) Reuters Institute

#### Answer: D

Reuters Institute for the Study of Journalism has released the Digital News Report, 2022.

The report termed India as a strongly mobile-focused market. 72% of the survey respondents accessed news through smartphones and 35% did so via computers.

Source: The Hindu





## Q.10) Which of the following countries is/are part of I2U2 Network?

- 1. The USA
- 2. India
- 3. The UK
- 4. Israel
- 5. Indonesia

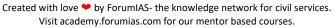
# Select the correct answer from the codes given below

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

## Answer: B

I2U2 is the grouping formed by four nations-India, Israel, UAE and the US. The countries share various common global issues including food security crisis and defense.

Source: Indian Express





### Q.1) With reference to the inter-state council, consider the following statements:

- 1. It was established via Presidential Order.
- 2. Membership of the council includes Cabinet rank ministers nominated 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

### Answer: a

- **Statement 1 is correct:** The Inter-State Council was established under Article 263 of the Constitution of India through a Presidential Order dated 28th May 1990.
- Statement 2 is incorrect: Six Ministers of Cabinet rank in the Union Council of Ministers are nominated by the Prime Minister, not the President.

Source: Article

# Q.2) With reference to the 3D Printing technology, consider the following statements:

- 1. It is a technology that is Produces objects layer by layer.
- 2. Subtractive manufacturing is a more advanced version of this technology that is going to play a pivotal role in Industrial revolution 4.0

### 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

### Answer: a

- Subtractive manufacturing or Machining (traditional method) is an umbrella term for various controlled machining and material removal processes that start with solid blocks, bars, rods of plastic, metal, or other materials that are shaped by removing material through cutting, boring, drilling, and grinding.
- In contrast to the subtractive process of removing material from a larger piece, additive manufacturing or 3D printing processes build objects by adding material one layer at a time, with each successive layer bonding to the preceding layer until the part is complete

### Q.3) With reference to Blockchain, consider the following statements:

- 1. The first block in a Blockchain is known as the Genesis block.
- 2. Transaction data and a timestamp are both included in a block.

## 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

Answer: c



### Both statements are correct.

- The first block in a Blockchain is termed as a Genesis block
- Each block in a blockchain contains a) Cryptographic hash of the previous block, b) Transaction data and c) Timestamp

Source: Article

### Q.4) With reference to Antibodies in human body, consider the following statements:

- 1. Antibodies recognize and attack antigens in order to remove them from the body.
- 2. IgM is the only isotype that can pass through the placenta.

### 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

#### Answer: a

- **Statement 1 is correct**: Antibody, also called immunoglobulin, is a protective protein produced by the immune system in response to the presence of a foreign substance, called an antigen. A wide range of substances are regarded by the body as antigens, including disease-causing organisms and toxic materials.
- **Statement 2 is incorrect**: IgG is the main antibody in blood and it has a powerful ability to bind to bacteria and toxins, and thus it takes on an important role in the biological defense system. IgG is the only isotype that can pass through the placenta, and IgG transferred from the mother's body protects a newborn

## Q.5) Which of the following is/are correctly matched?

### Disease Causative agent

Black Death Virus
 Leprosy Bacteria
 Tetanus Bacteria

### Select the correct answer from the codes given below:

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

## Answer: b

- Black death is caused by a bacteria called as Yersinia pestis.
- Leprosy is caused by a Bacteria Mycobacterium leprae.
- Tetanus is also caused by bacteria Clostridium tetani

Source: Article



### Q.6) With reference to Web 5.0, consider the following statements;

- 1. It is aimed to build an extra decentralized web that puts one in control of their data and identity.
- 2. It is a combination of Web 1.0 and Web 2.0.

### 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

### Answer: A

**Statement 1 is correct**: It is aimed to build an extra decentralized web that puts one in control of their data and identity.

**Statement 2 is incorrect**: Web 5.0 is Web 2.0 plus Web 3.0 that will allow users to 'own their identity on the Internet and 'control their data'.

Source: Indian Express

# Q.7) Khan-Prahari Mobile Application which is seen in news recently is related to which of the following?

- a) To report illegal theft of electricity in rural areas
- b) To report any illegal coal mining incidents
- c) To improve monitoring of traffic violations
- d) To increase surveillance capability of Indian Army.

### Answer: B

Khan-Prahari Mobile Application was launched by: Ministry of Coal. It is a tool for reporting any illegal coal mining incident through geotagged photographs as well as textual information by any individual.

Source: PIB

### Q.8) Which of the following is/are the advantages of Mitticool Refrigerator?

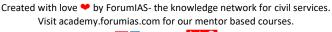
- 1. Reviving the pottery culture
- 2. Promoting sustainable consumption
- 3. Reduce electricity bills

## Select the correct answer from the codes given below.

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

### Answer: D

The Mitticool refridgrator can play an influential role in 1) Reviving the pottery culture, tradition, and heritage, 2) Connecting people back to roots in better healthier ways, 3) Promoting sustainable consumption, 4) Economically empowering the indigent community, 5) Working





towards green and cool earth, economic development and employment generation and **6)** Contributing towards rural women upliftment and making them financially independent.

Source: PIB

## Q.9) With reference to Wheat, consider the following statements;

- 1. Wheat requires a cool growing season and bright sunshine at the time of ripening.
- 2. Punjab is the largest wheat producing state in India.
- 3. Well-drained fertile loamy and clayey loamy soil is best suited for Wheat.

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

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

### Answer: B

**Statement 1 is correct**: Wheat requires a cool growing season and bright sunshine at the time of ripening.

**Statement 2 is incorrect**: Top Wheat Producing States: Uttar Pradesh > Punjab > Haryana>Madhya Pradesh > Rajasthan> Bihar>Gujarat.

**Statement 3 is correct**: Well-drained fertile loamy and clayey loamy soil is best suited for Wheat.

Source: <u>Indian Express</u>

# Q.10) Some Buddhist rock-cut caves are called Chaityas, while the others are called Viharas. What is the difference between the two?

- a) Vihara is a place of worship, while Chaitya is the dwelling place of the monks
- b) Chaitya is a place of worship, while Vihara is the dwelling place of the monks
- c) Chaitya is the stupa at the far end of the cave, while Vihara is the hall axial to it
- d) Vihara is a cave constructed on bottom of hill and Chaitya is a cave constructed on top of the hill.

### Answer: B

'Vihara' is the Sanskrit and Pali term for a Buddhist monastery. It originally means 'a secluded place to walk', and referred to 'dwellings' used by wandering monks during the rainy season.

A Chaitya is a Buddhist shrine or prayer hall with a Stupa at one end. In modern texts on Indian architecture, the term 'Chaitya-Griha' is often used to denote an assembly or prayer hall that houses a Stupa.

Source: Indian Express



### **PRELIMS**

## Q.1) With reference to flexible fuel vehicles (FFVs), consider the following statements -

- 1. The cost of Flex Fuel Engines is more than conventional engines.
- 2. FFVs cannot run on unblended fuel.

## 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

### Answer: a

- **Statement 1 is correct:** Flex Fuel Engines cost more as ethanol has very different chemical properties than petrol. Ethanol has very low (40 per cent) Calorific value as compared to Gasoline, very High Latent heat of vaporization causing cooling of charge/combustion etc. Hence, the cost of Flex Fuel Engines is more than conventional engines.
- Statement 2 is incorrect: FFVs allow vehicles to use all the blends and unblended fuels.

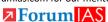
## Q.2) Arrange the following seas from West to East:

- 1. Laptev
- 2. Kara
- 3. Barents

### Select the correct code from the answers given below:

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

Answer: b





# Q.3) With reference to the Critical Information Infrastructure (CII), consider the following statements:

- 1. The government has the power to declare any data, database, IT network or communications infrastructure as CII.
- 2. CERT-In is the nodal agency for taking all measures to protect the nation's critical information infrastructure.

## 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

#### Answer: a

- **Statement 1 is correct**: The government, under the IT Act 2000, has the power to declare any data, database, IT network or communications infrastructure as CII to protect that digital asset.
- **Statement 2 is incorrect**: Created in January 2014, the National Critical Information Infrastructure Protection Centre (NCIIPC) is the nodal agency for taking all measures to protect the nation's critical information infrastructure.

Source: Article



## Q.4) With reference to Kaavi art, consider the following statements:

- 1. It is a kind of sculpture modelling.
- 2. This art was introduced by the Portuguese in India.

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

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

### Answer: b

- **Statement 1 is incorrect**: It is a wall art found in Konkan region, especially in temples of Goa, parts of coastal Maharashtra and Karnataka.
- **Statement 2 is correct**: The art was introduced by the Portuguese who ruled Goa until 1961.

## Q.5) Global Gender Gap report is released by which of the following organizations?

- a) WB
- b) ILO
- c) WEF
- d) IMF

### Answer: c

• The report is released by the World Economic Forum (WEF).

Source: Article

### Q.6) Nongkhyllem Wildlife Sanctuary is located in which of the following state?

- a) Manipur
- b) Meghalaya
- c) Assam
- d) Arunachal Pradesh

### Answer: B

Recently, Scientists have discovered a new species of bamboo-dwelling bat near the Nongkhyllem Wildlife Sanctuary.

The Sanctuary is situated in the Ri-Bhoi district near Lailad village and spread over an area of 29 sq. kms, Nongkhyllem Wildlife Sanctuary is one of the famous attractions of Meghalaya.

Source: The Hindu



# Q.7) Which of the following is/are the purpose/purposes of Government's 'Sovereign Gold Bond Scheme' and 'Gold Monetization Scheme'?

- 1. To bring the idle gold lying with Indian households into the economy.
- 2. To promote FDI in the gold and jewellery sector.
- 3. To reduce India's dependence on gold imports.

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

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

### Answer: C

Sovereign Gold Bond Scheme and Gold Monetization Scheme were launched by the Government in 2015.

The main objectives of these schemes are:

- To mobilize the gold held by households and institutions in the country. To provide a fillip to the gems and jewellery sector in the country by making gold available as raw material on loan from the banks
- To be able to reduce reliance on import of gold over time to meet the domestic demand.
- To promote FDI in gold and jewellery sector is not the objective of these schemes.

Source: TOI

# Q.8) Bonn Challenge, which was seen in the news recently, is related to which of the following?

- a) It is a collaboration of global unicorns to make themselves net zero by 2030.
- b) It is a global challenge to reduce the smuggling of arms and ammunitions.
- c) It is a global effort to bring 150 million hectares of the world's deforested and degraded land into restoration.
- d) It is an international effort to quadruple the production of Electric Vehicles by 2030.

