

10 PM Current Affairs Quiz Compilation

4th to 9th July 2022

*THIS IS A MONTHLY DOCUMENT CONTAINING ALL MCQS ASKED IN 10 PM
CURRENT AFFAIRS QUIZ BY FORUMIAS.*

PRELIMS

Q.1) Which of the following pairs is/are matched incorrectly?

| Type of plastic | Description |
|-------------------------------|------------------------------------|
| 1. Polystyrene | Withstands high temperature |
| 2. Polyethylene Terephthalate | Simplest structure of all plastics |
| 3. Polypropylene | Non-recyclable at commercial scale |

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

All the given pairs are matched incorrectly.

| Type | Share | Description |
|------|-------|--|
| PS | 1% | Polystyrene is an inexpensive resin found everywhere: from beverage cups to egg cartons and disposable dinnerware. Environmentally-speaking it's among the worst types of plastic |
| HDPE | 7% | High-Density Polyethylene is an incredibly resistant resin used for grocery bags, milk jugs, recycling bins, among others. They are one of the easiest plastic polymers to recycle |
| PET | 12% | Polyethylene terephthalate is mostly used for food and drinking packaging purposes as it prevents oxygen from spoiling the contents inside. It is the most widely recycled plastic in the world |
| PP | 14% | Polypropylene can withstand high temperatures and are used in tupperwares, car parts, thermal vests, among others |
| LDPE | 31% | Low density polyethylene has the simplest structure of all the plastics, making it easy and cheap to produce. It is used in plastic bags, various containers, and not often recycled |
| MLP | 35% | Multi-layered packaging is made of plastics and other composite layers such as aluminum foil and others. These are used for packaging. They are non-recyclable at a commercial scale |

Source: [Article](#)

Q.2) World Cities Report is released by which of the following organizations?

- a) UN HABITAT
- b) WB
- c) UNESCO
- d) IMF

Answer: a

- United Nations-Habitat (UN-Habitat) releases the World Cities Report.

Source: [Article](#)

Q.3) With reference to the National Investigation Agency (NIA), consider the following statements:

1. The law under which NIA operates also extends to the Indian citizens outside the country.
2. It can probe offences under the Narcotic Drugs and Psychotropic Substances Act that are connected to terror cases.

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 law under which NIA operates extends to the whole of India. It also applies to: 1) Indian citizens outside the country 2) Persons in the service of the government wherever they are posted 3) Persons on ships and aircraft registered in India wherever they may be and 4) Persons who commit a scheduled offence beyond India against the Indian citizen or affecting the interest of India.
- **Statement 2 is correct:** In 2020, the Centre empowered the NIA to also probe offences under the Narcotic Drugs and Psychotropic Substances Act that are connected to terror cases.

Source: [Article](#)

Q.4) Which of the following factors will help in strengthening South west monsoon?

1. Intense heating of Tibetan plateau during summer months.
2. Positive Indian Ocean dipole

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

Answer: c

- **Warming of Tibetan plateau during summer months heats the air above, which then rises and creates an area of low pressure.** That belt of low pressure then attracts the moisture from the oceans, thus initiating the monsoon. The Indian Ocean Dipole (IOD) is defined by the difference in sea surface temperature between two areas (or poles, hence a dipole) – a western pole in the Arabian Sea (western Indian Ocean) and an eastern pole in the eastern Indian Ocean south of Indonesia. During the positive phase of Indian ocean dipole (IOD), sea surface temperatures are warmer in the western Indian Ocean (which gives a boost to monsoon winds) as compared to the eastern Indian Ocean—hence a dipole nature.

Q.5) With reference to Ramsar sites and wetlands, consider the following statements:

1. Indian government's definition of wetland does not include river channels & paddy fields.
2. Every Ramsar Site is a notified protected area under the Wildlife (Protection) Act, 1972.

Which of the statements given above is/are correct?

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

Answer: a

- **Statement 1 is correct:** The Indian government's definition of wetland excludes river channels, paddy fields and other areas where commercial activity takes place. The Wetlands (Conservation and Management) Rules, 2017 notified by the Union Ministry of Environment, Forest and Climate Change define wetlands as "area of marsh, fen, peatland or water; whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters, but does not include river channels, paddy fields, human-made water bodies/ tanks specifically constructed for drinking water purposes and structures specifically constructed for aquaculture, salt production, recreation and irrigation purposes."
- **Statement 2 is incorrect:** Not every Ramsar Site is a notified protected area under the Wildlife (Protection) Act, 1972.

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

1. The Chairman and the Deputy Chairman of the Rajya Sabha are not the members of that House.
2. While the nominated members of the two Houses of the Parliament have no voting right in the presidential election, they have the right to vote in the election of the Vice President.

