

## *10 PM Current Affairs Quiz Compilation*

**July, 2022**

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.



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– 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?**

- It is a concept where all the satellite towns has to be located in a distance with in 15 minutes from the city.
- 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.
- It is a concept in which residents can meet most of their daily needs within a 15-minute journey.
- 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?**

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

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

- 1 only
- 2 and 3 only
- 1 and 3 only
- 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**

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**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**



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- **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.

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**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](#)

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**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](#)

**PRELIMS**

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**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](#)

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**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**

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**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**



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- **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](#)

## 10 PM Compilation for the Month of July, 2022

**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,  $1.6 \times 10^{-22}$  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**

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**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](#)

**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](#)

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**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**

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**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 CO<sub>2</sub> 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.

**PRELIMS**

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**Q.1) 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.

**Q.2) Which of the following will increase the liability of the government?**

Capital expenditure

Salaries of employees

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.3) 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.

**Q.4) 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.

**Q.5) Which of the following statements correctly 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: [Indian Express](#)

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

- 1. These are thunderstorms that have a higher level of rotation than the TORNADOS.
- 2. They mostly occur across central and eastern parts of the United States.

**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:** A derecho is a widespread, long-lived, straight-line windstorm that is associated with a band of rapidly moving showers or thunderstorms.

Straight-line storms are those in which thunderstorm winds have no rotation, unlike a tornado. These storms travel hundreds of miles and cover a vast area.

**Statement 2 is correct:** They mostly occur across central and eastern parts of the United States. However, Derechos have also been documented elsewhere across the world such as in Germany, and Russia.

Source: [Economic Times](#)

**Q.7) ARYABHAT-1, was seen in news recently, is related to which of the following?**

- a) It is an Indian satellite that aims to study the solar system.
- b) It is a new supercomputer that has the capacity of 50 petaflops.
- c) It is a chipset that will allow Artificial Intelligence and Machine Learning apps to perform much better and faster.
- d) It is a new aerosol that aims to reduce the population of mosquitoes in specific areas.

**Answer: C**

ARYABHAT-1 stands for Analog Reconfigurable Technology and Bias-scalable Hardware for AI Tasks.

**Purpose:** It is an analog chipset that will allow Artificial Intelligence and Machine Learning apps to perform much better and faster.



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**Uses:** This chipset is especially helpful for AI-based applications which deal with object or speech recognition systems, like Alexa or Siri. They are also very useful in operations that require massive parallel computing at high speeds.

Source: [Firstpost](#)

**Q.8) With reference to INS Vikrant, consider the following statements;**

1. The aircraft is a type of short take-off but arrested landing
2. Currently, the Indian Navy does not operate any aircraft carrier.

**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 ship can operate a mix of aircrafts like Russian MiG-29K/KUB fighters, Kamov-31 helicopters and a new fleet of Sikorsky MH-60R Seahawk multi-role helicopters.

**Type of Aircraft Carrier:** STOVAR (short take-off but arrested landing)

**Statement 2 is incorrect:** Currently, the Indian Navy operates a single aircraft carrier, INS Vikramaditya, which was bought from Russia. After Induction of INS Vikrant, the Indian Navy is planning a second indigenous aircraft carrier (IAC-2). It is believed that the IAC-2 will be named INS Vishal.

Source: [Business Standard](#)

**Q.9) Which of the following factor/s is/are responsible for cloud bursts?**

1. High temperature
2. Slow winds in the region
3. High cloud cover

**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**

A cloudburst refers to an extreme amount of rain that happens in a short period, sometimes accompanied by hail and thunder.

**Conditions during Cloudburst:** The relative humidity and cloud cover are at the maximum level with low temperature and slow winds because of which a high amount of clouds may get condensed at a very rapid rate and result in a cloudburst.

Source: [Indian Express](#)

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**Q.10) With reference to Mission Vatsalya, consider the following statements;**

1. The Mission will execute a 24×7 helpline service for children as defined under Juvenile Justice Act, 2015.
2. The Mission will promote in-country adoption and regulating inter-country adoption.

**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 Mission in partnership with states and districts will execute a 24×7 helpline service for children as defined under Juvenile Justice Act, 2015.

**Statement 2 is incorrect:** It will support State Adoption Resource Agencies (SARA), which will further support the Central Adoption Resource Authority (CARA) in promoting in-country adoption and regulating inter-country adoption.

Source: [PIB](#)

**PRELIMS**

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**Q.1) With reference to Marburg virus disease, consider the following statements:**

1. Marburg and Ebola virus diseases are clinically similar to each other.
2. It is a zoonotic 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**

Both statements are correct.

- Marburg and Ebola viruses are both members of the Filoviridae family (filovirus). Though caused by different viruses, the two diseases are clinically similar. Both diseases are rare and have the capacity to cause outbreaks with high fatality rates.
- MVD is caused by the Marburg virus, a genetically unique zoonotic (or, animal-borne) RNA virus of the filovirus family.

**Source:** [Article](#)

**Q.2) With reference to Consumer Protection framework in India, consider the following statements:**

1. Hotels and restaurants can restrict entry or services to consumers based on the collection of service charges.
2. Central Consumer Protection Authority (CCPA) is empowered to recall unsafe goods and 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: b**

- **Statement 1 is incorrect:** As per the new guidelines, hotels or restaurants are prohibited from levying extra charges automatically or by default in the bill or by any other name. Also, they are not allowed to force service charges, and must clearly inform the consumers that service charges are voluntary, optional, and at their discretion. Most importantly, hotels and restaurants are no longer allowed to restrict entry or services based on the collection of service charges. Furthermore, hotels cannot add service charges to their bills and charge GST on the total.
- **Statement 2 is correct:** CCPA is empowered to order the recall of unsafe goods and services, discontinuation of unfair trade practices and misleading advertisements.

**Source:** [Article](#)

**Q.3) With reference to Natural Gas, consider the following statements:**

1. The largest component of natural gas is methane.
2. The volume of natural gas in its liquid state is smaller than its volume in its gaseous state.

**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:** Natural gas is a fossil energy source that formed deep beneath the earth's surface. Natural gas contains different compounds. The largest component of natural gas is **methane**, a compound with one carbon atom and four hydrogen atoms (CH<sub>4</sub>)
- **Statement 2 is correct:** The volume of natural gas in its liquid state is about 600 times smaller than its volume in its gaseous state. This process makes it possible to transport natural gas to places where pipelines do not reach.