### Answer: C

The Bonn Challenge is a global effort to bring 150 million hectares of the world's deforested and degraded land into restoration by 2020, and 350 million hectares by 2030.

At the UNFCCC Conference of the Parties (COP) 2015 in Paris, India also joined the voluntary Bonn Challenge pledge to bring into restoration 21 million hectares of degraded and deforested land by the year 2030. The target now revised to restore 26 million hectares of degraded and deforested land by 2030.

Source: PIB



### Q.9) Consider the following pairs;

## Crocodilian Species - Characteristics

Saltwater Crocodile
 Gharial
 Marsh Crocodile
 Earth's largest living crocodile species
 Most alligator-like of all crocodile species
 Good indicator of clean river water

## How many pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) All three pairs
- d) None of the pairs

### Answer: A

## Crocodilian Species - Characteristics

1. Saltwater Crocodile - Earth's largest living crocodile species

2. Gharial - Good indicator of clean river water

3. Marsh Crocodile - Most alligator-like of all crocodile species

Source: DTE

### Q.10) With reference to the Sahitya Akademi, consider the following statements;

- 1. The Sahitya Akademi award is the highest literary honour given by the Government of India.
- 2. It is only institution that undertakes literary activities in 24 Indian languages.

## 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

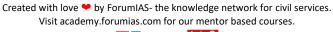
## Answer: B

**Statement 1 is incorrect**: The Sahitya Akademi award is the second-highest literary honour by the Government of India, after the Jnanpith award.

The Jnanpith award is the highest literary award in India. It can only be conferred upon an Indian citizen. English language was added to the list of languages for consideration after the 49th Jnanpith Award.

**Statement 2 is correct**: Sahitya Akademi, India's National Academy of Letters, is the central institution for literary dialogue, publication and promotion in the country and the only institution that undertakes literary activities in 24 Indian languages, including English.

Source: PIB





### **PRELIMS**

## Q.1) With reference to Indian Railways, consider the following statements:

- 1. The Railway Protection Force (RPF) is empowered to make an arrest without a magistrate's order.
- 2. The Government Railway Police (GRP) is under the administrative control of the local state government.

### Which of the statements given above is/are incorrect?

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

### Answer: d

### Both statements are correct.

- RPF is empowered to **arrest without a magistrate's order** and in 2019 its handpicked personnel were given commando training.
- As trains crisscross states, state governments also come into the picture. Government
  Railway Police (GRP), and local police assist in safeguarding railway assets and
  passengers.
  - o GRP is funded equally by IR and states, but is under the administrative control of the local government.

Source: Article

### Q.2) Glischropus meghalayanus sometimes seen in news is a species of?

- a) Spider
- b) Frog
- c) Bat
- d) Lizard

### Answer: c

- Scientists have discovered a new species of bamboo-dwelling bat in Ri Bhoi district of Meghalaya. The species, found near the forested patch of Nongkhyllem Wildlife Sanctuary, has been named *Glischropus meghalayanus*.
- The present discovery is the first report of a thick-thumbed bat not only from India but also from South Asia.

Source: Article



### Q.3) With reference to the Theri desert, consider the following statements:

- 1. It consists of red sand dunes.
- 2. The deposits in the desert are characterized by high water and nutrient retention capacity.

## 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

### Answer: a

- Statement 1 is correct: Theri is a small desert situated in the state of Tamil Nadu. It consists of red sand dunes. The red dunes are called theri in Tamil. They consist of sediments dating back to the Quaternary Period (began 2.6 million years ago) and are made of marine deposits.
- **Statement 2 is incorrect**: They have very low water and nutrient retention capacity. The dunes are susceptible to aerodynamic lift. This is the push that lets something move up. It is the force that is the opposite of weight.

Source: Article

# Q.4) With reference to National Supercomputing Mission (NSM), consider the following statements:

- 1. Its aim is to connect research and academic institutions to a Supercomputing grid all over the country.
- 2. Param Shakti was the first supercomputer assembled indigenously in India.

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

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

#### Answer: a

- Statement 1 is correct
- **Statement 2 is incorrect**: Param Shivay was the first supercomputer assembled indigenously, installed in IIT(BHU).

### Q.5) With reference to lightning strikes, consider the following statements:

- 1. Lightning is classified as a natural disaster in India.
- 2. COVID pandemic has caused a reduction in the lightning strikes over 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

Answer: b



- Statement 1 is incorrect: Lightning is not classified as a natural disaster in India.
- **Statement 2 is correct**: The reduction has been attributed to the impact of the Covid-19 pandemic. The reason attributed to reduction in lightning is due to Covid-2019 pandemic induced reduction in aerosol level, pollution, environmental upgradation and relatively stable weather system in Indian subcontinent.

Source: Article

### Geography

### Q.6) With reference to the Chambal River, consider the following statements;

- 1. It is a rainfed river and its basin is bounded by the Vindhyan mountain ranges and the Aravallis.
- 2. Banas, Kali Sindh, Parbati are major tributaries of the Chambal River.

## 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

### Answer: A

**Statement 1 is correct**: The Convention on Biological Diversity (CBD), a legally binding treaty to conserve biodiversity has been in force since 1993.

**Statement 2 is incorrect**: Nearly all countries have ratified it (notably, the US has signed but not ratified). India enacted Biological Diversity Act in 2002 for giving effect to the provisions of the CBD.

Source: <u>DTE</u>

# Q.8) Which of the following factor/s is/are responsible for increased rain in Northeastern India?

- 1. La Nina conditions in the Pacific
- 2. Positive Indian Ocean Dipole (IOD) in the Indian Ocean
- 3. Strong winds over Bay of Bengal

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

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

### Answer: C

**Statement 1 is correct and 2 is incorrect**: The ongoing La Nina conditions in the Pacific, in combination with a negative Indian Ocean Dipole (IOD) in the Indian Ocean, has increased the intensity of the floods. This is because this condition strengthens the winds that blow from the southwest to the northeast (Southwesterlies) in the Bay of Bengal.



**Statement 3 is correct**: The winds over the Bay of Bengal have been exceptionally strong for a week. These strong winds carry a lot of moisture, dumping them as rains over Bangladesh and Northeast India.

Source: Times of India

# Q.9) Black Swan Event which is seen in news recently, is related to which of the following?

- a) It is a rare event in which the Earth witnesses a significant rise in meteor showers.
- b) It is a nicknamed secret event of gathering of global terror outfits.
- c) It is a rare, unpredictable event that comes as a surprise and has a significant impact on society or the world.
- d) It is an event of increased white swan death recorded in Europe.

#### **Answers: C**

A Black Swan is a rare, unpredictable event that comes as a surprise and has a significant impact on society or the world.

These events are said to have three distinguishing characteristics – 1) They are extremely rare and outside the realm of regular expectations, 2) They have a severe impact after they hit and 3) They seem probable in hindsight when plausible explanations appear.

Source: Indian Express

## Q.10) With reference to the Bird Strikes, consider the following statements;

- 1. All bird strikes cause significant problems for the aircraft.
- 2. Indian government recognize bird strikes as one of the "State Safety Priority".

## 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

#### Answer: B

**Statement 1 is incorrect**: Typically, when birds collide with an aircraft's airframe, it is unlikely to cause significant problems for the pilots flying.

However, if the collision has happened with a window or a windscreen resulting in cracking of the structure, pilots will look to land the plane as early as possible.

**Statement 2 is correct**: Ministry of Civil Aviation and the DGCA has recognised wildlife strikes including bird and animal hits to aircraft as one of the "State Safety Priority".

Source: Indian Express



### **PRELIMS**

## Q.1) Consider the following statements

- 1) Dumped plastic in garbage dumps cannot pollute the environment, until and unless it is thrown in the open.
- 2) Many countries have pledged to do away with hazardous plastic by 2030 at the United Nations Environment Assembly in Nairobi.

## Select the correct answer from the codes given below

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Nether 1 nor 2

### Ans) b

Statement 1 is incorrect. A sizable part of plastics lands up in garbage dumps, where it can stay for hundreds of years, emitting toxic fumes to pollute the air. Traces of plastic toxicants are often found even in cooked or processed foods packed in substandard plastic containers.

Statement 2 is correct. As many as about 170 countries, which participated in the United Nations Environment Assembly in Nairobi in March last, pledged to do away with hazardous plastic by 2030. In fact, about 80 of them have carried out their commitments by imposing a complete or partial ban on the production, trade, possession, and use of plastic material not conforming to the prescribed standards. About 30 of them are small and developing countries of Africa and Asia.

Source: Business Standard

## Q.2) Consider the following statements regarding green energy open access rules

- 1) Any consumer, household or commercial can ask for Green Open access from Discoms.
- 2) Consumers will be given green certificates if they consume green power.

## Select correct answer from the codes given below

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

### Ans) b

Statement 1 is incorrect. The Green Open access is allowed to any consumer and the limit of Open Access Transaction has been reduced from 1 MW to 100 kW for green energy, to enable small consumers also to purchase renewable power through open access.

Statement 2 is correct. Consumers will be given the green certificates if they consume green power.

Source: Business Standard



### Science and Technology

# Q.4) In India, it is legally mandatory for which of the following to report on cyber security incidents?

- 1. Service providers
- 2. Intermediaries
- 3. Corporate bodies

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

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

### Answer: D

The Union Government under section 70B of the IT Act, 2000 established and notified rules of CERT-In in 2014. According to Rule 12(1)(a), it is mandatory for service providers, intermediaries, data centers and corporate bodies to report cyber security incidences to CERT-In within a reasonable time of occurrence of the incident.

Source: Indian Express

## Q.5) Which of the following country/countries share border with the Persian Gulf?

- 1. Qatar
- 2. Pakistan
- 3. Iraq
- 4. Syria
- 5. Kuwait

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

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

## **Answer: C**



Source: Wikivoyage Source: PIB

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### **Economy**

# Q.6) Payments Vision 2025 document is released by which of the following organization/bank?

- a. National Payments Corporation of India (NPCI)
- b. State Bank of India (SBI)
- c. BillDesk Payment gateway
- d. Reserve Bank of India(RBI)

### Answer: D

The Reserve Bank of India(RBI) has released the "Payments Vision 2025". The vision of the document is to provide every user with Safe, Secure, Fast, Convenient, Accessible, and Affordable e-payment options (6 Attributes).