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 Vice President of India is the ex-officio Chairman of the Rajya Sabha, who presides over its sessions. But he is not the member of that house. However, the Deputy Chairman, who takes care of the day-to-day matters of the House in the absence of the Chairman, is elected from amongst the members of the Rajya Sabha. Thus, Deputy Chairman is the member of the House.

Statement 2 is correct: The Vice President is elected by the elected as well as nominated members of both the Rajya Sabha and the Lok Sabha. But they have no voting rights in Presidential elections

Source: [Indian Express](#)

Q.7) With reference to Kai Chutney, consider the following statements;

1. It is a food item made from neem tree in Kerala.
2. The chutney can enhance vision and eyesight naturally without corrective eyewear among others.

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: Kai Chutney is a food item made from Kai (Red Weaver Ant) in Odisha's Mayurbhanj district.

Statement 2 is correct: The chutney can enhance vision and eyesight naturally without corrective eyewear among others.

Source: [The Hindu](#)

Q.8) With reference to the National Investigation Agency (NIA), consider the following statements;

1. It is a statutory body mandated to investigate offences related to friendly relations with foreign states.
2. It has powers to take cases on suo motu basis.

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: NIA was constituted under the National Investigation Agency(NIA) Act, 2008.

It is a Central Agency mandated to investigate all the offences affecting:

- Sovereignty, security and integrity of India,
- Friendly relations with foreign states,
- Offences under the statutory laws enacted to implement international treaties, agreements, conventions and resolutions of the United Nations, its agencies and other international organizations.

Statement 2 is incorrect: As provided under Section 6 of the Act, State governments can refer the cases pertaining to the scheduled offences registered at any police station to the Central government (Union Home Ministry) for NIA investigation.

- After assessing the details made available, the Centre can then direct the NIA to take over the case. State governments are required to extend all assistance to the NIA.

– Even when the Central government is of the opinion that a scheduled offence has been committed which is required to be investigated under the Act, it may, suo motu, direct the agency to take up/over the probe. (But the agency does not have suo moto powers).

Source: [The Hindu](#)

Q.9) 15-minute city concept, which was seen in news recently, is related to which of the following?

- a) It is a concept where all the satellite towns has to be located in a distance with in 15 minutes from the city.
- b) It is a concept in which the recharging of groundwater aquifers will be carried out in all areas within 15 minutes of distance from the city.
- c) It is a concept in which residents can meet most of their daily needs within a 15-minute journey.
- d) In this concept, parks will be constructed so that within 15 minutes walk all residents have access to any one of them.

Answer: C

“15-minute city concept” was popularized in Paris, Melbourne and other places. It envisages that residents can meet most of their daily needs within a 15-minute journey.

Source: [The Hindu](#)

Q.10) Which of the following is/are the benefit/s of Offshore Wind Energy compared to Onshore wind energy?

- 1. Offshore wind turbines are more efficient compared to onshore ones
- 2. Off shore turbines produce electricity when consumer demand is at its lowest
- 3. Offshore wind farms have a higher capacity utilisation factor (CUF) than onshore wind farms

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: C

Statement 1 is correct: It is proven that offshore wind turbines are more efficient compared to onshore ones. So, fewer offshore turbines are required to produce the same capacity of energy as compared to onshore ones.

Statement 2 is correct: As the offshore wind is stronger during the daytime, so it ensures electricity generation when consumer demand is at its highest. In contrast, wind power on land performs better at night when power consumption is lower.

Statement 3 is correct: Offshore wind farms have a higher capacity utilisation factor (CUF) than onshore wind farms. Therefore, offshore wind power allows for longer operating hours.

Source: [PIB](#)

PRELIMS

Q.1) With reference to Nitrogen and nitrate absorption in plants, consider the following statements:

1. The whole process of nitrate absorption takes place in the roots.
2. Nitrogen is a part of chlorophyll, amino acids and nucleic acids.

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 whole process of nitrate absorption takes place in the roots. Hence, a well-developed root system is needed for this to take place optimally.
- Nitrogen is one of the most important macronutrients needed for the development of a plant. It is a part of chlorophyll, amino acids and nucleic acids, among others. It is mostly sourced from the soil where it is mainly absorbed in the form of nitrates and ammonium by the roots.

Source: [Article](#)

Q.2) Consider the following statements:

1. He is said to have become a sanyasi at the age of 18, and gained a mystical aura among the hill and tribal peoples.
2. He was inspired by the Non-Cooperation Movement, and persuaded people to wear khadi and give up drinking.
3. He asserted that India could be liberated only by the use of force, not non-violence.