**Q.4) With reference to the Southwest Monsoon, consider the following statements;**

1. The onset of southwest monsoon is announced by Kerala Government.
2. Southwest monsoon season brings more than 70 per cent of the country's annual rainfall.

**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 onset of southwest monsoon is announced by IMD, after the following parameters are met, **Rainfall:** At least 60% of 14 designated meteorological stations in Kerala and Lakshadweep record at least 2.5 mm of rain for two consecutive days at any time after May 10. **Wind field:** The depth of westerlies should be up to 600 hectopascal (1 hPa is equal to 1 millibar of pressure) in the area bound by the equator to 10°N latitude, and from longitude 55°E to 80°E. **Heat:** Outgoing Longwave Radiation (OLR) value (a measure of the energy emitted to space by the Earth's surface, oceans, and atmosphere) should be below 200 watt per sq m (wm<sup>2</sup>) in the box confined by 5-10°N latitude and 70-75°E latitude.
- **Statement 2 is correct:** Southwest monsoon season over India, which brings more than 70 per cent of the country's annual rainfall.

**Q.5) The LUX-ZEPLIN experiment sometimes seen in news is associated with which of the following?**

- a) Dark matter
- b) Near Earth Objects
- c) Quasars
- d) Black Holes

**Answer: a**

- Many physicists strongly believe that the entire visible part of the universe forms only 5% of all matter in it. They believe the rest is made up of dark matter and dark energy. Once this was convincingly demonstrated through various indirect observations and calculations, experiments started being set up to hunt for these elusive particles.
- The latest to hit the news in the field of dark matter is a dark matter detector experiment named LUX-ZEPLIN (LZ) in South Dakota in the U.S. As of today, this is the most sensitive dark matter detector in the world. To give an idea of the degree of difficulty in measuring evidence of a dark particle, it is said that the chamber of this LZ detector, can contain only one gram of dust if it is to detect a dark matter particle.

Source: [Article](#)

**Q.6) World Population Prospects (WPP) Report was released by which of the following organization?**

- a) Asian Forum of Parliamentarians on Population and Development
- b) Partners in Population and Development
- c) United Nations Population Division
- d) Demographic responsible

**Answer: C**

The United Nations Population Division (UNPD) has released the World Population Prospects(WPP) Report 2022. These projections show that India will become the most populous country in 2023, earlier than the year 2027, as expected.

Source: [Indian Express](#)

**Q.7) Which of the following statement is not correct about National Emblem?**

- a) The National Emblem is an adaptation from the Sarnath Lion Capital of Ashoka which is preserved in the Sarnath Museum.
- b) The emblem of India was adopted on January 26, 1950 - the same day when the constitution of India came into force.
- c) The frieze of the abacus has sculptures of Tiger, Cow, horse and elephant.
- d) The words 'Satyameva Jayate' from Mundaka Upanishad are inscribed below the abacus in the Devanagari script.

**Answer: C**

The Lion Capital has four lions mounted back-to-back on a circular abacus. The frieze of the abacus is adorned with sculptures in high relief of an elephant, a galloping horse, a bull and a lion separated by intervening Dharma Chakras.

Source: [The Hindu](#)



**Q.8) With reference to Epstein Barr Virus (EBV), consider the following statements;**

1. The EBV virus has been found to be widely present in the human population.
2. The EBV might cause various complications like Burkitt's lymphoma, stomach cancer, multiple sclerosis and so on.

**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 is an "informal mechanism" to support Pacific islands and to boost diplomatic, and economic ties in the Pacific region.

**Statement 2 is incorrect:** This may further lead to various complications like a type of blood cancer called Burkitt's lymphoma, stomach cancer, multiple sclerosis and so on.

Source: [Indian Express](#)

**Q.9) With reference to Dark matter, consider the following statements;**

1. Dark matter is made up of particles that have a positive charge in them.
2. The visible part of the universe is much less compared to the presence of dark matter and dark energy.

**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:** Dark matter is made up of particles that do not have a charge — which means they do not interact through electromagnetic interactions.

**Statement 2 is correct:** Many physicists strongly believe that the entire visible part of the universe forms only 5% of all matter in it. They believe the rest is made up of dark matter and dark energy.

Source: [The Hindu](#)

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**Q.10) With reference to service charge, consider the following statements;**

1. It is a fee collected to pay for services associated with the purchase of a primary product or service.
2. It is collected by hospitality sectors alone.

**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 fee collected to pay for services associated with the purchase of a primary product or service.

**Statement 2 is incorrect:** It is collected by hospitality sectors and food and beverage industries as a fee for serving customers.

Source: [The Hindu](#)

**PRELIMS**

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**Q.1) Services Trade Restrictiveness Index is released by which of the following organizations?**

- a) IMF
- b) OECD
- c) IBRD
- d) WEF

**Answer: b**

- STRI is released by the Organization for Economic Co-operation and Development (OECD).

**Source:** [Article](#)

**Q.2) With reference to Gene editing, consider the following statements:**

1. It can be used to make plants exhibit properties not native to them.
2. Gene editing involves insertion of foreign genetic material.

**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:** Gene editing can be used to make plants exhibit properties not native to them.
- **Statement 2 is incorrect:** Gene editing enables modification of plants' owned genes, without insertion of external genes (foreign genetic material).

**Q.3) Singalila National Park is located in which of the following states?**

- a) Andhra Pradesh
- b) West Bengal
- c) Telangana
- d) Gujarat

**Answer: b**

- Singalila National Park is the highest protected area in West Bengal.

**Source:** [Article](#)

**Q.4) With reference to Azores High, consider the following statements:**

1. It is a high-pressure system that extends over the eastern subtropical North Atlantic and western Europe during winter.
2. It is associated with cyclonic winds.

**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 subtropical high-pressure system that extends over the eastern subtropical North Atlantic and western Europe during winter,
- **Statement 2 is incorrect:** It is associated with anticyclonic winds in the subtropical North Atlantic. It is formed by dry air aloft descending the subtropics and coincides with the downward branch of the Hadley Circulation.

**Source:** [Article](#)

**Q.5) With reference to the Lab Grown Diamonds, consider the following statements:**

1. They are chemically, physically, and optically different from natural diamonds.
2. These diamonds are used in computer chips and satellites.