#### **Environment**

# Q.7) With reference to the Major Economies Forum on Energy and Climate(MEF), consider the following statements;

- 1. The forum aims to facilitate candid dialogue among major emitting countries, both developed and developing countries.
- 2. The forum is an initiative of BRICS Countries.

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

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

#### Answer: A

**Statement 1 is correct**: The Convention on Biological Diversity (CBD), a legally binding treaty to conserve biodiversity has been in force since 1993.

Statement 2 is incorrect: The Forum was launched in 2009 by US President Barack Obama.

Source: PIB

# Science and Technology

## Q.8) With reference to the Typhoid, consider the following statements;

- 1. Typhoid fever can be treated with antiviral drugs.
- 2. It is usually spread through contaminated food or water.

# 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

# Answer: B



**Statement 1 is incorrect**: Typhoid fever is a life-threatening infection caused by the bacterium Salmonella Typhi. Typhoid fever can be treated with antibiotics.

**Statement 2 is correct**: It is usually spread through contaminated food or water. Once Salmonella Typhi bacteria are eaten or drunk, they multiply and spread into the bloodstream.

Source: Indian Express

### **Economy**

# Q.9) Which of the following factor/s is/are responsible for higher debt-GSDP ratio in States?

- 1. Declining Tax Revenue
- 2. High Revenue Expenditure
- 3. Significant Committed Expenditure

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

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

### Answer: D

According to a Reserve Bank of India(RBI) study, five states namely, Bihar, Kerala, Punjab, Rajasthan, and West Bengal figure among the most stressed states fiscally.

**Exceeded Debt and Fiscal Targets:** Among the ten states, Andhra Pradesh, Bihar, Rajasthan and Punjab exceeded both debt and fiscal deficit targets for 2020-21 set by the 15th Finance Commission (FC-XV).

**Declining Tax Revenue**: The own tax revenue of some of these states, viz Madhya Pradesh, Punjab and Kerala has been declining over time making them fiscally more vulnerable.

**High Revenue Expenditure:** The share of revenue expenditure in total expenditure of these states varies in the range of 80-90%. This results in poor expenditure quality, as reflected in their high revenue spending to capital outlay ratios.

**Significant Committed Expenditure:** Committed expenditure which inter alia includes interest payments, pensions and administrative expenses accounts for a significant portion (over 35 per cent) of the total revenue expenditure in some of these states.

**High Discoms Losses**: The combined losses of DISCOMs in the five most indebted states, viz Bihar, Kerala, Punjab, Rajasthan and West Bengal, constituted 24.7% of the total DISCOMs losses in 2019-20 while their combined long-term debt was 22.9% of the total DISCOM debt in 2019-20.

Source: Indian Express



## Q.10) Jyotirgamaya festival is related to which of the following?

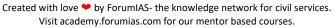
- a) To celebrate the 12 Jyotirlingas in India
- b) To showcase the talent of rare musical instruments
- c) To promote the Buddhist circuit under the Swadesh Darshan scheme
- d) To showcase India's martial art forms in India

### Answer: B

The Union Minister of Culture has inaugurated Jyotirgamaya-A festival showcasing the talent of unsung performers.

Jyotirgamaya is a festival to showcase the talent of rare musical instruments from across the country, including street performers, train entertainers, performers attached to temples etc.

Source: PIB





### **PRELIMS**

## Q.1) Which of the following measures can help in preventing flooding?

- 1. Strengthening embankments
- 2. Dredging of rivers
- 3. Zoning of flood plains

## Select the correct answer from the codes given below:

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

### Answer: d

- Strengthen embankments along the rivers: Most flood protection structures in Assam are over 50-60 years old. These were constructed on the main stem of the Brahmaputra and its tributaries way back in the 1960s and 1970s and have become weak now.
- **Dredging of Rivers:** Dredging is the removal of sediments and debris from the bottom of lakes, rivers, harbors, and other water bodies. It is a routine necessity in waterways around the world because sedimentation—the natural process of sand and silt washing downstream—gradually fills channels and harbors.
- **Enact Flood Zoning Bill**: Major flood-prone states such as Uttar Pradesh, Bihar, West Bengal, Assam, Odisha etc had not taken initiatives to enact the flood plain zoning bill. The bill envisages the zoning of the flood plain of a river according to flood frequencies and defines the type of use of flood plains.

Source: Article

# Q.2) With reference to the International Energy Agency, consider the following statements:

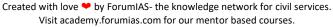
- 1. It was established based on the framework of the Organisation for Economic Co-operation and Development (OEC)
- 2. The IEA releases World Energy Outlook.
- 3. India is a fulltime member of IEA.

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

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

### Answer: d

- **Statement 1 is correct**: It was established in the framework of the Organisation for Economic Co-operation and Development (OECD) in 1974 in the wake of the 1973 oil crisis.
- **Statement 2 is correct**: IEA is best known for the publication of its annual World Energy Outlook.
- **Statement 3 is incorrect**: Recently, the International Energy Agency (IEA) has invited India to become its full-time member. If accepted, India will have to raise strategic oil reserves to 90 days' requirement.





## Q.3) Serpent Island is situated in?

- a) Russia
- b) China
- c) Ukraine
- d) Japan

#### Answer: c

Snake Island, or Zmiinyi Island, also known as Serpent Island is an island belonging to Ukraine and is located in the Black Sea.

Source: Article

## Q.4) Which of the following will increase the liability of the government?

- 1. Capital expenditure
- 2. Salaries of employees
- 3. Borrowings by PSUs

### Select the correct answer from the codes given below:

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

### Answer: c

- Borrowings by PSUs would increase the liabilities of the government.
- Capital expenditure creates assets for the government and causes reduction in liabilities for the government.
- Unlike capital expenditure, revenue expenditure is one that neither creates assets nor reduces any liability of the government.
- Salaries of employees, interest payment on past debt, subsidies, pension, etc, fall under the category of revenue expenditure.

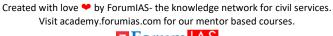
### Q.5) Which of the following correctly defines the Dutch Disease phenomenon?

- a) Uneven growth witnessed across sectors in a country due to the discovery of natural resources, especially large oil reserves.
- b) The level of imports of a nation far exceeds its level of exports.
- c) Presence of indirect trade barriers for merchants of other countries.
- d) Growth of cartelization creating problems for entry of new players in an industrial sector.

### Answer: a

- Dutch Disease in economics refers to a phenomenon wherein a country witnesses uneven growth across sectors due to the discovery of natural resources, especially large oil reserves.
- According to the concept, when a country discovers natural resources and starts exporting them to the rest of the world, it causes the exchange rate of the currency to appreciate significantly and this, in turn, discourages the exports from other sectors while encouraging the import of cheaper alternatives.

**Source**: Article





### **Polity and Governance**

# Q.6) With reference to the floor test in State Assemblies, consider the following statements;

- 1. Only the Governor can call for a floor test in the State Assembly.
- 2. Governor would not need the advice of council of ministers if the Constitution requires him to carry out any function at her/his discretion.

## 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

#### Answer: B

**Statement 1 is incorrect**: When the House is in session, it is the Speaker who can call for a floor test. But when the Assembly is not in session, the Governor's residuary powers under Article 163 allow him to call for a floor test.

In 2020, the Supreme Court in Shivraj Singh Chouhan & Ors versus Speaker case upheld the powers of the Speaker to call for a floor test if there is a prima facie view that the government has lost its majority.

**Statement 2 is correct**: Governor would not need the advice of council of ministers if the Constitution requires him to carry out any function at her/his discretion.

Source: Indian Express

### Q.7) With reference to the Azooxanthellate Corals, consider the following statements;

- 1. They derive nourishment from capturing different forms of plankton.
- 2. They are restricted to shallow waters.

## 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

### Answer: A

**Statement 1 is correct**: Azooxanthellate corals are a group of hard corals. They do not contain zooxanthellae and derive nourishment not from the sun but from capturing different forms of planktons.

**Statement 2 is incorrect**: They are deep-sea representatives with the majority of species being reported from depths between 200 meters and 1,000 meters.

They are also reported from shallow waters, unlike zooxanthellate corals that are restricted to shallow waters.

Source: The Hindu



#### **International Relations**

## Q.8) Northern Ireland Protocol is signed between which of the following countries?

- a) The UK and Ireland
- b) Ireland and the EU
- c) The UK and the EU
- d) Ireland and Scotland

#### Answer: C

Special trading arrangements were needed for Northern Ireland after the UK voted for Brexit in 2016. This is because it's the only part of the UK with a land border with an EU country - the Republic of Ireland.

Before Brexit, it was easy to transport goods across this border because both sides had the same EU trade rules. No checks or paperwork were necessary.

After Brexit, a new system was needed because the EU has strict food rules and requires border checks when certain goods -arrive from non-EU countries.

Hence, the UK and the EU agreed to sign the Northern Ireland Protocol in 2019 as part of the Brexit withdrawal agreement, which is now part of international law.

Source: The Hindu

## Q.9) Which of the following is/are part of Geoengineering techniques?

- 1. Solar Radiation Modification (SRM)
- 2. Cloud engineering
- 3. Carbon Dioxide Removal (CDR) technologies

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

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

## Answer: D

All are part of geoengineering techniques designed to deliberately alter the climate system to reduce the impacts of global warming. They are broadly fall under two categories: Solar Radiation Modification (SRM) technologies and Carbon Dioxide Removal (CDR) technologies.

SRM technologies include techniques such as Cloud engineering, Stratospheric Aerosol Injection (SAI), etc.

Source: TOI



# Q.10) Which of the following is/are the disadvantage/s of Stratospheric Aerosol Injection (SAI) technique?

- 1. Deplete the ozone layer and enlarge the ozone hole
- 2. It might disrupt the water cycle and lead to massive biodiversity loss
- 3. Costliest Geoengineering technique

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

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

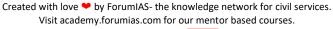
#### Answer: C

**Statement 1 and 2 are correct**: The major disadvantages of SAI are, **a)** SAI might create unintended consequences such as adverse impacts on rainfall, crop production and ocean acidification, **b)** Large-scale spraying of aerosols into the atmosphere could also deplete the ozone layer, enlarging the ozone hole, **c)** If the aerosol injection is terminated abruptly this will cause rapid warming, disrupting the water cycle and leading to massive biodiversity loss, **d)** Unilateral use of SAI could lead to significant adverse effects in other countries, leading to conflicts.