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

- a) Alluri Sitharama Raju
- b) Birsa Munda
- c) Veer Narayan Singh
- d) Telanga Kharia

Answer: a

- Prime Minister recently unveiled a 30-foot-tall bronze statue of Alluri Sitharama Raju at Bhimavaram in Andhra Pradesh.
- Raju is believed to have been born in present-day Andhra Pradesh in 1897 or 1898. He is said to have become a sanyasi at the age of 18, and gained a mystical aura among the hill and tribal peoples with his austerity, knowledge of astrology and medicine, and his ability to tame wild animals.
- Raju talked of the greatness of Mahatma Gandhi, said he was inspired by the Non-Cooperation Movement, and persuaded people to wear khadi and give up drinking. But at the same time, he asserted that India could be liberated only by the use of force, not non-violence

Source: [Article](#)

Q.3) State of the Ocean Report is released by which of the following?

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

Answer: c

- The State of the Ocean Report compiles the most up-to-date knowledge on the state of the world's oceans, from pollution to biodiversity, to assist key policy-makers in making informed decisions on ocean protection and sustainable planning.
- It is released by UNESCO

Source: [Article](#)

Q.4) With reference to Mange disease consider the following statements:

1. These are caused by parasitic mites and affect animals such as dogs, camels, foxes.
2. Animal to human transmission of the disease is not known.

Which of these is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 or 2

Answer: a

- **Mange is a disease condition commonly caused by Demodex spp. (a species of mite)**, Sarcoptes scabiei and Otodectes cynotis in India. Mange is a rather generic term used for skin conditions caused by certain species of mites. Recently, Wildlife conservationists have expressed concern after locals spotted a few desert foxes, found in the scrub forests of Rajasthan's Jaisalmer district, suffering from a loss of fur due to the mange skin disease.
- **Transmission to humans:** The two types of mites **that can spread between dogs and humans** are known as sarcoptic mites and demodectic mites. Occasionally, these mites can be transmitted between a pet and the owner.
- **Treatment:** There are **a wide range of therapeutic options** involving allopathic, homeopathic, and herbal formulations for topical, parenteral and oral administration available. However, a complete cure is not easily achieved, and relapses are common.

Q.5) With reference to Hubble Space Telescope, consider the following statements:

1. Hubble currently sits at the Earth-Sun L2 Lagrange point.
2. While Hubble can see the equivalent of toddler galaxies, the James Webb Space Telescope will be able to see baby 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: b

- **Statement 1 is incorrect:** Hubble orbits the Earth at an altitude of ~570 km. Webb will not orbit the Earth, instead it will sit at the Earth-Sun L2 Lagrange point, 1.5 million km away
- **Statement 2 is correct:** Hubble can see the equivalent of “toddler galaxies”, On the other hand, Webb will be able to see “baby galaxies”. This is because Webb is an infrared telescope, and can see distant objects which are very dim at visible wavelengths of light.

Q.6) With reference to Weaver Ants, consider the following statements;

1. The nests of weaver ants are strong enough to withstand wind and are impermeable to water.
2. They are recognized as biological control agents in tropical crops as they are able to protect a variety of crops.

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: Kai (Red Weaver Ant) Ants, scientifically called *Oecophylla smaragdina*, are abundantly found in Mayurbhanj throughout the year.

They construct nests with leaves of host trees. The nests are strong enough to withstand wind and are impermeable to water.

Statement 2 is correct: Due to their predatory habit, Kais are recognized as biological control agents in tropical crops as they are able to protect a variety of crops against many different insect pests. In this way, they are utilized indirectly as an alternative to the chemical insecticides.

Source: [The Hindu](#)

Q.7) With reference to SPADEX, consider the following statements;

1. It is an experiment by ISRO to monitor and destroy space debris.
2. It can increase the longevity of a mission and provide a futuristic option to combine missions/experiments.

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: ISRO is developing a docking experiment to provide in-orbit servicing named SPADEX. It looks at docking a satellite on an existing satellite, offering support in re-fuelling and other in-orbit services while enhancing the capability of a satellite.

Statement 2 is correct: It can increase the longevity of a mission and provide a futuristic option to combine missions/experiments.

Source: [The Hindu](#)

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

1. It is endemic to the Agasthyamala Biosphere Reserve.
2. It is a Fern species that is more resilient to climate change

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: Chenkuringi tree is endemic to the Agasthyamala Biosphere Reserve.

Statement 2 is incorrect: Chenkuringi (*Gluta travancorica*) is a species of plant in the family Anacardiaceae. Chenkuringi is very susceptible to climate change and the present condition of the species is quite bad with low regeneration performance.

Source: [The Hindu](#)

Q.9) Which of the following country/organization has recently launched a “Plan for Space Sustainability”?

- a) United Nations Committee on the Peaceful Uses of Outer Space (COPUOS)
- b) The US
- c) United Nations Office for Outer Space Affairs (UNOOSA)
- d) The UK

Answer: D

The U.K. hosted the fourth summit for Space Sustainability in London in collaboration with the Secure World Foundation. During the summit, the UK launched a new 'Plan for Space Sustainability'.

The plan aims to

-Set a global commercial framework for the insurability, licensing and regulation of commercial satellites.