**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:** Man-made diamond is chemically, physically, and optically same as those grown beneath the Earth's surface. Lab-grown diamonds can be created by two processes - High Pressure High Temperature (HPHT) which is used in China and Chemical Vapor Deposition (CVD) which is used in USA and India.
- **Statement 2 is correct:** Lab-grown diamonds are also used in computer chips, satellites, 5G networks as they can be used in extreme environments as it has potential to operate at higher speeds while using less power than the silicon-based chips

**Q.6) Consider the following statements**

1. He discovered several ground-breaking chemical compounds including mercurous nitrite.
2. One of his famous books is Life and Experience of a Bengali Chemist.
3. He is the founder of Bengal Chemical & Pharmaceutical Works.

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

- a) Satyendra Nath Bose
- b) Meghnad Saha
- c) Acharya Prafulla Chandra Ray
- d) Har Gobind Khorana

**Answer: C**

Source: [PIB](#)

**Q.7) With reference to Multiple sclerosis, consider the following statements;**

1. It occurs when the immune system attacks the nerve fibres and myelin sheathing in the brain and spinal cord.
2. The vulnerable group of multiple sclerosis are elderly people, especially the persons aged above 70 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:** It occurs when the immune system attacks the nerve fibres and myelin sheathing (a fatty substance which surrounds/insulates healthy nerve fibres) in the brain and spinal cord.

**Statement 2 is incorrect:** It affects young individuals between the ages of 20 to 40 years but may also occur in children and adolescents. Females are affected more by this disease than males.

Source: [Indian Express](#)

**Q.8) With reference to Red Panda, consider the following statements;**

1. Red Pandas are arboreal animals and considered an indicator species for ecological change.
2. Red Pandas are listed as Vulnerable in IUCN Red List.
3. Red Pandas are found in the forests of India, Nepal, Bhutan, Myanmar and southern China.

**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:** Red Pandas are shy, solitary and arboreal animals and considered an indicator species for ecological change.

**Statement 2 is incorrect:** Red Pandas are listed as Endangered in IUCN Red List. Giant Pandas are listed as Endangered in IUCN Red List.



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**Statement 3 is correct:** Red Pandas are found in the forests of India, Nepal, Bhutan and the northern mountains of Myanmar and southern China.

Source: [The Hindu](#)

**Q.9) With reference to bail in India, consider the following statements;**

1. The term bail is clearly defined in the Code of Criminal Procedure (CrPC).
2. The CrPC empowers magistrates to grant bail for bailable offences as a matter of right.

**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 Code of Criminal Procedure (CrPC) does not define the word bail but only categories offences under the Indian Penal Code as 'bailable' and 'non-bailable'.

**Statement 2 is correct:** The CrPC empowers magistrates to grant bail for bailable offences as a matter of right. This would involve release on furnishing a bail bond, without or without security. For non-bailable offences which enable the police officer to arrest without a warrant, a magistrate would determine if the accused is fit to be released on bail.

Source: [Indian Express](#)

**Q.10) Which of the following Ministry/organisation has released Youth in India report?**

- a) Ministry of Health and Family Welfare
- b) Population Foundation of India
- c) Ministry of Statistics and Programme Implementation
- d) United Nations Population Fund

**Answer: C**

'Youth in India 2022' report was released by the Ministry of Statistics and Programme Implementation. According to the report, the youth population is expected to increase initially but will start to decline in the latter half of the 2011-2036 period. The total youth population increased from 222.7 million in 1991 to 333.4 million in 2011 and is projected to reach 371.4 million by 2021 (27.2% of the population) and, thereafter, decrease to 345.5 million by 2036 (22.7%).

Source: [Indian Express](#)

**PRELIMS**

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**Q.1) Global Gender Gap Index is released by which of the following organizations?**

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

**Answer: b**

- The Global Gender Gap Index for 2022 was released by the World Economic Forum (WEF) Wednesday, and it ranks India at 135 out of 146 countries. In 2021, India was ranked 140 out of 156 countries.

**Source:** [Article](#)

**Q.2) Stephan's Quintet sometimes seen in news is associated with?**

- a) Galaxies
- b) Higg
- c) Black Holes
- d) Gravitational waves

**Answer: a**

- They are five close-range galaxies approximately 290 light years away.

**Source:** [Article](#)

**Q.3) 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.
  - **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.

**Q.4) With reference to the legal framework related to juvenile justice in India, consider the following statements:**

1. A preliminary assessment, to assess mental and physical capacity of a juvenile, under the Juvenile Justice Act, is not necessary if they are involved in a serious crime.
2. A juvenile who is treated as an adult, if found guilty, can get life 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:** Section 15 of the Juvenile Justice (Care and Protection of Children) Act of 2015 requires a “preliminary assessment” to be done of the mental and physical capacity of juveniles, aged between 16 and 18, who are involved in serious crimes. The assessment is meant to gauge a child’s ability to understand the consequences of the offence and the circumstances in which he or she allegedly committed the offence.
- **Statement 2 is correct:** If the Juvenile Justice Board is of the opinion that the juvenile should not be treated as an adult, it would not pass on the case to the children’s court and hear the case itself. In that case, if the child is found guilty, he would be sent to juvenile care for three years. On the other hand, if the Board decides to refer the case to the children’s court for trial as an adult, the juvenile, if guilty, would even face life imprisonment.

**Source:** [Article](#)

**Q.5) With reference to Human Rights Council (HRC), consider the following statements:**

1. If one third of the Member States requests so, the Council can hold a special session to address human rights violations and emergencies.
2. It was created via a UN Security Council resolution.

**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:** If one third of the Member States request so, the Council can hold a special session to address human rights violations and emergencies.
- **Statement 2 is incorrect:** The Council was created by the United Nations General Assembly in 2006 by a resolution.

**Q.6) With reference to James Webb Space Telescope (JWST), consider the following statements;**

1. It is a space telescope jointly developed by NASA, the European Space Agency (ESA) and the Canadian Space Agency (CSA).
2. It is currently at a point in space known as the Lagrange point L4.

**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 space telescope jointly developed by NASA, the European Space Agency (ESA) and the Canadian Space Agency (CSA).