**Statement 3 is incorrect**: The major advantages of SAI are, Several modelling studies indicate that SAI might reduce some of the worst effects of climate change, such as lowering warming and reducing the frequency of heatwaves and high-intensity storms.

Also, the price of SAI is so affordable that a few dozen countries can easily deploy this technology unilaterally.

Source: TOI





#### **PRELIMS**

## Q.1) With reference to the Dissolved Oxygen (DO) in the water bodies, consider the following statements:

- 1. Still water has more amount of Dissolved Oxygen than running stream of water.
- 2. Level of Dissolved Oxygen will decrease if the temperature of a river increases.

## Which of the statements given above is/are incorrect?

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

#### Answer: a

- **Statement 1 is incorrect**: Water bodies receive oxygen from the atmosphere and from aquatic plants. Running water, such as that of a swift moving stream, dissolves more oxygen than the still water of a pond or lake.
- **Statement 2 is correct**: Oxygen becomes less soluble in warmer and polluted waters. Hence, any increase in water temperature means the level of Dissolved Oxygen will decrease.

Source: Article

## Q.2) With reference to communication satellites in India, consider the following statements:

- 1. Use of a foreign satellite for communication services over India is permitted.
- 2. The Indian National Satellite (INSAT) system is the largest domestic communication satellite systems in Asia-Pacific region.

## 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

#### Answer: a

- **Statement 1 is correct**: Use of a foreign satellite for communication services over India is permitted as per the provisions of Satcom Policy and GOI regulations, guidelines & procedures.
- **Statement 2 is incorrect**: INSAT system is one of the largest domestic communication satellite systems in Asia-Pacific region.

Source: Article



## Q.3) Consider the following statements:

- 1. Constitutional bodies can only be created or changed by passing a regular, government or Private bill.
- 2. Central Bureau of Investigation (CBI) is a statutory body
- 3. Securities and Exchange Board of India (SEBI) is a statutory body that regulates both the securities and commodity market in India.

## Which of the statements given above is/are incorrect?

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

#### Answer: b

- In India, a constitutional body is a body or institute established by the Constitution of India. They can only be created or changed by passing a Constitution amendment bill, rather than by a regular, government or private bill. The Securities and Exchange Board of India is the regulatory body for securities and commodity market in India under the ownership of Ministry of Finance, Government of India.
- It was established on 12 April 1988 and given Statutory Powers on 30 January 1992 through the SEBI Act, 1992. The CBI is not a statutory body although it derives its powers from the Delhi Special Police Establishment (DSPE) Act, 1946, which was passed in British India

## Q.4) With reference to Solar Power, consider the following statements:

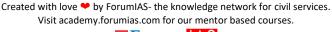
- 1. Solar panels contain heavy metals and also some valuable materials like silver
- 2. In India the total installed capacity of coal fired power plants is lower than that of Hydro, wind and solar energy combined.

#### 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

## Answer: a

- Some governments classify solar panels as hazardous waste due to the small amounts of heavy metals (cadmium, lead, etc.) in them. While panels contain small amounts of valuable materials such as silver, they are mostly made of glass, an extremely low-value material.
- This also disincentivizes recycling efforts in the sector. Installed capacity for the Electricity generated from coal is 2,03,190 MW (51.9%) of the total while that for Wind, hydro and solar combined is 1,50,000 MW aaprox.(38.4%) of the total.





## Q.5) With reference to Open Network for Digital Commerce (ONDC), consider the following statements:

- 1. It is an aggregator application and a hosting platform for all existing digital commerce applications.
- 2. ONDC was incubated by the Department for Promotion of Industry and Internal Trade (DPIIT) at the Quality Council 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

#### Answer: b

- **Statement 1 is incorrect**: It is neither an aggregator application nor a hosting platform, and all existing digital commerce applications and platforms can voluntarily choose to adopt and be a part of the ONDC network.
- **Statement 2 is correct:** ONDC was incubated by the Department for Promotion of Industry and Internal Trade (DPIIT) at the Quality Council of India. A nine-member advisory council, including Nandan Nilekani from Infosys and National Health Authority CEO RS Sharma, counseled the government on the measures required to design and accelerate the adoption of ONDC.

Source: Article

## Q.6) With reference to Keibul Lamjao National Park, consider the following statements;

- 1. It is the only floating National Park in the world.
- 2. This is the last natural habitat of the brow-antlered deer (Sangai) the dancing deer of Manipur.

#### 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

#### Answer: C

Both the statements are correct.

It is the only floating National Park in the world, the Keibul Lamjao National Park located on the Loktak Lake is the last natural habitat of the 'Sangai' (Rucervus eldii eldii), the dancing deer of Manipur.

This is the last natural habitat of the brow-antlered deer (Sangai) the dancing deer of Manipur.

In the 1950s, it was believed that the brow-antlered deer(Rucervus eldii eldii) had become extinct in the country. However, it was subsequently re-discovered in Manipur.

Source: The Hindu



## Q.7) Which of the following measure/s are followed to directly control fiscal deficit in India?

- 1. Privatization of higher educational Institutions
- 2. Selling/offloading the shares of Public Sector Undertakings
- 3. Encouraging Foreign Direct Investment inflows
- 4. Down-sizing of bureaucracy

## Select the correct answer from the codes given below:

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

#### Answer: D

**Statements 2 and 4 are correct**: Downsizing of bureaucracy as well as selling offloading of the shares of public sector undertaking directly contributes to reduction in fiscal deficit.

**Statements 1 and 3 are incorrect**: Privatisation of higher educational institutions may improve the situation but its impact may not be effective in reduction of fiscal deficit.

Without knowing the destination and the effect of FDI inflows, it is difficult to determine its actual impact on the fiscal deficit.

Source: **IE** 

## Q.8) With reference to rocket launches, consider the following statements;

- 1. At present, India does not have a launch rocket capable of lifting a satellite that weighs more than 4 tons into geostationary orbit.
- 2. India does not support any "demand-driven" communication satellite launches.

## 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

#### Answer: A

**Statement 1 is correct**: At present, India does not have a space-launch rocket capable of lifting a satellite that weighs more than 4 tons into geostationary orbit.

Currently, India's most powerful rocket, the GSLV Mk3, can lift a maximum of 4 tons into geostationary orbit.

**Statement 2 is incorrect**: 'Demand-driven' mode basically means when a satellite is launched, one will know who the end customers are going to be and what's the kind of utilization and commitment so that one can have very effective utilization of this satellite capacity once it goes into orbit.

Recently, launched GSAT 24 is the first "demand-driven" communication satellite mission undertaken by NSIL post space sector reforms. NSIL has leased the entire satellite capacity to Tata Play.

Source: The Hindu





## Q.9) Surya Nutan which was seen in news recently, is related to which of the following statements?

- a) It is a new solar rechargeable smart watch.
- b) It is a new type of solar winds identified by Indian scientists.
- c) It is a stationary, rechargeable indoor solar cooking system.
- d) It is a new prototype solar vehicle that can run 200 kms.

#### Answer: C

Surya Nutan is a stationary, rechargeable and always a kitchen-connected indoor solar cooking system.

The stove works in a hybrid mode and is capable of running both on solar and an auxiliary energy source simultaneously. This makes it a reliable cooking solution for all weather conditions.

Source: ET

## Q.10) With reference to Balika Panchayat, consider the following statements;

- 1. It is managed by women Members of the Legislative Assembly.
- 2. Gujarat is the first state in the country to launch Balika Panchayat.

## 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

#### Answer: B

**Statement 1 is incorrect**: "Balika Panchayat" is managed by girls in the 11-21 age group. Members of the Balika Panchayat are elected after an intense campaigning process.

Girls who aspire to become members of the Balika Panchayat even carry out rallies and door-to-door campaigns.

**Statement 2 is correct**: Gujarat is the first state in the country to launch Balika Panchayat.

Source: AIR





#### **PRELIMS**

## Q.1) Which one of the countries is a part of G7 grouping?

- 1. United Kingdom
- 2. China
- 3. Russia
- 4. Japan

## Select the correct answer using the codes given below

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

## Ans) c

## **Explanation**

G7 members — Canada, France, Germany, Italy, Japan, the United Kingdom, the US, and the European Union

#### Source

## Q.2) Consider the following statements

- 1. As per the Indian Constitution, gambling is classified under the State List of 7th Schedule.
- 2. Games of skill are legitimate business activities protected under Article 19(1)(g) of the Indian Constitution

#### Select the correct answer using the code given below

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

#### Ans c

Statement 1 is correct. In India gambling and betting is a subject matter of legislation under entry 34 and 62 of State List in the Seventh Schedule of the Constitution.

Statement 2 is correct. "games of skill" are legitimate business activities protected under Article 19(1)(g) of the Indian Constitution as per the rulings of the Supreme Court and several High Courts till date. These rulings have also emphasised a clear distinction between "games of skill" and "games of chance."

Source



## Q.3) Which of the following are features of National Mobile Monitoring Software (NMMS) App?

- 1. Real time attendance of workers
- 2. Processing payments faster
- 3. Educating workers regarding the scheme

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

- a) 1 and 3 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) All of the above

#### Ans) b

In 2021, the Ministry of Rural Development (MoRD) launched the National Mobile Monitoring Software (NMMS) app. It was aimed at "improving citizen oversight and increasing transparency" in National Rural Employment Guarantee Act (NREGA) works.

It would ensure proper monitoring of the schemes with the purpose of increasing "citizen oversight" or transparency in the implementation of the scheme. In addition to this, it will potentially enable processing payments faster.

It would ensure monitoring the attendance of workers through real-time, photographed, geotagged attendance. The attendance will be taken once in each half of the day.

Source

## Q.4) Which one of the following mechanisms/Institutions are associated with BRICS?

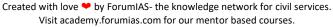
- a) New Development Bank (NDB)
- b) Asian Infrastructure Investment Bank
- c) International Development Association
- d) International Bank for Reconstruction and Development

#### Ans) a

The New Development Bank, formerly referred to as the BRICS Development Bank, is a multilateral development bank established by the BRICS states.

The International Bank for Reconstruction and Development and International Development Association are associated with the World Bank Group.

Source





## Q.5) Consider the following statements regarding the National Commission for the Protection of Child Rights (NCPCR)

- 1. National Commission for Protection of Child Rights (NCPCR) is a constitutional body.
- 2. The Commission considers a person up to the age of 16 years as a child.