-Reduce the cost for those who comply with the best sustainability standards and thus encourage a thriving ecosystem for the industry.

Source: [The Hindu](#)

Q.10) With reference to Cash and digital transactions, consider the following statements;

1. The volume of UPI transactions rose over threefold in the last two years.
2. The per capita cash holding reduced in India in the last two years.

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 the last two years, the volume of UPI transactions rose over threefold to 46 billion in 2021-22.

Statement 2 is incorrect: The per capita cash holding increased in India in the last two years. Present India's cash holding is one of the highest in the world in relation to GDP. For instance, India's currency per capita of Rs 22,752 is about 13% of per capita GDP. Currency in Circulation (CiC) as a proportion of GDP has also grown from 8.7% in 2016-17 to 13.7% in 2021-22.

Source: [Times of India](https://timesofindia.indiatimes.com/india/currency-per-capita-gdp-in-india/articleshow/8944447.cms)

PRELIMS

Q.1) Uzbekistan share its border with which of the following countries?

1. Kazakhstan
2. Turkmenistan
3. Afghanistan

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

Uzbekistan shares its border with:

- a. Kazakhstan, Kyrgyzstan, Tajikistan, Afghanistan, Turkmenistan

Source: [Article](#)

Q.2) With reference to the Foreign Portfolio Investors (FPIs), consider the following statements:

1. Foreign Portfolio Investment is often referred to as hot money.
2. A sell-off by FPIs in India will lead the appreciation of the rupee.

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:** Foreign Portfolio Investment is often referred to as hot money because of its tendency to flee at the first signs of trouble in an economy.
- **Statement 2 is incorrect:** Sell-off by FPIs lead to a decline in the value of local currency.

Source: [Article](#)

Q.3) Pederin sometimes seen in news is a?

- a) Ballistic Missile
- b) Surveillance software
- c) Insect Toxin
- d) Underwater Drill Bot

Answer: c

- It is an insect toxin released by Nairobi flies.
- It can cause irritation if it comes in contact with the skin, leading to lesions or unusual marks or colouring on the skin.

Source: [Article](#)

Q.4) Consider the following statements:

1. He was a polyglot.
2. Rabindranath Tagore called him a Bharatpathik.
3. He assisted Alexander Duff to set up the General Assembly's Institution, which later became the Scottish Church College.

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

- a) Ishwar Chandra Vidyasagar
- b) Raja Ram Mohan Roy
- c) Swami Dayanand Saraswati
- d) Jyotiba Phule

Answer: b

- b. A **polyglot**, Roy knew Bengali and Persian, but also Arabic, Sanskrit, and later, English. His exposure to the literature and culture of each of these languages bred in him a **scepticism towards religious dogmas and social strictures**. For instance: practices such as Sati.
- c. Rabindranath Tagore called him a '**Bharatpathik**' by which he meant to say that Rammohun combined in his person the underlying spirit of Indic civilisation, its spirit of pluralism, tolerance and a cosmic respect for all forms of life," says historian Amiya P Sen.
- d. In 1817, he collaborated with Scottish philanthropist David Hare to set up the **Hindu College**(now, Presidency University).
 - o He followed it up with the **Anglo-Hindu School** in 1822 and, in 1830, assisted Alexander Duff to set up the General Assembly's Institution, which later became the **Scottish Church College**.

Q.5) The relationship between a reef-building coral and zooxanthellae can be characterized under which of the following categories?

- a) Amensalism
- b) Commensalism
- c) Mutualism
- d) Competition

Answer: c

- e. Shallow water, reef-building corals have a symbiotic relationship with photosynthetic algae called zooxanthellae, which live in their tissues. The coral provides a protected environment and the compounds zooxanthellae need for photosynthesis. In return, the algae produce carbohydrates that the coral uses for food, as well as oxygen. The algae also help the coral remove waste. Since both partners benefit from association, this type of symbiosis is called mutualism.

Q.6) With reference to Large Hadron Collider(LHC), consider the following statements;

1. ATLAS is the largest general-purpose particle detector experiment at the LHC.
2. It is a 50-km-long track-loop located in the UK.

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: ATLAS is the largest general-purpose particle detector experiment at the LHC.

The Compact Muon Solenoid(CMS) experiment is one of the largest international scientific collaborations in history with the same goals as ATLAS but which uses a different magnet-system design.

Statement 2 is incorrect: It is a 27-km-long track-loop buried 100 meters underground on the Swiss-French border.

Source: [Indian Express](#)

Q.7) Consider the following pairs,

Countries - Infrastructure projects

1. Sri Lanka - Hambantota Port
2. Nepal - Trans-Himalayan rail road
3. Afghanistan - Sinamale bridge

How many pairs given above are correctly matched?