**Statement 2 is incorrect:** It was launched on December 25, 2021, and is currently at a point in space known as the Sun-Earth L2 Lagrange point, approximately 1.5 million km beyond Earth's orbit around the Sun.

Source: [The Hindu](#)

**Q.7) Which of the following is/are the reason/s for the occurrence of multi-drug resistance in microbial pathogens?**

1. Using antibiotics in livestock farming
2. Multiple chronic diseases in some people
3. Taking incorrect doses of antibiotics to cure diseases

**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**

Source: [WHO](#)

**Q.8) Taranga Hill-Ambaji-Abu Road new rail line is going to be constructed between which of the following states?**

- a) Maharashtra and Karnataka
- b) Rajasthan and Punjab
- c) Rajasthan and Gujarat
- d) Gujarat and Madya Pradesh

**Answer: C**

Cabinet Committee on Economic Affairs has approved the construction of Taranga Hill-Ambaji-Abu Road new rail line to be constructed by the Ministry of Railways.

This rail line will traverse through the Sirohi district of Rajasthan and Banaskantha and Mahesana districts of Gujarat.

Source: [PIB](#)

**Q.9) With reference to Peptides, consider the following statements;**

1. Synthetic peptides are chemically synthesized small polymers of amino acids.
2. Peptides are bigger and has well-defined in structure than proteins.

**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:** Synthetic peptides are chemically synthesized small polymers of amino acids. One can think of synthetic peptides as being to proteins what oligos are to DNA.

**Statement 2 is incorrect:** The basic distinguishing factors are size and structure. Peptides are smaller than proteins. Traditionally, peptides are defined as molecules that consist of between 2 and 50 amino acids, whereas proteins are made up of 50 or more amino acids.

In addition, peptides tend to be less well-defined in structure than proteins which can adopt complex conformations known as secondary, tertiary and quaternary structures.

Source: [PIB](#)

**Q.10) With reference to Cervical Cancer, consider the following statements;**

1. Human Papilloma Virus (HPV), a sexually transmitted infection, play a role in causing most cervical cancer.
2. It is the most common cause of cancer death in women of reproductive age.

**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:** Worldwide, cervical cancer is the second most common cancer type and the second most common cause of cancer death in women of reproductive age (15–44). India accounts for about a fifth of the global burden of Cervical Cancer. It kills one woman every eight minutes in the country.

Source: [Indian Express](#)



**PRELIMS**

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**Q.1) The Right to Repair has been recognized in which of the following?**

1. USA
2. France
3. EU

**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 right to repair has been recognized in many countries across the globe, including the U.S.A, U.K and European Union.

**Source:** [PIB](#)

**Q.2) With reference to Anti-Microbial Resistance (AMR), consider the following statements:**

1. India's medical societies adopted the Chennai Declaration, a set of national recommendations to promote antibiotic stewardship.
2. NDM-1 is an enzyme that makes bacteria resistant to a wide range of powerful antibiotics.

**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.

- In 2012, India's medical societies adopted the Chennai Declaration, a set of national recommendations to promote antibiotic stewardship.
- NDM-1 (New Delhi Metallo-beta-lactamase-1) is an enzyme that makes bacteria resistant to a wide range of powerful antibiotics.

**Source:** [Article](#)

**Q.3) 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.**

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- Mission Lucy is NASA's first mission to explore the Jupiter Trojan asteroids.
  - **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".

### Q.4) SP Mukherjee committee sometimes in news is related to which of the following?

- a) Minimum Wages
- b) Labour codes
- c) Occupational safety
- d) FDI in defence

**Answer: a**

- The committee is related to minimum wages and national floor wages.

**Source:** [Article](#)

### Q.5) With reference to Fertilizer subsidy, consider the following statements;

1. The MRPs of urea and non-urea fertilisers are decontrolled or fixed by the companies.
2. All Non-Urea based fertilisers are regulated under Nutrient Based Subsidy 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: b**

- **Statement 1 is incorrect:** The MRPs of non-urea fertilisers are decontrolled or fixed by the companies. But, for urea the manufacturers are required to sell the fertiliser at the government-set Maximum Retail Price (MRP).
- **Statement 2 is correct:** All Non-Urea based fertilisers are regulated under Nutrient Based Subsidy Scheme.

**Note:** The Centre pays subsidy on urea to fertiliser manufacturers on the basis of cost of production at each plant.

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

1. There are phrases and words both in English and in Indian languages, that are considered "unparliamentary".
2. In 2022, India have listed these words for the first time since independence.

**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**

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**Statement 1 is correct:** There are phrases and words, literally in thousands, both in English and in Indian languages, that are considered “unparliamentary”.

**Statement 2 is incorrect:** The Presiding Officers — Speaker of Lok Sabha and Chairperson of Rajya Sabha — have the job of keeping such words out of Parliament’s records.

For their reference, the Lok Sabha Secretariat has brought out a bulky tome titled ‘Unparliamentary Expressions’. The last such book was published in 2009.

Source: [Indian Express](#)

**Q.7) With reference to the Forest Advisory Committee (FAC), consider the following statements;**

1. The FAC gives approval for diverting any forest land for non-forestry usage.
2. This committee will examine whether the user agent has a plan in place to ensure that the following environmental damage will be minimal.

**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:** For forest land beyond five hectares, approval for diverting land must be given by the Central government. This is done through a specially constituted committee, called the Forest Advisory Committee (FAC).

**Statement 2 is correct:** This committee examines whether the user agency, or those who have requested forest land a) Have made a convincing case for the upheaval of that specific parcel of land, b) Whether they have a plan in place to ensure that the succeeding damage will be minimal and c) The said piece of land doesn’t cause damage to wildlife habitat.

Source: [The Hindu](#)

**Q.8) Which of the following is/are the Application/s of Genomics?**

1. Controlling Infectious Disease
2. Preventing and Managing Genetic Conditions
3. Cataloguing of genetic diversity

**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**

Genomics is the study of all of a person's genes, including interactions of those genes with each other and with the person's environment.

Applications of Genomics

**Control Infectious Disease:** Genomics can map the evolution of infectious agents, assign phenotypic, such as infectivity and pathogenicity, to specific genes and evaluate an infectious agent’s sensitivity or resistance to drugs.

**Prevent and Manage Genetic Conditions:** These include evaluating carrier status for a genetic disorder and screening for and diagnosis of single gene disorders.