#### Select the correct code using the codes given below

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

## Ans) d

Statement 1 is incorrect. The National Commission for Protection of Child Rights (NCPCR) is a statutory body established in 2007 under an act of Parliament, the Commissions for Protection of Child Rights (CPCR) Act, 2005.

Statement 2 is incorrect. As defined by the commission, children include people up to the age of 18 years.

Source

## Q.6) Which of the following is/are the source of air pollution?

- 1. Farming activities
- 2. Dust storms
- 3. Garbage burning

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

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

## Answer: D

**Burning of Fossil Fuels**: Most of the pollutants are produced by burning fossil fuels or wood, for driving, heating, power plants and industry.

Several man-made factors, vehicular emissions, construction dust, garbage burning causes severe pollution.

**Farming**: Releasing Ammonia from livestock manure and fertilisers blowing into cities and forming particles, particularly in spring time when crops are sown and muck is spread.

Further, stubble burning is also one of the major sources of air pollution in northern India, especially in winters.

**Natural Sources**: Natural sources of outdoor air pollution such as dust storms.

Source: PIB



## Q.7) With reference to Water Hyacinth, consider the following statements;

- 1. It is an indigenous species of aquatic weed.
- 2. The plant has the ability to trap and remove toxic metabolites and harmful heavy metals from water.
- 3. It is associated with the depletion of dissolved oxygen in the water.

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

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

#### Answer: B

**Statement 1 is incorrect**: It is not an indigenous species but was introduced to India during the British colonial rule as an ornamental aquatic plant from South America.

**Statement 2 is correct**: The plant is a good phytoremediation species, suggesting it has the ability to trap and remove toxic metabolites and harmful heavy metals from water. But more research needs to be conducted to find a suitable use for the notorious weed.

**Statement 3 is correct**: Water hyacinth is considered invasive because it grows rapidly and can form thick layers over the water. These mats shade out the other aquatic plants. Eventually, these shaded plants die and decay. The decaying process depletes the amount of dissolved oxygen in the water. As oxygen levels decline, many fish are unable to survive. Often the waters below water hyacinth masses become devoid of life.

Source: DTE

#### Q.8) With reference to Sovereign credit ratings, consider the following statements;

- 1. These are Central Bank assessments that determine the creditworthiness of a country.
- 2. Loss of Biodiversity will downgrade the sovereign credit ratings of countries.

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

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

#### Answer: B

**Statement 1 is incorrect**: Sovereign credit ratings are an independent assessment that determines the creditworthiness of a country.

**Statement 2 is correct**: Loss of Biodiversity will downgrade the sovereign credit ratings of several countries. India, Indonesia, Ethiopia and Bangladesh can expect downgrades of four notches while a third of the countries studied would experience more than three.

Source: AIR



## Q.9) Bedti-Varada River Interlinking Project is located in which of the following state?

- a) Kerala
- b) Madhya Pradesh
- c) Karnataka
- d) Maharashtra

#### Answer: C

Environmental groups in Karnataka have criticised the project to link the Bedti and Varada rivers in Karnataka, calling it unscientific and a waste of public money.

The Bedti-Varada project was envisaged in 1992 to supply drinking water.

The plan aims to link the Bedti, a river flowing west into the Arabian Sea, with the Varada, a tributary of the Tungabhadra River, which flows into the Krishna, which in turn flows into the Bay of Bengal.

Source: DTE

## Q.10) With reference to Galapagos archipelago, consider the following statements;

- 1. The islands are known for their large number of endemic species such as land iguana, giant tortoise.
- 2. The archipelago famously caused Darwin's understanding of evolution.

## 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

#### Answer: C

Both the statements are correct.

Galápagos Islands is an archipelago of volcanic islands distributed on either side of the equator in the Pacific Ocean. It is administratively a province of Ecuador.

The islands are known for their large number of endemic species such as land iguana, giant tortoise that were studied by Charles Darwin which contributed to the inception of Darwin's theory of evolution.

Source: TOI



#### **PRELIMS**

## Q.1) Which of the Element is not counted as a Rare Earth Mineral?

- a) scandium
- b) europium
- c) lanthanum
- d) tellurium

#### Ans) d

Together, the group of following 17 elements is known as Rare Earth Element scandium, yttrium, lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium and lutetium.

## Source

#### 0.2) Consider the following statements regarding Global Liveability Index 2022

- 1. Denmark is the most liveable city in the world as per the index.
- 2. India has none of its cities in the top 100 of the index.

#### Which of the statements are correct?

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

#### Ans) b

Statement 1 is incorrect. The Austrian capital, Vienna has bagged the top spot on the 2022 index. The European city had slipped to the 12th spot on the index in 2021.

Statement 2 is correct. The cities in India have fared poorly in the list of the world's most liveable cities. India's national capital New Delhi has been ranked 112th in the list of most liveable cities. While India's financial capital Mumbai is ranked at 117th position. Source-

#### Q.3) Which of the following are associated with the development of MSMEs in India

- 1. United Nations Industrial Development Organization (UNIDO)
- 2. zero effect zero defect (ZED) certification
- 3. e-Shram

## 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) All of the above

#### Ans) d

Option 1 is correct. together with the Bureau of Energy Efficiency (BEE), UNIDO provided energy efficiency advisory services to 695 MSMEs in 23 clusters covering brass, ceramic, dairy, foundry and hand tool sectors.

Option 2 is correct. India's ambitious "Make in India" campaign aims to catapult the country up the manufacturing value chain to position itself as a global manufacturing hub. Initiatives

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such as the production linked incentives (PLI) schemes and the recently launched zero effect zero defect (ZED) certification are helping to promote and boost MSMEs.

Option 3 is correct. Government initiatives such as the Digital Saksham and the interlinking of the Udyam, e-Shram, National Career Service (NCS), and Atmanirbhar Skilled Employee-Employer Mapping (ASEEM) portals show the promise of targeted digitalisation schemes or MSMEs.

Source

## Q.4) Which of the following statements clearly explains the term 'carbon bombs'?

- a) These are coal present beneath the Earth's surface yet to be discovered.
- b) These are oil or gas projects that will result in at least a billion tonnes of CO2 emissions over its lifetime.
- c) These are oil resources present beneath the permafrost that will be exposed due to melting of ice.
- d) These are vehicular emissions that receive less attention from the international community.

#### Answer: B

Carbon Bombs are "an oil or gas project that will result in at least a billion tonnes of CO2 emissions over its lifetime."

In total, around 195 such projects have been identified the world over, including in the US, Russia, West Asia, Australia and India.

They will collectively overshoot the limit of emissions that had been agreed to in the Paris Agreement of 2015.

Source: Indian Express

## Q.5) With reference to Utricularia Furcellata, consider the following statements;

- 1. It is a fruit bearing plant species found in marsh conditions.
- 2. Recently, the plant was sighted in the Western Himalayas for the first time.

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

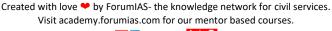
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

#### Answer: B

**Statement 1 is incorrect**: It is a rare carnivorous plant species found in Uttarakhand's Mandal valley, Chamoli district. This plant was last seen in the country in Meghalaya state in 1986. These plants are mostly found in freshwater and wet soil.

**Statement 2 is correct**: Recently, the plant was first sighted in Uttarakhand and also in the entire western Himalayan region for the first time.

Source: Indian Express





## Q.6) Consider the following statements

- 1. Under his leadership, Sirhind was conquered by the Sikhs from mughals and established the Khalsa rule in Punjab.
- 2. He abolished the Zamindari system and granted property rights to the tillers of the land.
- 3. He introduced the Nanak Shahi coins.

## Which of the following personality is described in the lines above?

- a) Maharaja Ranjit Singh
- b) Guru Ram Das
- c) Baba Banda Singh Bahadur
- d) Guru Hargobind

#### Answer: C

Recently, The National Monuments Authority has observed the Martyrdom Day of the great warrior Baba Banda Singh Bahadur at Red Fort in New Delhi.

Source: PIB

## Q.7) With reference to Virtual Servers, consider the following statements;

- 1. A virtual server is a simulated server environment built on an actual physical server.
- 2. Virtual servers are not as efficient as the physical servers.

#### 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

#### Answer: A

**Statement 1 is correct**: A virtual server is a simulated server environment built on an actual physical server. It basically recreates the functionality of a dedicated physical server.

**Statement 2 is incorrect**: Converting one physical server into multiple virtual servers allows organizations to use processing power and resources more efficiently by running multiple operating systems and applications on one partitioned server.

Source: The Hindu

# Q.8) Which of the following application is/are associated with the usage of drones in Agriculture sector?

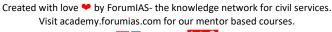
- 1. Distinguish between healthy and diseased or pest-infested plants
- 2. Digitising land records
- 3. Transportation of farm produce

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

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

#### Answer: D

**Firstly**, Drones are employed in agriculture for a variety of purposes such as estimating the planted area and likely production, assessing crop damage by pests and diseases, and





digitising land records, apart from their most common use for spraying pesticides and plant nutrients.

**Secondly**, The use of drones in the farm sector is unlikely to remain confined to a few broad areas, such as spraying, surveying, mapping, and surveillance.

**Thirdly**, Specially designed sensors equipped with artificial intelligence tools can enable drones to distinguish between healthy and diseased or pest-infested plants for better targeting of pesticides and other plant-protection chemicals.

**Fourthly**, large drones can be used to transport farm produce, especially perishable items like vegetables, fruit, meat, and fish, to markets directly from farms in the least possible time and with minimum damage to the stuff.

Source: Business Standard

# Q.9) With reference to the Medical Termination of Pregnancy (MTP) Act, consider the following statements;

- 1. This law is an exception to certain Indian Penal Code (IPC) provisions.
- 2. The 2021 amendment increased the gestation period from 20 weeks to 28 weeks without any conditions.

## 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

#### Answer: A

**Statement 1 is correct**: This law is an exception to the Indian Penal Code (IPC) provisions of 312 and 313 and sets out the rules of how and when a medical abortion can be carried out. **Statement 2 is incorrect**: Under the Medical Termination of Pregnancy (Amendment) Act, 2021, abortion is permitted after medical opinion under stipulated circumstances. The 2021 Act increased the upper limit of the gestation period to which a woman can seek a medical abortion to 24 weeks from 20 weeks permitted in the 1971 Act. But this renewed upper limit can only be exercised in specific cases.