- a) Only one pair
- b) Only two pairs
- c) All three pairs
- d) None of the above

Answer: B

Countries - Infrastructure projects

1. Sri Lanka - Hambantota Port
2. Nepal - Trans-Himalayan rail road
3. Maldives - Sinamale bridge

Source: [The Hindu](#)

Q.8) With reference to Nairobi Flies, consider the following statements;

1. They are small, beetle-like insects that thrive in areas with high rainfall.
2. These flies do not bite, but if disturbed while sitting on anyone's skin, they release a potent acidic substance.

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: They are small, beetle-like insects that belong to two species, *Paederus eximius* and *Paederus sabaeus*.

They are orange and black in color and thrive in areas with high rainfall.

Statement 2 is correct: These flies do not bite, but if disturbed while sitting on anyone's skin, they release a potent acidic substance called pederin.

This substance can cause irritation if it comes in contact with the skin, leading to lesions or unusual marks or colouring on the skin. The skin begins to heal in a week or two, but some secondary infections can occur, especially if the victim scratches the irritated skin.

Source: [Indian Express](#)

Q.9) With reference to the State Ranking Index for National Food Security Act, consider the following statements;

1. The Index reflect the level of hunger, malnutrition in a particular state or union territory.
2. It was released by the Ministry of Consumer Affairs, Food & Public Distribution.

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 Index denotes only the efficiency of Targeted Public Distribution System (TPDS) operations. It does not reflect the level of hunger, if any or malnutrition, or both, in a particular state or union territory.

Statement 2 is correct: It is released by Ministry of Consumer Affairs, Food & Public Distribution.

Source: [PIB](#)

Q.10) With reference to Banni Grasslands, consider the following statements;

1. Two ecosystems, wetlands and grasslands are juxtaposed in Banni.
2. It is a high-altitude alpine grassland located in Uttarakhand.

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 situated near the Great Rann of Kutch in Gujarat.

Source: [Indian Express](#)

PRELIMS

Q.1) Which of the following are categorised as critical minerals?

1. Graphite
2. Lithium
3. Cobalt

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: d

- Critical minerals are elements that are the building blocks of essential modern-day technologies, and are at risk of supply chain disruptions. These minerals are now used everywhere from making mobile phones, computers to batteries, electric vehicles and green technologies like solar panels and wind turbines. Based on their individual needs and strategic considerations, different countries create their own lists.
- However, such lists mostly include graphite, lithium and cobalt, which are used for making EV batteries; rare earths that are used for making magnets and silicon which is a key mineral for making computer chips and solar panels. Aerospace, communications and defence industries also rely on several such minerals as they are used in manufacturing fighter jets, drones, radio sets and other critical equipment.

Source: [Article](#)

Q.2) Lumen Database sometimes in news is associated with which of the following?

- a) Legal complaints for removal of online materials
- b) Registration of Galaxies and Near-Earth Objects
- c) Markers for healthy eyesight across various tribes
- d) Records of international criminals pending extradition

Answer: a

- The Lumen database collects and analyzes legal complaints and requests for removal of online materials, helping Internet users to know their rights and understand the law.

Source: [Article](#)

Q.3) With reference to Varroa destructor, consider the following statements:

1. It is a parasitic insect.
2. It attacks and feeds on the honeybee population.

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 Varroa mite, or Varroa destructor, is a parasitic insect that attacks and feeds on honeybees. Reddish-brown in colour, the tiny pests are known to kill entire colonies of honeybees.
- They often travel from bee to bee and also via beekeeping equipment, such as combs that have been extracted.

Source: [Article](#)

Q.4) With reference to Cage aquaculture, consider the following statements:

1. Only fishes are grown in this process.
2. This type of aqua culture reduces water pollution as well as eutrophication.

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:** Cage aquaculture involves the growing of fishes in existing water resources while being enclosed in a net cage which allows free flow of water.
- **Statement 2 is incorrect:** In cage aquaculture, accumulation of unused feed and excreta will lead to water pollution as well as eutrophication

Q.5) With reference to the International Telecommunication Union (ITU), consider the following statements:

1. It is an intergovernmental organisation which facilitates international connectivity in communications networks.
2. It allocates satellite orbits.

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

- **The International Telecommunication Union (ITU) is the United Nations specialized agency for information and communication technologies – ICTs.** Founded in 1865 to facilitate international connectivity in communications networks.
- It allocates global radio spectrum and satellite orbits, develop the technical standards that ensure networks and technologies seamlessly interconnect, and strive to improve access to ICTs to underserved communities worldwide.

Q.6) Which of the following is/are the advantage/s of Sodium-Ion Batteries?

1. Sodium-Ion Batteries are cheaper than Lithium-ion batteries.
2. Offer better performance in narrow temperature range.
3. Sodium-Ion batteries are non-Inflammable.

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: C

The advantages of sodium-ion batteries are,

Abundant Availability: Sodium is the seventh most abundant element in the world and in comparison to lithium, it is available 1200 times more.