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**Agriculture:** These include cataloguing of genetic diversity in the wild and in founder stocks and assessing genetic profiles for health and commercial traits.

Source: [DTE](#)

**Q.9) With reference to Balance of Payments, which of the following constitutes/constitute the Current Account?**

1. Balance of invisibles
2. Special Drawing Rights
3. Balance of trade

**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**

Loans and borrowing by private or public sectors, investments, and changes in the forex reserves are some of the examples of the components of the Capital Account. So, Special Drawing Rights are part of capital account.

Current Account shows export and import of visibles (also called merchandise or goods - represent trade balance) and invisibles (also called non-merchandise). Invisibles include services, transfers and income.

Source: [The Hindu](#)

**Q.10) With reference to Mediation, consider the following statements;**

1. It is a voluntary, binding process in which an impartial and neutral mediator facilitates disputing parties in reaching a settlement.
2. In mediation, the mediator has the power to impose a solution upon parties.

**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 voluntary, binding process in which an impartial and neutral mediator facilitates disputing parties in reaching a settlement.

**Statement 2 is incorrect:** A mediator does not impose a solution but creates a conducive environment in which disputing parties can resolve all their disputes.

Source: [The Hindu](#)

**PRELIMS**

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**Q.1) With reference to Ozone, consider the following statements:**

1. It is naturally produced in the stratosphere.
2. Ground level Ozone leads to reduced agricultural crops and commercial forest yields.

**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 stratosphere or “good” ozone layer extends upward from about 6 to 30 miles and protects life on Earth from the sun’s harmful ultraviolet (UV) rays.
- Ground level Ozone leads to reduced agricultural crop and commercial forest yields, reduced growth and survivability of tree seedlings, and increased susceptibility to diseases, pests and other stresses such as harsh weather.

**Source:** [Article](#)

**Q.2) With reference to Kanheri caves in India, consider the following statements:**

1. The excavations at these caves were primarily undertaken during Hinayana phase of Buddhism.
2. The name of these caves is derived from ‘Kanhagiri’ in Prakrit.
3. The earliest reference of Kanheri is ascribed to Hiuen Tsang.

**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:** The Kanheri caves comprise more than 110 different rock-cut monolithic excavations and is one of the largest single excavations in the country. These excavations were primarily undertaken during the Hinayana phase of Buddhism but also has several examples of the Mahayana stylistic architecture as well as few printings of the Vajrayana order.
- **Statement 2 is correct:** The name Kanheri is derived from ‘Kanhagiri’ in Prakrit and occurs in the Nasik inscription of the Satavahana ruler Vasisthiputra Pulumavi
- **Statement 3 is incorrect:** Kanheri was mentioned in the travelogues of foreign travelers. The earliest reference of Kanheri is ascribed to Fa-Hein who visited India during 399-411 CE and later by several other travelers.



**Q.3) Kudremukh National Park is located in which of the following states?**

- a) Tamil Nadu
- b) Karnataka
- c) Andhra Pradesh
- d) Telangana

**Answer: b**

- The Kudremukh National Park is located in Karnataka.

**Source:** [Article](#)

**Q.4) Which of the following materials is a semiconductor?**

1. Silicon
2. Gallium arsenide
3. Germanium

**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 materials are semiconductors.

**Q.5) Which of the following countries are the part of the Shanghai Five?**

1. Uzbekistan
2. Iran
3. Kyrgyzstan

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

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

**Answer: c**

- Prior to the creation of SCO in 2001 - Kazakhstan, China, **Kyrgyzstan**, Russia and Tajikistan were members of the Shanghai Five.
- India and Pakistan became members in 2017.
- On 17th September, 2021, it was announced that Iran would become a full member of the SCO.

**Source:** [Article](#)

**Q.6) Which of the following is/are the advantages of Build-Operate-Transfer (BOT) Model?**

1. The model provides a mechanism and incentives for enterprises to improve efficiency.
2. The risks of the project are shared by the private sector.
3. Smaller projects can be completed in a short time along with low upfront cost.

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

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

**Answer: B**

**Statement 1 is correct:** BOT provides a mechanism and incentives for enterprises to improve efficiency through performance-based contracts and output-oriented targets.

**Statement 2 is correct:** Under this model, the risks of the project are shared by the private sector.

**Statement 3 is incorrect:** It may take a long time and considerable up front expenses to prepare and close a BOT financing deal as it involves multiple entities and requires a relatively complicated legal and institutional framework. There the BOT may not be suitable for small projects.

Source: [Indian Express](#)

**Q.7) With reference to Alcohol Consumption, consider the following statements;**

1. People aged above 40 are at greatest risk of harmful alcohol consumption.
2. Alcohol Consumption has no associated health benefits.

**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:** According to the recent study, young men are at the greatest risk of harmful alcohol consumption. Males between the ages 15-39 are at the greatest risk of harmful alcohol consumption. In every region, males in this age group comprised the largest segment of the population drinking unsafe amounts.

There are only health risks with 60% of alcohol-related injuries occurring among this segment including motor vehicle accidents, suicides and homicides.

**Statement 2 is incorrect:** For adults over age 40, health risks from alcohol consumption vary by age and region. However, consuming a small amount of alcohol can provide some health benefits for people in this age group such as reducing the risk of cardiovascular disease, stroke, and diabetes.

Source: [Indian Express](#)

**Q.8) Y- 3023 Dunagiri which was seen in news recently is related to which of the following statement?**

- a) Newly found asteroids by James Webb space telescope.
- b) New mountain peak identified in Indian Ocean.
- c) New warship launched under Project 17A.
- d) The missile system invented by DRDO to tackle cruise missiles.

**Answer: C**

Y- 3023 Dunagiri is the fourth warship of Project 17A. The ship is named after an earlier frigate. The former one was a Leander class ASW frigate which was decommissioned in 2010.

**Features:** The ships are designed with extensive use of low-observability technologies, including the use of composite materials and radar-absorbing coatings. These materials assist the vessel in maintaining a low radar cross-section(RCS).

Source: [PIB](#)

**Q.9) With reference to Multiple First Information Reports, consider the following statements;**

- 1. Multiple FIRs can be filed against the same person for the same offence.
- 2. Once framed, all FIRs must be investigated.