Source: The Hindu

#### Q.10) Shantilal Shah Committee is related to which of the following?

- a) To draft the India's crude oil diplomacy
- b) To enumerate challenges related to children education
- c) Regarding the legalisation of abortion in India
- d) To draft India's new cyber security policy

#### Answer: C

In the 1960s, in the wake of a high number of induced abortions taking place, the Union government ordered the constitution of the Shantilal Shah Committee to deliberate on the legalisation of abortion in the country. In order to reduce maternal mortality owing to unsafe abortions, the Medical Termination of Pregnancy (MTP) Act was brought into force in 1971. This law is an exception to the Indian Penal Code (IPC) provisions of 312 and 313 and sets out the rules of how and when a medical abortion can be carried out.

Source: The Hindu



#### **PRELIMS**

# Q.1) Which of the following features are associated with the recently signed India-UAE Comprehensive Economic Partnership Agreement (CEPA)?

- 1. Zero Customs Duty
- 2. Preferential Market Access
- 3. Sensitive list cannot be applied in this agreement

## 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) All of the above

#### Ans) a

Option 1 is correct. The zero duty access for Indian products to the UAE is set to expand over 5-10 years to 97 per cent of UAE tariff lines corresponding to 99 per cent of India's exports by value.

Option 2 is correct. India will benefit from preferential market access provided by the UAE on over 97 % of its tariff lines which account for 99% of Indian exports to the UAE.

Option 3 is incorrect. India has excluded certain goods from the agreement through a "sensitive list" of products amounting to 10 per cent of tariff lines that are excluded completely from the agreement.

Source

## Q.2) Which of the following impacts of predatory pricing are not correct?

- 1. Low prices for the product in the long run
- 2. Creation of monopoly
- 3. Increase in choice for customers

#### Select the correct answer using the codes given below

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

#### Ans) c

In a predatory pricing scheme, prices are set low to attempt to drive out competitors and create a monopoly.

Consumers may benefit from lower prices in the short term, but they suffer if the scheme succeeds in eliminating competition, as this would trigger a rise in prices and a decline in choice.

Source



## Q.3) Which of the following statements correct defines the term 'Off-Budget Debt'?

- a) These are borrowings taken by the Centre to pay off the liabilities or NPAs of Important financial institutions or banks.
- b) These are borrowings taken not by the Centre directly, but by another public institution on the direction of government.
- c) These are borrowings taken by the government, to spend on the activities of central intelligence to maintain secrecy.
- d) These are the borrowings taken by the center, for payment of salaries of constitutional bodies.

## Ans) b

#### **Explanations**

Off-budget borrowings are loans that are taken not by the Centre directly, but by another public institution which borrows on the directions of the central government. Such borrowings are used to fulfil the government's expenditure needs.

Source

#### \_\_\_\_\_

## Q.6) With reference to BRICS, consider the following statements;

- 1. BRICS countries together launched Remote Sensing constellation of satellites.
- 2. During the Third BRICS Summit, the BRICS leaders set up Asian Infrastructure Investment Bank.

## 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

#### Answer: A

**Statement 1 is correct**: A Remote Sensing constellation of satellites has been launched by BRICS Nations with 6 satellites including 2 from India, 2 from China, 1 from Russia, and 1 Brazil-China.

**Statement 2 is incorrect**: During the Sixth BRICS Summit in Fortaleza (Brazil) in 2014, the leaders signed the Agreement establishing the New Development Bank (NDB - Shanghai, China). It has so far approved 70 infrastructure and sustainable development projects worth.

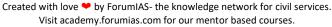
## Source: The Hindu

# Q.7) Which of the following Eras in the Geologic Time Scale, is often referred as the 'Great Dying'?

- a) Mesozoic Era
- b) Jurassic period
- c) Permian Era
- d) Cenozoic Era

#### **Answer: C**

The Permian era is a period spanning 298.9 million-252.2 million years ago. This was a time before the dinosaurs ruled the planet. Global ocean temperatures were 10 degrees higher than today. Oxygen levels were 80% lower.





During this period, land masses collided to form the supercontinent Pangaea. The supercontinent was arid; only a few parts received rainfall round the year.

But towards the end of the era, a series of volcanic eruptions occurred in central Siberia, injecting massive amounts of greenhouse gases(GHG) into the atmosphere.

The change in climate after the volcanic eruptions was a death knell for the flourishing and diverse life forms.

Many long-lived lineages vanished. Roughly 96% of marine species and 70% of land species went extinct. Hence, the scientists refer to this period as the 'Great Dying'.

Source: <u>DTE</u>

## Q.8) With reference to Salt sector, consider the following statements;

- 1. India is the top producer of salt in the world.
- 2. Gujarat is the top producer of salt in India.
- 3. Salt is a central subject and listed as mining industry.

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

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

#### Answer: B

**Statement 1 is incorrect**: India ranks third in the production of salt in the world next to the USA and China.

**Statement 2 is correct**: Gujarat produces about 28.5 million tonnes of salt per year which is more than 80% of the country's total production.

**Statement 3 is correct**: Salt is a central subject listed as item number 58 of the Union List of the 7th Schedule of the Constitution. It is listed as a mining industry.

Source: The Hindu

# Q.9) With reference to India State Support Program for Road Safety, consider the following statements;

- 1. It is a pan India Program that aims to make India Roads accidents free by 2025.
- 2. The program is funded by World Bank.

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

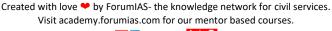
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

#### Answer: B

**Statement 1 is incorrect**: The programme will be implemented in seven states namely: Andhra Pradesh, Gujarat, Odisha, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal.

**Statement 2 is correct**: Recently, the World Bank has approved a \$250 million loan to support the "India State Support Program for Road Safety".

Source: The Hindu





## Q.10) With reference to India, the terms Gadisar, Brahma and Dhandh pertain to,

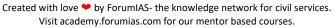
- a) Tribal languages
- b) Pre-historic cave paintings
- c) Lakes in North India
- d) Dance forms of Northwest Indi

#### Answer: C

Menar Village in the Udaipur district is set to be notified as Rajasthan's new wetland. This will pave the way for getting the Ramsar site status for this village. The village has two lakes – the Brahma and Dhandh. These lakes play host to more than 150 species of local and migratory birds in the winter season.

Gadisar Lake also called Gadaria Lake is located in the Jaisalmer district of the Indian state of Rajasthan. It was built by the founder of Jaisalmer, King Rawal Jaisal in 1156 AD and later rebuilt by Gadsi Singh in the year around 1367 AD. This lake is an artificial lake.

Source: The Hindu





#### **International Relations**

# Q.1) Which of the following is/are the focus of Partnership for Global Infrastructure and Investment(PGII) Initiative?

- 1. Revive connectivity, trade and infrastructure used in ancient times.
- 2. Focus on climate action and clean energy.
- 3. Focus on bolstering digital information and communications technology (ICT) networks

## Select the correct answer using the codes given below;

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

#### Answer: B

**Statement 1 is incorrect**: China's Belt and Road project was started to revive connectivity, trade and infrastructure along what was China's ancient Silk Road. On the other hand, PGII has been set up to help underfunded low and middle-income countries to meet their infrastructure needs.

**Statement 2 is correct**: PGII has laid focus on climate action and clean energy while China has built large coal-fired plants under BRI along with solar, hydro, and wind energy projects. **Statement 3 is correct**: It will focus on bolstering digital information and communications technology (ICT) networks.

Source: The Hindu

## Q.2) Consider the following pairs,

Famous arts/crafts - Associated States

1. Gulabi Meenakari - Uttar Pradesh

2. Dokra art - Bihar

3. Kullu Shawl - Arunachal Pradesh

4. Aranmula Kannadi - Kerala

## How many pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) Only three pairs
- d) All four pairs

#### Answer: B

Famous arts/crafts - Associated States

Gulabi Meenakari - Uttar Pradesh
 Dokra art - Chhattisgarh

3) Kullu Shawl - Himachal Pradesh

4) Aranmula Kannadi - Kerala

Source: Indian Express



## Q.3) With reference to Partners in the Blue Pacific (PBP) initiative, consider the following statements;

- 1. It is an "informal mechanism" to support Pacific islands and to boost diplomatic, and economic ties in the pacific region..
- 2. It is launched by Russia and China.

## 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

#### Answer: A

**Statement 1 is correct**: It is an "informal mechanism" to support Pacific islands and to boost diplomatic, and economic ties in the pacific region.

**Statement 2 is incorrect**: It is launched by US, Australia, New Zealand, Japan and the United Kingdom

Source: Indian Express

## **Q.4) With** reference to **Hermit**, consider the following statements;

- 1. It is a newly developed chatbot for aiding elderly.
- 2. Once installed on a device, Hermit can record audio on the device, carry out many unauthorized activities.

## 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

#### Answer: B

**Statement 1 is incorrect**: Hermit is a spyware developed by the Italian commercial spyware vendor RCS Lab.

**Statement 2 is correct**: Once installed on a device, it can record audio on the device, carry out unauthorized calls and many unauthorized activities.

Source: The Hindu

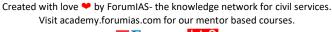
# Q.5) India's Booming Gig and Platform Economy Report is released by which of the following organisation?

- a) Reserve Bank of India
- b) Central Statistics Office
- c) Niti Aayog
- d) Small Industries Development Bank of India

#### Answer: C

NITI Aayog has released a report titled 'India's Booming Gig and Platform Economy'. The report is a first-of-its-kind study that presents comprehensive perspectives and recommendations on the gig-platform economy in India.

Source: ForumIAS Blog





## Q.6) With reference to anti-defection law, consider the following statements;

- 1. In defection cases, Speaker's decision was subject to judicial review.
- 2. Presiding Officer can adjudicate defection complaint while a motion for his own removal is pending.

## 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

#### Answer: A

**Statement 1 is correct**: In 1992, Kilhoto Hollohan vs Zachillhu case, a Constitution Bench, while upholding the validity of the anti-defection law, held that the Speaker's decision was subject to judicial review, albeit on limited grounds.

The court also made it clear that this should take place after a final decision, and there can be no interim order, except if there is an interim disqualification or suspension.