Cheaper: Affordable Sodium's abundance makes this material much cheaper than lithium. The element costs less to extract and purify compared to lithium. Sodium-ion battery cells can be manufactured with ample metals such as iron and manganese.

Note: Lithium-ion batteries require cobalt, which is limited in reserve and distributed across the world in an uneven manner.

Better Performance at Colder Temperatures: Sodium-ion batteries offer better performance and can operate at a wider temperature range. They work much more efficiently in cold environments, compared to lithium-ion batteries.

Non-Inflammable: Another advantage of sodium-ion batteries over lithium-ion batteries is they are nonflammable and there is no thermal runaway. This means the risk of the battery catching fire is less.

Can be Easily discharged: Sodium-ion batteries can be totally discharged to zero volts, similar to a capacitor, making it a safer option in comparison to many other storage technologies.

Lightweight: Sodium-ion batteries are lightweight compared to lithium-ion batteries.

Simple disposal strategies: The simple disposal strategies of Na-ion-based batteries can help in addressing the climate mitigation issue.

Source: [PIB](#)

Q.7) With reference to Higgs Boson, consider the following statements;

1. It is the fundamental particle associated with the Higgs field.
2. Higgs Boson has the longest life span among all elementary particles.

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 Higgs boson, also known as the God Particle, is the fundamental particle associated with the Higgs field, a field that gives mass to other fundamental particles such as electrons and quarks.

Statement 2 is incorrect: Higgs Boson has a short lifespan. Once it is created during the particle collisions, it sticks around for merely less than a trillionth of a billionth of a second or, more precisely, 1.6×10^{-22} seconds.

Source: [DTE](#)

Q.8) Which of the following is/are considered as intermediary under Section 2(w) of the IT Act?

1. Online payment sites
2. Cyber cafes
3. Telecom service providers

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

According to the definition under Section 2(w) of the IT Act, an intermediary includes telecom service providers, network service providers, internet service providers, web-hosting service providers, search engines, online payment sites, online auction sites, online marketplaces, cyber cafes etc.

Source: [Indian Express](#)

Q.9) Which of the following places is also called Adivasi Jallianwala?

- a) Chittagong hill tracts
- b) Mangarh Hillock
- c) Chota Nagpur
- d) East Godavari region

Answer: B

Mangarh Hillock is located in Banswara District, Rajasthan. It is situated in the Aravali mountains on the Rajasthan-Gujarat border.

It is a site of a tribal uprising where a massacre of over 1500 Bhil tribal freedom fighters took place in 1913. Hence, this place is also known as the Adivasi Jallianwala.

Source: [PIB](#)

Q.10) With reference to Directorate General of Civil Aviation (DGCA), consider the following statements;

1. It is an attached office of the Ministry of Civil Aviation.
2. DGCA is responsible for regulation of air transport services to/from/within 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: C

Statement 1 is correct: Directorate General of Civil Aviation is an attached office of the Ministry of Civil Aviation. It is the regulatory body in the field of Civil Aviation primarily dealing with safety issues.

Statement 2 is correct: DGCA is responsible for (a) regulation of air transport services to/from/within India (b) enforcement of civil air regulations (c) air safety (d) airworthiness standards and (e) co-ordinates all regulatory functions with International Civil Aviation Organization.

Source: [Times of India](#)

PRELIMS

Q.1) Consider the following statements regarding the Environment Protection Act (EPA), 1986

1. There is no provision of imprisonment in EPA, for violations of environmental laws.
2. The act was enacted to implement India's commitment under Stockholm conference, 1972.

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 up to five years or with a fine up to Rs 1,00,000, or with both.

Statement 2 is correct. The Act of 1986 was enacted under Article 253[1] of Indian Constitution, for implementation of the decisions at *United Nations Conference on Human Environment at Stockholm* in 1972 in order to provide for progressive policy for protection of ecosystem and ecology.

[Source](#)

Q.2) Justice Rohini Commission has been constituted to report on which one of the following issues?

- a) Sub-categorisation of OBCs
- b) Determination of issue of MSP
- c) Service Charge issue of restaurants
- d) Police reforms

Ans) a

Explanations

The Centre extended the tenure of The Commission to Examine Sub-categorisation of Other Backward Classes (OBCs) headed by Justice G Rohini, former Chief Justice of Delhi High Court. The Commission, constituted nearly five years ago, has got 10 extensions so far, and now has until January 31 next year to submit its report.

[Source](#)

Q.3) Recently approved draft GSR (general statutory rules) Notification, is intended to fulfil, which of the following purposes?

1. To assess crash safety of a vehicle
2. To increase exports of Indian vehicles
3. To assess the pollution level of a vehicle

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

Options 1 and 2 are correct. Union Minister for Road, Transport and Highways Nitin Gadkari approved a Draft GSR (general statutory rules) Notification seeking comments on a proposal to introduce the Bharat New Car Assessment Program (Bharat-NCAP). It would accord vehicles a star rating based on their performance in crash tests. They are intended to increase the export-worthiness of vehicles and competition on safety parameters among manufacturers, as well as instill consumer confidence in their safety.