**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:** Multiple FIRs can be filed against the same person for the same offence. For instance, In a recent case against former spokesperson of a political party, at least nine FIRs have been filed in multiple states. The date and time of the occurrence of the alleged offence are the same in all the FIRs.

All the FIRs refer to the same television debate in which the former spokesperson made remarks against the Prophet. The sections of the Indian Penal Code are almost the same in all the FIRs.

**Statement 2 is incorrect:**

**In TT Antony vs. State of Kerala case, 2001:** In this, the SC held that only the earliest information in regard to the commission of an offence could be investigated and tried. (Not all of them have to be investigated, only the earliest one has to be investigated).

**In Babubhai vs. State of Gujarat case, 2010:** The Court explained that the test to determine the sameness of the offence is to identify whether “the subject matter of the FIRs is the same incident, same occurrence or are in regard to incidents which are two or more parts of the same transaction”.

Source: [Indian Express](#)

**10 PM Compilation for the Month of July, 2022**

**Q.10) With reference to Monkeypox, consider the following statements;**

1. Monkeypox virus DNA is not present in samples of saliva, urine, rectal swabs and faeces.
2. Human-to-human transmission of virus is largely due to sexual contact, especially among men who have sex with men (MSM).

**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:** Monkeypox virus DNA has been found in samples of semen, saliva, urine, rectal swabs and faeces at high viral loads.

**Statement 2 is correct:** The rapid increase in cases and geographical spread have primarily been due to human-to-human transmission largely during sexual contact, especially among men who have sex with men (MSM).

**Source:** [The Hindu](#)

**PRELIMS**

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**Q.1) With reference to Monkeypox, consider the following statements:**

1. It occurs primarily in tropical rainforest areas of Central and West Africa.
2. Monkeys are the natural hosts of 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: a**

- **Statement 1 is correct:** Monkeypox is a viral zoonotic disease (a disease that is transmitted from infected animals to humans) that occurs primarily in tropical rainforest areas of Central and West Africa and is occasionally exported to other regions.
- **Statement 2 is incorrect:** The natural host of the virus remains undefined. But the disease has been reported in many animals.

**Source:** [Article](#)

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

1. Followers of Judaism have been granted minority community status in India.
2. States in India have the power to recognize any community as a minority community.

**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:** Centre has notified the following six communities as minority communities in India - Muslims, Christians, Sikhs, Buddhists, Parsis and followers of Jainism.
- **Statement 2 is correct:** States can have minorities notified as such within their jurisdiction. For instance: Maharashtra recognizing Jews as a minority community and Karnataka recognizing speakers of several languages as linguistic minorities.



**Q.3) Arrange the following countries from North to South -**

1. Qatar
2. Bahrain
3. Kuwait

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

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

**Answer: b**

- The correct order from North to South is – Kuwait, Bahrain, Qatar

**Source:** [Article](#)

**Q.4) With reference to Ballistic and Cruise missiles, consider the following statements:**

1. Cruise missiles are launched directly into the upper layers of the earth's atmosphere.
2. Ballistic missiles are self-propelled for the most part of their flights.

**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 statements are incorrect.**

- **Statement 1 is incorrect:** Ballistic missiles are launched directly into the upper layers of the earth's atmosphere.
- **Statement 2 is incorrect:** Cruise missiles are self-propelled for the most part of their flight, flying in a relatively straight line and at lower altitudes due to rocket propellant.

**Q.5) 10/90 gap, sometimes seen in the news, is associated with?**

- a) Global Health inequity
- b) Balance of payment issue
- c) Detection of neutrinos
- d) Current Account Deficit

**Answer: a**

- The 10/90 gap challenge states that the diseases and health problems that constitute roughly 10% of the global disease burden but affect people mostly in rich countries receive 90% of the overall health research attention and funding.
- However, health problems that constitute 90% of the world's burden of disease but affect mainly low- and lower-middle income countries get merely 10% of the attention and funds.

**Source:** [Article](#)

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

1. It is a mascot for empowering consumers and generating awareness of their rights.
2. It was launched by the Department of Consumer Affairs(DoCA).

**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:** Jagriti is a mascot for empowering consumers and generating awareness of their rights. It will be projected as an empowered consumer who is spreading awareness about consumer rights & addressing solutions to the problems faced by the consumers.

**Statement 2 is correct:** It was launched by the Department of Consumer Affairs(DoCA).

Source: [PIB](#)

**Q.7) Which of the following can be categorized as External Commercial Borrowings (ECBs)?**

1. Foreign currency convertible bonds
2. Foreign currency exchangeable bonds
3. Foreign exchange reserves

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

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

**Answer: B**

ECBs are commercial loans that eligible resident entities can raise from outside India, i.e. from a recognized non-resident entity.

ECBs can be buyer's credit, supplier's credit, foreign currency convertible bonds, foreign currency exchangeable bonds, and loans among others.

ECBs can be raised via the automatic route where cases are examined by Authorized Category Dealer or the approval route where borrowers are mandated to forward their request to RBI through their authorized dealers.

Source: [Livemint](#)

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

1. It is also known as whooping cough and it is a highly contagious respiratory infection caused by the bacterium Bordetella pertussis.
2. Diphtheria particularly affects children aged 1 to 5 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: B**

**Statement 1 is incorrect:** Diphtheria is primarily caused by the bacterium Corynebacterium diphtheriae.

Note: Pertussis, also known as whooping cough, is a highly contagious respiratory infection caused by the bacterium Bordetella pertussis.

**Statement 2 is correct:** Diphtheria particularly affects children aged 1 to 5 years. Occurrence of diphtheria cases in under-five children reflects low coverage of primary diphtheria vaccination.

Source: [Indian Express](#)

**Q.9) With reference to Snakebites in India, consider the following statements;**

1. Around 80% of all polyvalent antivenom derived in India comes from snakes caught in one district.
2. Neurotoxin is a poison that primarily acts on the cells in a 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: A**

**Statement 1 is correct:** The antivenom is derived from the “Big Four” snakes in India namely Russell’s viper, Common Krait, Indian Cobra and Saw-scaled viper.

However, 80% of all polyvalent antivenom derived in India comes from snakes caught in one district of Tamil Nadu. This it fails to address the diversity of venom across the species.

**Statement 2 is incorrect:** Neurotoxin is a poison that acts on the nervous system. Cytotoxins kill the cells in a body.