**Statement 2 is incorrect**: Based on a conclusion in Nabam Rebia (2016) that a Presiding Officer should not adjudicate any defection complaint while a motion for his own removal is pending. Source: The Hindu

## Q.7) Kaukab-i-Tali, which was mentioned in news, refers to which of the following?

- a) Biggest and heaviest gold coin ever minted in the world during the reign of Emperor Jahangir.
- b) Emperor Shahjahan's personal collection of books containing various languages.
- c) Shah of Iran's personal gift to Emperor Akbar for his eighth regnal year.
- d) Title given to Nizam-ul-Mulk Asaf Jah for his valiant efforts in war.

#### Answer: A

Kaukab-i-Tali was 20. 3 cm in diameter, weighed 11,935.8 grams, and was minted in Agra. The coin is also inscribed with the Persian script in different calligraphic styles.

It is the biggest and heaviest gold coin ever minted in the world, and it was minted during the reign of Emperor Jahangir.

Source: TOI

## Q.8) Consider the following statements;

- 1. He is the founder of Sankhyā, the Indian Journal of Statistics.
- 2. He wrote a series of essays titled 'Rabindra Parichay' ('Introduction to Rabindra').
- 3. He devised a statistical method called 'Fractile Graphical Analysis'. This method is used to compare the socio-economic conditions of varied groups.

#### Which of the following personalities is reffered in the lines above?

- a) Srinivasa Ramanujan
- b) Calyampudi Radhakrishna Rao
- c) Prasanta Chandra Mahalanobis
- d) Satyendra Nath Bose

Answer: C

Source: The Hindu



## Q.9) Which of the following factor/s is/are responsible for increased rain in Northeastern India?

- 1. La Nina conditions in the Pacific
- 2. Positive Indian Ocean Dipole (IOD) in the Indian Ocean
- 3. Strong winds over Bay of Bengal

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

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

#### Answer: C

**Statement 1 is correct and 2 is incorrect**: The ongoing La Nina conditions in the Pacific, in combination with a negative Indian Ocean Dipole (IOD) in the Indian Ocean, has increased the intensity of the floods. This is because this condition strengthens the winds that blow from the southwest to the northeast (Southwesterlies) in the Bay of Bengal.

**Statement 3 is correct**: The winds over the Bay of Bengal have been exceptionally strong for a week. These strong winds carry a lot of moisture, dumping them as rains over Bangladesh and Northeast India.

Source: Times of India

## Q.10) With reference to the 'Use and File' system, consider the following statements;

- 1. Under this system, Companies are permitted to market products without the regulator's prior approval, thus avoiding a long wait.
- 2. The system is mostly used in Fast-moving consumer goods (FMCG) sector.

#### 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

## Answer: A

**Statement 1 is correct**: Under 'Use and File', insurance firms are permitted to market products without the regulator's prior approval, thus avoiding a long wait.

**Statement 2 is incorrect**: The system is mostly used in Insurance sector. The system will facilitate insurance firms to quickly introduce new schemes with innovative features, enabling people to participate and cover their health expenses.

Source: Indian Express



#### **PRELIMS**

## Q.1) Which of the following countries/place does not share border with UAE?

- a) Oman
- b) Saudi Arabia
- c) Qatar
- d) Persian Gulf

#### Ans) c



#### Q.3) Consider the following statements

- 1) UN Sustainable Development Goal (SDGs) targets to halve road traffic crash fatalities and injuries by 2030.
- 2) As per World Bank, India accounts for only 1 per cent of the world's vehicles.

## 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

Statement 1 is correct. 2030 Agenda for UN Sustainable Development, in targets 3.6 - aiming for the reduction of global road traffic deaths and injuries by 50 per cent by 2020. Statement 2 is correct. The World Bank noted in a report this month that with only 1 per cent

of the world's vehicles, India accounts for almost 10 per cent of all crash related deaths.

Source



## Q.4) Which of the following can be classified as ecosystem services (PES)

- 1. photosynthesis or soil formation
- 2. aesthetic and recreational value added by landscape
- 3. medicinal plants

## Select the correct answer from the codes given below

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

## Ans) d

Ecosystem services can be roughly divided into:

Supporting services – those services creating conditions necessary for the provision of all other ecosystem services, for example photosynthesis or soil formation

Provisioning services – all products coming from ecosystems, for example food, fiber, fuel, herbs and medicinal plants, genetic resources, drinking water

Regulating services – the capacity of ecosystems to regulate important natural processes, for example regulation of climate, quality and quantity of water, etc.

Cultural services – non-material benefits from ecosystems, for example the aesthetic and recreational value of landscapes

Source

# Q.5) Consider the following statements regarding Primary Agriculture Cooperative Societies (PACS).

- 1. PACS aids in financial inclusion of the rural areas.
- 2. PACS can offer any economic activities other than credit to become economically viable.

## 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) a

Statement 1 is correct.

Statement 2 is incorrect. The model bylaws will enable PACS to offer a host of economic activities other than credit. This includes developing cold-storage facilities in villages, running PDS shops and providing locker facilities for rural depositors. However, at present PAS cannot deviate from their core economic activities.

Source



# Q.6) With reference to India Forum for Nature-Based Solutions(NbS), consider the following statements;

- 1. The forum aims to create a collective of NbS entrepreneurs, government entities to help scale urban nature-based solutions.
- 2. It is a global forum created by Cities4Forests Initiative.

#### 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

#### Answer: A

**Statement 1 is correct**: The forum aims to create a collective of NbS entrepreneurs, and government entities to help scale urban nature-based solutions.

**Statement 2 is incorrect**: It is India's first national coalition platform for urban nature-based solutions (NbS).

Source: PIB

## Q.7) With reference to Living Lands Charter, consider the following statements;

- 1. The charter mandates member countries to safeguard global land resources and arrest land degradation.
- 2. It is a binding agreement adopted by the G7 member countries.

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

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

#### Answer: A

**Statement 1 is correct**: The charter mandates member countries to safeguard global land resources and arrest land degradation while acting against climate change, biodiversity loss and towards sustainable management.

**Statement 2 is incorrect**: It is a non-binding agreement adopted by the Commonwealth member countries.

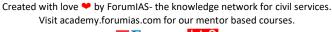
Source: DTE

# Q.8) The term CAPSTONE, which was seen in news recently, is related to which of the following?

- a) A new gem stone found close to Earth's mantle.
- b) A new moss species that has been identified with true roots for the first time.
- c) A new CubeSat launched by NASA to Near-Rectilinear Halo Orbit(NRHO).
- d) A stone excavated in Dholavira showing the evidence of Horse riding.

#### Answer: C

NASA has launched CAPSTONE, a microwave oven-sized CubeSat weighing just 55 pounds (25 kg).





For the Artemis Mission, NASA has decided to include Gateway, a small space station around the moon. That would make it easier for astronauts to reach more parts of the moon. This outpost is to be placed in what is known as a Near-Rectilinear Halo Orbit(NRHO). At the Moon, CAPSTONE will enter NRHO, where it will fly within 1,600 km of the Moon's the North Pole on its near pass and 70,000 km from the South Pole at its farthest. Source: Indian Express

## Q.9) With reference to Primary Agriculture Credit Societies (PACS), consider the following statements:

- 1. These constitute the top tier of the four tiers of Long-term cooperative credit (LTCC).
- 2. PACS fall within the jurisdiction of state governments.
- 3. There is no uniformity in the software being used by them and they are not interconnected.

## Select the correct answer using the codes given below;

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

#### Answer: B

**Statement 1 is incorrect**: Primary Agricultural Cooperative credit societies (PACS) constitute the lowest tier of the three-tier Short-term cooperative credit(STCC) in the country. The other two tiers are: State Cooperative Banks(StCBs) and District Central Cooperative Banks (DCCBs).

**Statement 2 is correct**: PACS fall within the jurisdiction of state governments.

**Statement 3 is correct**: There is also no uniformity in the software being used by them and they are not interconnected with the DCCBs and StCBs. So, recently the Cabinet Committee on Economic Affairs has approved the Computerization of Primary Agricultural Credit Societies (PACS).

Source: PIB

#### Q.10) Which of the following is/are the application/s of Lithium?

- 1. Rechargeable batteries for mobile phones
- 2. Used in air conditioning and industrial drying systems
- 3. Used in special glasses and glass ceramics

#### Select the correct answer using the codes given below;

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

## **Answer: D**

**Rechargeable Batteries**: Lithium is used in rechargeable batteries for mobile phones, laptops, digital cameras and electric vehicles.

**Alloy making:** Lithium metal is made into alloys with aluminium and magnesium, improving their strength and making them lighter. A magnesium-lithium alloy is used for armour plating. Aluminium-lithium alloys are used in aircraft, bicycle frames and high-speed trains.

**Other uses**: Lithium oxide is used in special glasses and glass ceramics. Lithium chloride is also one of the most hygroscopic materials known, and is used in air conditioning and industrial drying systems (as is lithium bromide).

Source: <u>DTE</u>



#### **PRELIMS**

# Q.1) With reference to Living Lands Charter of Commonwealth Heads of Government Meeting (CHOGM), consider the following statements:

- 1. Under the agreement, all Commonwealth members will be dedicating a living land in their respective countries to future generations.
- 2. The charter is binding in nature.

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

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

#### Answer: a

- **Statement 1 is correct:** All 54 Commonwealth members have agreed to voluntarily dedicate a 'living land' in their respective countries to future generations, in line with the strategy set for the United Nations Decade on Ecosystem Restoration.
- Statement 2 is incorrect: The Living Lands Charter is non-binding in nature.

Source: Article

# Q.2) With reference to the Raising and Accelerating MSME Performance (RAMP) scheme, consider the following statements:

- 1. It is a World Bank assisted Central Sector Scheme, supporting various Covid Resilience and Recovery Interventions.
- 2. The overall monitoring and policy overview of the scheme would be done by NITI Aayog. 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

#### Answer: a

- **Statement 1 is correct:** It is a World Bank assisted Central Sector Scheme, supporting various COVID Resilience and Recovery Interventions of the Ministry of Micro, Small and Medium Enterprises (MoMSME).
- **Statement 2 is incorrect:** The overall monitoring and policy overview of RAMP would be done by an apex National MSME Council.

Source: Article



## Q.3) Which of the following countries are members of both G7 and G20?

- 1. Canada
- 2. Australia
- 3. France

## Select the correct answer from the codes given below:

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

## Answer: d

- **G7 members:** Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.
- **G20 members**: Argentina, Australia, Brazil, Canada, China, Germany, France, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom, the United States and the European Union.

Source: Article

## Q.4) With reference to Biofuels, consider the following statements:

- 1. Biofuels can be solid, liquid or gaseous in nature.
- 2. The first-generation biofuels are made from non-food crops or portions of food crops that are not edible and considered as wastes.