Option 3 is incorrect. There is no such proposal in the given proposal.

[Source](#)

Q.4) Which of the following steps will help in increasing the Rupee value?

1. Boosting foreign exchange inflows
2. Trade Deficit
3. Increase in foreign borrowings by Indian firms

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

Boosting foreign exchange inflow will increase the supply of foreign currency into India and in turn will reduce the value of foreign currency vis-a-vis Rupee. The Rupee value will increase.

Trade deficit will increase the outflow of foreign currency for the payment of deficit. It will reduce the amount of foreign currencies in India and in turn will reduce the value of Rupee.

Increase in foreign borrowings by Indian firms will increase the availability of foreign currency in India for the time being.

[Source](#)

Q.5) Which of the following Education program of India is funded by the World Bank?

- a) Scheme for Infrastructure Development in Minority Institutes (IDMI)
- b) Strengthening Teaching-Learning and Results for States Program (STARS)
- c) Unnat Bharat Abhiyan
- d) Strengthening for providing quality Education in Madrassas (SPQEM)

Ans) b

The Government of India and the World Bank signed a \$500 million Strengthening Teaching-Learning and Results for States Program (STARS) to improve the quality and governance of school education in six Indian states - Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Odisha, and Rajasthan.

Source: [Source](#)

Q.6) With reference to Dragon fruit, consider the following statements;

- 1. Dragon Fruit grows in all kinds of soil, and does not require much water.
- 2. The fruit is considered to be one of the tropical superfoods due to its nutrient richness.

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: Dragon Fruit grows in all kinds of soil, and does not require much water. The plant doesn't need productive land as it can give maximum production from non-productive, less fertile areas also.

Statement 2 is correct: Dragon fruit is considered to be one of the tropical superfoods due to its nutrient richness. It is rich in nutrients and low in calories. It is believed to help in the control of chronic illnesses, improve the health of the alimentary canal and boost the body's immunity.

Source: [Indian Express](#)

Q.7) Consider the following statements;

- 1. His guru honoured him with the coveted title "Em-perum- anar" you are ahead of us.
- 2. He established Yathiraj Math of Yadugiri.
- 3. He is believed to be the first Hindu acharya to initiate women into 'sanyasa'.

Which of the following personality is described in the statements above?

- a) Thyagaraja
- b) Ramanujacharya
- c) Annamacharya
- d) Bhaktha Ramdas

Answer: B

Source: [PIB](#)

Q.8) Which of the following statements clearly explains the Business Blasters programme?

- a) The programme provides concession loans to entrepreneurs from Scheduled Castes (SCs) and Scheduled Tribes (STs).
- b) It is a programme which makes school students float their business ideas and facilitates them to create their own business ventures.
- c) The programme provides open access to business platforms for selected entrepreneurs to make them explore business plans.
- d) The programme aims to create 100 more unicorns in India, especially in the fintech sector.

Answer: B

The Business Blasters programme is part of the Entrepreneurship Mindset curriculum in Delhi government schools. Under this, School students who pitched business ideas and floated their own business venture will be provided with a meagre government grant of Rs 1000 per student as well as a platform to implement these ideas.

These kinds of programs can help in inculcating the values of innovation and research among young students thus helping them provide quality education, encourage entrepreneurship, and in the overall development of the country.

Previously, Delhi government had introduced Happiness Curriculum (2018) and Deshabhakthi Syllabi (2020-2021)

Source: [TOI](#)

Q.9) With reference to Direct Seeded Rice (DSR), consider the following statements;

- 1. There is no nursery preparation or transplantation involved in this method.
- 2. The crop can survive high temperatures and deficient rainfall.
- 3. This method provides farmers more time for management of paddy straw.

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: Direct Seeded Rice(DSR), also known as the 'broadcasting seed technique,' is a water-saving method of sowing paddy. There is no nursery preparation or transplantation involved in this method.

Statement 2 is incorrect: Farmers were hesitant to choose DSR because their wheat crops had already suffered due to high temperatures and deficient rainfall.

Statement 3 is correct: DSR crops matures 7-10 days earlier than the puddle transplanted crop, therefore giving more time for management of paddy straw.

Source: [DTE](#)

Q.10) With reference to Bharat New Car Assessment Program (Bharat-NCAP), consider the following statements;

1. The program will assess Adult Occupant Protection (AOP), Child Occupant Protection (COP) and Safety Assist Technologies (SAT).
2. The assessment is mandatory for all original equipment manufacturers.

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: Bharat NCAP would assign vehicles between one and five stars on parameters such as Adult Occupant Protection (AOP), Child Occupant Protection (COP) and Safety Assist Technologies (SAT).