Source: [The Hindu](#)

**Q.10) Town and Village Enterprises Policy was sometimes seen in news, the policy is implemented in which of the following country/region?**

- a) China
- b) India
- c) European Union
- d) The USA

**Answer: A**

China started its economic reforms in 1978 with a primary focus on agriculture. It broke away from the commune system and liberated agri-markets from myriad controls.

During 1978-84, China's agri-GDP grew by 7.1% per annum and farmers' real incomes grew by 14% per annum with the liberalisation of agri-prices. As farmers' real incomes doubled, poverty fell by half in just six years.

**Industries:** Enhanced incomes of rural people created a huge demand for industrial products. The aim of China's manufacturing through **Town and Village Enterprises** (TVEs) was basically to meet the surging demand from the hinterlands.

**Source:** [Indian Express](#)

**PRELIMS**

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

- 1) With India assuming presidency of G20, past, present and future G20 presidents will be from developing nations.
- 2) Sherpas are generally appointed for taking care of the financial sector agenda of G20.

**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. With the next presidency after India is to Brazil, past, present and future G20 presidents will for the first time be from developing nations.

**Statement 2** is incorrect. G20 is divided into two channels, to discuss the various issues, namely the **financial track** and the **Sherpa track**.

**Financial Track** addresses a number of agendas related to the financial sectors and involves Finance Ministers and Central Bank Governors from all G20 members.

**The Sherpa Track** addresses other agendas that are outside the financial sector. Sherpas are generally appointed directly by the Head of Government / Country and are seen as their representation at various G20 meetings. He/she is assisted by several sous Sherpas.

**Q.2) Chin ethnic group, recently seen in news, belongs to which of the following countries?**

- a) Sri Lanka
- b) Myanmar
- c) China
- d) Cambodia

**Ans) b**

China ethnic group native to Chin State and its neighbouring states of Myanmar.

[Source](#)

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

- 1) New Pension Scheme is a Defined Benefit (DB) scheme
- 2) Project OASIS was launched to analyse the New Pension Scheme

**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. New Pension Scheme is a Defined Contribution (DC) scheme

Statement 2 is incorrect. Project OASIS was launched in 1998. It was before the launch of New Pension Scheme. It analysed the failures of pay-as-you-go **defined benefit (DB) system**



**Q.4) Which of the following statements are correct regarding bond yield?**

- a) In case the price of bond increases, the bond yield will fall.
- b) In case the price of bond increases, the bond yield will increase.
- c) In case the price of bond increases, the bond yield will not be affected.
- d) inversion of the yield curve essentially suggests that investors expect future growth to be stronger.

**Ans) a**

In case the price of bond increases, the bond yield will fall.

Statement 1 is correct. The selling price of the bond may go from Rs 100 to Rs 105 or Rs 110 because of competitive bidding by the two buyers. Importantly, even if the bond is sold at Rs 110, the coupon payment of Rs 5 will not change. Thus, as the price of the bond increases from Rs 100 to Rs 110, the yield falls to 4.5%. Thus, in case the price of bond increases, the bond yield will fall.

There are times when this bond yield curve becomes inverted. For instance, bonds with a tenure of 2 years end up paying out higher yields (returns/ interest rate) than bonds with a 10 year tenure. Such an inversion of the yield curve essentially suggests that investors expect future growth to be weak.

**Q.5) Consider the following effects of raising interest rates by US feds:**

- 1) dollar becomes stronger
- 2) exports to countries having dollar as a currency become costly for the 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

**Ans) a**

**Statement 1** is correct. US Fed's action of aggressively raising interest rates is that more and more investors are rushing to invest money in the US. This, in turn, has made the dollar become stronger than all the other currencies. That's because the dollar is more in demand than yen, euro, yuan etc.

**Statement 2** is incorrect. This should make all other countries happier because a relative weakness of their local currency against the dollar makes their exports more competitive. For instance, a Chinese or an Indian exporter gets a massive boost.

**Q.6) Which of the following is/are the drawbacks of farm loan waivers?**

- 1. Covers only a fraction of farmers.
- 2. Severely erodes the credit culture
- 3. Provides only partial relief to the indebted farmers

**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**

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Farm loan waivers have the following challenges:

- They covers only a tiny fraction of farmers. The loan waiver excludes most of the farm households in dire need of relief and includes some who do not deserve such relief on economic grounds.
- It provides only partial relief to the indebted farmers as about half of the institutional borrowing of a cultivator is for non-farm purposes.
- Loan waiving excludes agricultural labourers who are even weaker than cultivators in bearing the consequences of economic distress.
- It severely erodes the credit culture, with dire long-run consequences to the banking business.

Source: [The Hindu](#)

**Q.7) With reference to NAMASTE Scheme, consider the following statements;**

1. The scheme aims to promote tourism in Indian cities by providing visa free arrival from select countries.
2. The scheme will be implemented across cities and townships already notified under the Atal Mission for Rejuvenation and Urban Transformation (AMRUT).

**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**

**NAMASTE** stands for National Action Plan for Mechanized Sanitation Ecosystem.

**Statement 1 is incorrect:** The scheme aims to achieve outcomes like zero fatalities in sanitation work in India, no sanitation workers come in direct contact with human faecal matter and all Sewer and Septic tank sanitation workers have access to alternative livelihoods.

**Statement 2 is correct:** The scheme will be implemented from 2022 to 2026 across 500 cities and townships already notified under the Atal Mission for Rejuvenation and Urban Transformation (AMRUT).

Source: [AIR](#)

**Q.8) Which of the following committee is/are related to Minimum Support Price?**

1. Sanjay Agrawal committee
2. Acharya Narendra Deva Committee
3. Swaminathan committee

**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:** Recently, the Government of India has constituted a committee to look into the issues of minimum support price(MSP), Natural Farming and Crop diversification. The committee is headed by Former Agriculture Secretary Sanjay Agrawal.

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**Statement 3 is correct:** The Union government formed the National Commission on Farmers (NCF) with MS Swaminathan as its chairman. The main aim of the committee was to come up with a sustainable farming system, make farm commodities cost-competitive and more profitable.

It, in 2006, recommended that MSPs must be at least 50% more than the cost of production.

**Statement 2 is incorrect:** Acharya Narendra Deva Committee is related to the Primary and Secondary Education Reorganization.