## 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

#### Answer: a

**Statement 1 is correct**: Biofuels may be solid, liquid or gaseous in nature.

- Solid: Wood, dried plant material, and manure
- **Liquid:**Bioethanol and Biodiesel
- Gaseous:Biogas

**Statement 2 is incorrect:** First-generation Biofuels are made from food sources such as sugar, starch, vegetable oil, or animal fats using conventional technology.

 Second-generation Biofuels are produced from non-food crops or portions of food crops that are not edible and considered as wastes. For example: stems, husks, wood chips, and fruit skins and peeling.



## Q.5) With reference to Cobalt, consider the following statements:

- 1. The largest global deposits of Cobalt are in China.
- 2. There is no production of cobalt in the India from primary cobalt resources.

## 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

#### Answer: b

- **Statement 1 is incorrect**: It is found all over the world in countries such as in Australia, Canada, China, Cuba, South Africa, the United States and the Philippines. But 70% of the total supply comes from one country, the Democratic Republic of the Congo (DRC). Also, the world's largest deposit of Cobalt is present in DRC.
- Statement 2 is correct: Presently, there is no production of cobalt in the country from primary cobalt resources. The demand for cobalt is usually met through imports. Refining capacity of cobalt in India is estimated at about 2,060 tonnes per year.

# Q.6) With reference to Business Reforms Action Plan(BRAP), consider the following statements;

- 1. It aims to boost investor confidence, foster a business-friendly climate and augment the Ease of Doing Business.
- 2. It was released by the Department for Promotion of Industry and Internal Trade(DPIIT).

#### Which of the statements given above is/are incorrect?

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

#### Answer: D

**Statement 1 is correct**: The plan aims to boost investor confidence, foster a business-friendly climate and augment the Ease of Doing Business by introducing an element of healthy competition through a system of assessing states based on their performance in the implementation of the Business Reforms Action Plan.

**Statement 2 is correct**: It is released by Department for Promotion of Industry and Internal Trade(DPIIT).

Source: PIB



## Q.7) With reference to Nadaprabhu Kempegowda, consider the following statements;

- 1. He is a 17th-century architect of the Bijapur Sultanate.
- 2. He is credited as the founder of Bengaluru City.

## 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

#### Answer: B

**Statement 1 is incorrect**: He is a 16th-century chieftain of the Vijayanagara empire. **Statement 2 is correct**: He is credited as the founder of Bengaluru City. He also prohibited the custom of amputating the last two fingers of the left hand of unmarried women during "Bandi Devaru".

Source: Indian Express

## Q.8) With reference to Exercise RIMPAC (Rim of the Pacific), consider the following statements;

- 1. It is an annual multilateral Naval Exercises led by China.
- 2. India is one of the participator in RIMPAC.

## 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

#### Answer: B

**Statement 1 is incorrect**: It is one of the largest biennial multilateral Naval Exercises led by the United States(US). It was first conducted in 1971.

**Statement 2 is correct**: 26 countries are participating in the exercise. India is one among these countries.

India for the first time participated in the Exercise RIMPAC in 2014.

Source: PIB

## Q.9) With reference to Vritika Research Internship, consider the following statements;

- 1. It aims to provide necessary knowledge on converting research data into an indexed publication and exposure to processing of research manuscripts for publication.
- 2. Only Masters and PhD (Science Stream) students enrolled in any Indian University or Institution can apply.

## 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

## Answer: C

**Statement 1 is correct**: It aims to provide necessary knowledge on converting research data



into an indexed publication and exposure to processing of research manuscripts from preparation to publication..

**Statement 2 is correct**: Only Masters and PhD (Science Stream) students enrolled in any Indian University or Institution can apply.

Source: PIB

## Q.10) With reference to Abhyas, consider the following statements;

- 1. It is a High-speed Expendable Aerial Target (HEAT) that offers a realistic threat scenario for the practice of weapon systems.
- 2. It is powered by a solid fuel having low endurance flight at hypersonic speed.

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

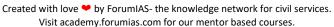
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

## Answer: A

**Statement 1 is correct**: It is a High-speed Expendable Aerial Target (HEAT) that offers a realistic threat scenario for the practice of weapon systems.

**Statement 2 is incorrect**: It is powered by a gas turbine engine to sustain a long endurance flight at subsonic speed.

Source: Indian Express





#### **PRELIMS**

## Q.1) Consider the following statements regarding Single-Use Plastic (SUP) Products:

- 1. Replacing SUPs with biodegradable SUPs will eliminate the possibility of environmental harm.
- 2. SUPs of every thickness have been banned.

#### 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

Statement 1 is incorrect. Replacing SUPs with biodegradable SUPs will not eliminate the problem of microplastics that are now poisoning our food chain and are even being found in our bloodstream.

Statement 2 is incorrect. Plastic carry bags, for instance, will not be banned, they will still be available but the thickness has been regulated to be more than 75 microns till December 31, 2022, and more than 120 microns from December 31, 2022 onward

## Q.2) Consider the following statements regarding Anti-defection law

- 1) An MLA can be disqualified if in any situation he/she gives up the membership of the party on whose symbol he got elected.
- 2) Any nominated member joins any political party before the end of 6 months can be disqualified.

#### 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

Statements 1 and 2 are incorrect.

## **Grounds for Disqualification:**

- a member **voluntarily** giving up membership of the party on whose symbol he got elected (The word voluntary is the key here)
- a member violating a direction (whip) issued by his party to vote in a particular way or to abstain from voting.
- a member who is independently elected joins any party.
- any nominated member joins any political party after the end of 6 months.



## Q.3) Which of the following phenomenons may occur due to loss of sea ice in the Arctic?

- 1. Entry of Large Whales from Southern areas
- 2. Extinction of Polar bears
- 3. Changes in the food chain

## Answer using the codes given below

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

## Ans) c

Options 1 is correct. Melting ice will lead to the entry of the sea animals into the generally inaccessible Artic region.

Option 2 is incorrect. It won't lead to the extinction of Polar bears, as small numbers will be able to survive due to glacier ice.

Option 3 is correct. Due to the entry of animals from the south, changes in the food chain will occur.

## Q.4) Consider the following statements regarding the Environment Protection Act (EPA), 1986

- 1) EPA only imposes monetary penalties for the violation of its provisions
- 2) EPA superseded the Water and Air Act.

## 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

**Statement 1** is incorrect. In case of any non-compliance or contravention of the current provisions of the EPA, or of the rules under this Act, the violator can be punished with imprisonment for up to five years or with a fine up to Rs 1,00,000, or both. if the violation continues beyond a period of one year after the date of conviction, the offender can be punished with imprisonment for a term which may extend to seven years.

**Statement 2** is correct. the EPA, an overarching law that supersedes other environment laws such as the Water and Air Act, which will also be decriminalised.

#### Source

## Q.5) India's largest floating Solar Power Project is located in which of the following state?

- a) Gujarat
- b) Karnataka
- c) Telangana
- d) Tamil Nadu

#### Answer: C

India's largest floating Solar Power Project is now fully operational. NTPC declared Commercial



Operation of the final part capacity of 20 MW out of 100 MW Ramagundam Floating Solar PV Project at Ramagundam, Telangana with effect from July 01, 2022.

Source: PIB

## Q.6) Which of the following is/are considered as small savings instruments?

- 1. Postal Deposits
- 2. Social Security Schemes
- 3. Investment in government bonds

## Select the correct answer using the codes given below;

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

#### Answer: C

Small savings instruments can be classified under three heads:

Postal Deposits (comprising savings account, recurring deposits, time deposits of varying maturities and monthly income scheme).

Savings Certificates: National Small Savings Certificate (NSC) and Kisan Vikas Patra (KVP). Social Security Schemes: Sukanya Samriddhi Scheme, Public Provident Fund (PPF) and Senior Citizens' Savings Scheme (SCSS).

Source: The Hindu

#### Q.7) With reference to Protected Forests, consider the following statements;

- 1. These are the most restricted forests and are constituted by the State Government on any forest land or wasteland.
- 2. Local people are prohibited in protected forests, unless specifically allowed by a Forest Officer in the course of the settlement.

#### 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

#### Answer: D

#### Both the statements are incorrect.

Both the statements explain reserved forest not protected forests.

The State Government is empowered to constitute any land other than reserved forests as protected forests over which the Government has proprietary rights and the power to issue rules regarding the use of such forests.

This power has been used to establish State control over trees, whose timber, fruit or other non-wood products have revenue-raising potential.

Source: <u>Hindustan Times</u>



## Q.8) With reference to Bartholomaeus Ziegenbalg, consider the following statements;

- 1. He was a Danish missionary and he arrived in Tranquebar (Tharangambadi), a tiny Danish colony on the east coast.
- 2. He soon set up a printing press and published studies of the Tamil language and Indian religion and culture.

## 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

## Answer: C

Bartholomaeus Ziegenbalg was born in Saxony in 1682. He was a Danish missionary. In 1706, he arrived in Tranquebar (Tharangambadi), a tiny Danish colony on the east coast, close to Nagapattinam in Tamil Nadu, on the southeast coast of India, as the first Protestant missionaries in that country.

He soon set up a printing press and published studies of the Tamil language and Indian religion and culture. He died in 1719, at age 37.

He left behind a Tamil translation of the Bible, many brief writings in Tamil, two church buildings, the seminary and baptized Christians.

Source: The Hindu

# Q.9) With reference to Partners in Indian Pharmacopoeia, consider the following statements;

- 1. It prescribes the official standards for drugs produced and/or marketed in India.
- 2. The standards of the IP are authoritative and legally enforceable.
- 3. At present, the standards are applicable only within India.

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

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

#### Answer: C

**Statement 1 and 2 is correct**: Indian Pharmacopoeia(IP) is published by the Indian Pharmacopoeia Commission(IPC) on behalf of the Ministry of Health & Family Welfare to fulfill the requirements of the Drugs and Cosmetics Act 1940.

IP prescribes the official standards for drugs produced and/or marketed in India and thus contributes to the control and assurance of the quality of the medicines.

The standards of the IP are authoritative and legally enforceable. It intends to help in the licensing of manufacturing, inspection and distribution of medicines in our country.

**Statement 3 is incorrect**: Currently, four countries – Afghanistan, Ghana, Nepal and Mauritius-have accepted IP as a book of standards in their country.

Source: PIB