Statement 2 is incorrect: The grading system is not mandatory for all OEMs. But there are suggestions to make it mandatory, so that the choice is entirely left to the customer.

Source: [The Hindu](#)

PRELIMS

Q.1) Consider the following statements regarding Forest Landscape Restoration:

1. It aims at regaining ecological functionality of the forest as well as improving human welfare by it.
2. The process focuses on introducing the best tree plants from around the world to make the existing forest better.

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. FLR is the process of **regaining ecological functionality and improving human welfare** on deforested or degraded forest landscapes.

Statement 2 is incorrect. This process ensures the diversity of the native tree species during plantation. As diversity results in more efficient carbon sequestering than monoculture tree plantations.

Q.2) Which of the following benefits of reforestation is correct?

1. Forests absorb carbon dioxide
2. Forests absorb volatile organic compounds (VOCs)
3. Forests lessens rural-to-urban migration

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

Statement 1 is correct. Influencing the carbon cycle and mitigating the effects of climate change. Annually, forests absorb roughly 2.6 billion tonnes of carbon dioxide. It is 33% of the total CO₂ released due to fossil fuel burning.

Statement 2 is incorrect. Trees and other plants produce hundreds to thousands of volatile organic compounds (VOCs). These carbon-based chemicals easily evaporate from a liquid or solid into air at much lower temperatures than most chemicals.

Statement 3 is correct. Agroforestry lessens rural-to-urban migration by increasing resources and household income.

Q.3) Consider the following statements:

1. Only the Supreme Court can decide the matter of recognition of the party symbols in case of dispute between different factions of a party.
2. Election Commission deals with the elections to Parliament, state legislatures, and for the offices of President and Vice-President.

Which of the statements given above is/are correct?

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

Ans) b

Statement 1 is incorrect. As per the SC judgment Paragraph 15, gives the Election Commission power to settle such disputes pertaining to symbols between factions of a party. It is entirely legal, because this power accrues from Article 324 that creates the Commission and vests in it the power of superintendence over elections.

Statement 2 is correct. Article 324 of the Constitution provides that the superintendence, direction and control of elections is vested in the Election Commission (henceforth Commission). Such elections would include those to Parliament, state legislatures, and for the offices of President and Vice-President.

Q.4) Consider the following statements regarding 'Monuments of National Importance (MNI)'

1. They can be declared by the approval of Parliament only.
2. The monument or archaeological site should not be less than 100 years old, to be declared MNI.
3. There are more than 3000 monuments of national importance in India.

Which of the above statements is/are correct?

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

Ans) b

Statement 1 is incorrect. A monument or a site is declared to be of National Importance by the Archaeological Survey of India.

Statement 2 is correct. The monument or archaeological site should not be less than 100 years old.

Statement 3 is correct. There are at present more than 3650 ancient monuments and archaeological sites and remains of national importance.

Q.5) Consider the following statements

1. Private sector accounts for majority of defence exports from India.
2. US is the biggest customer of India's defence exports.

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. The private sector accounted for 70% of the defence exports, while public sector firms accounted for the rest.

Statement 2 is correct. the country's defence exports for 2021-22 were Rs 13,000 crore, the highest portion of exports going to the US.

[Source](#)

Q.6) Which of the following is the striking feature of INS Tarkash?

- a) Aircraft carrying capacity
- b) Capacity to dive in deeper ocean
- c) Nuclear weapons
- d) Stealth features

Ans) d

INS *Tarkash* is a state-of-the-art **stealth frigate** of the Indian Navy. The ship incorporates the latest stealth features such as reduced radar, infra-red, acoustic, and magnetic signatures, thus making it difficult to detect at sea.

[Source](#)

Q.7) LiFE (Lifestyle for the Environment) Movement was introduced in which of the following events?

- a) 26th United Nations Climate Change Conference of the Parties (COP26)
- b) Rotterdam Convention
- c) Earth summit
- d) Conference on the Protection of the Ozone Layer, Vienna

Ans) a

The idea of LiFE was introduced by the Prime Minister during the 26th United Nations Climate Change Conference of the Parties (COP26) in Glasgow in 2021.

Aim: To promote an environment-conscious lifestyle that focuses on 'mindful and deliberate utilization' instead of 'mindless and destructive consumption'.

[Source](#)

Q.8) Consider the following statements regarding India's Cooling Action Plan

1. It provides a 100-year road map (2018 to 2038) to address the cooling requirements
2. Plan has a provision to fulfill the commitments under Montreal Protocol.

Which of the statements given above is/are correct?

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

Ans) b

Statement 1 is incorrect. The Union environment ministry on Friday announced the India Cooling Action Plan—a 20 year road map (2018 to 2038) to address the cooling requirements for all sectors such as buildings, cold chain, transport and refrigeration.

Statement 2 is correct. In line with Montreal Protocol, the plan emphasis on cutting those elements that deplete ozone layer.