Source: [The Hindu](#)

**Q.9) Namsai Declaration which was seen in news recently, was signed between which of the following states?**

- a) Assam and Manipur
- b) Kerala and Karnataka
- c) Maharashtra and Gujarat
- d) Assam and Arunachal Pradesh

**Answer: D**

Assam and Arunachal Pradesh have signed the “Namsai Declaration” to resolve border disputes. The declaration marks the resolution of the principle of disputes regarding 37 locations out of 123 disputed villages along the borders between the two states.

– Now disputes regarding the remaining 86 border locations will be assessed by the regional committees of both states and a final resolution will be arrived at based on the reports of these committees.

Source: [Indian Express](#)

**Q.10) With reference to foreign trips of government officials, consider the following statements;**

1. Chief Ministers and ministers of state governments need clearance from the central government before making any official visit.
2. Personal foreign trips of government employees do not need any approval.

**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:** Chief Ministers, ministers of state governments and other state officials also need clearance from the Department of Economic Affairs.

For Union ministers, after getting political clearance from the MEA, additional clearance is needed from the Prime Minister, whether the trip is official or personal.

Lok Sabha MPs need clearance from the Speaker and Rajya Sabha members from the Chairperson (Vice President of India). However, for MPs, it is not obligatory to inform the Lok Sabha/Rajya Sabha secretariat if the trip is private.

**Statement 2 is incorrect:** For government employees, all foreign trips, official or personal, need approval.

Source: [Indian Express](#)

**PRELIMS**

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

1. Constructions are prohibited within 100 metres around a protected ancient monument.
2. Both the Union and the States have concurrent jurisdiction over all archaeological sites and remains.

**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.** The minimum prohibited area in respect of centrally protected monuments and protected areas is 100m, in all directions beginning at the limit of the protected area of the centrally protected monument or site.

**Statement 2 is incorrect.** Both the Union and the States have concurrent jurisdiction over archaeological sites and remains other than those declared by Parliament by law to be of national importance. Thus, archaeological sites and remains of national importance is under jurisdiction of central government.

[Source](#)

**Q.2) Which of the following is/are constitutional provisions for minorities?**

- 1) All minorities shall have the right to establish and administer educational institutions of their choice.
- 2) Special Officer for Linguistic Minorities
- 3) Any section of the citizens residing in any part of India having a distinct language, script or culture of its own, shall have the right to conserve the same.

**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) d**

**Option 1** is correct. As per article 30 of the Indian Constitution, All minorities shall have the right to establish and administer educational institutions of their choice.

**Option 2** is correct. Article 350-B provides for a Special Officer for Linguistic Minorities appointed by the President of India.

**Option 3** is correct. The statement is a part of article 29 of Indian Constitution.

[Source](#)



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

- 1) Central Drugs Standard Control Organisation (CDSCO) is the sole regulator for all matters like manufacturing, distribution and inspections related to drug industry.
- 2) India has a system of Good Manufacturing Practices (GMPs) for drug industry.

**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. India has 37 agencies for the same job: one in each State and Union Territory along with the Central Drugs Standard Control Organisation (CDSCO), which is under the control of the Union Health Ministry. State drug controllers are expected to license drug manufacturing and also conduct enforcement actions such as sampling, testing and prosecution for substandard drugs. The CDSCO's role is limited to regulating imports and to deciding whether new drugs have adequate clinical evidence before they can be sold. Over the years, even the CDSCO has started drawing samples for testing and prosecuting erring manufacturers. In addition, the Health Ministry is in charge of laying down rules and regulations and banning drugs which do not have supporting clinical evidence.

**Statement 2** is correct. In 1988, India incorporated a system of GMPs via rules framed by the government rather than Parliament. But even then, the government did not make GMPs the centrepiece of its regulatory strategy.

[Source](#)

**Q.4) Which of the following statements regarding National Emblem are correct?**

- 1) It is associated with the first sermon of Gautama Buddha.
- 2) It symbolizes courage, power and pride.
- 3) National emblem of India was adopted before independence.

**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) a**

**Statement 1** is correct. It was built in 250 BC to commemorate the first sermon of Gautama Buddha, where he is said to have shared the Four Noble Truths of life, it was mounted on a base of a frieze of smaller sculptures, including a horse (under fire in the new replica for its tail supposedly resembling that of a dog), a lion, a bull and an elephant moving in a clockwise direction.

**Statement 2** is correct. The seven feet tall sculpture made of polished sandstone represented courage, power and pride.

**Statement 3** is incorrect. On January 26, 1950, the Lion Capital of Asoka at Sarnath officially became the national emblem of India.



**Q.5) Which of the following statements correctly describes a Wormhole?**

- bridge or a shortcut between two points in curved spacetime which are well separated in practical terms.
- large amounts of matter squeezed into a tiny space creating extreme gravity.
- allows anything inside it to escape back out into space freely, but nothing can get in from the outside.
- dead stars that are incredibly dense.

**Ans) a**

**Explanation**

A wormhole can act as a bridge or a shortcut between two points in curved spacetime which are well separated in practical terms to the inhabitants of the universe.

**Q.6) With reference to GOAL Programme, consider the following statements;**

- The programme aims to increase sustainable agricultural practices in Tribal regions.
- The programme is a joint initiative of the Ministry of Tribal Affairs and Meta (formerly Facebook).

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

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

**Answer: B**

**Statement 1 is incorrect:** The programme aims to digitally empower tribal youth and women through the concept of mentor and mentee.

**Statement 2 is correct:** The programme is a joint initiative of the Ministry of Tribal Affairs and Meta (formerly Facebook).

Source: [PIB](#)

**Q.7) With reference to Transplantation of Human Organs, consider the following statements;**

- India has a separate legislation to regulate Transplantation of Human Organs and Tissues.
- Grandchildren are not considered as an organ donor in India.

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

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

**Answer: A**

**Statement 1 is correct:** The Transplantation of Human Organs & Tissues Act (THOTA) provides for the regulation of removal, storage and transplantation of human organs & tissues for therapeutic purposes and for the prevention of commercial dealings in human organs & tissues. It contains detailed provisions relating to the authority for removal of human organs, preservation of human organs, regulation of hospitals conducting the removal, storage or transplantation of human organs, registration of hospitals and punishment/penalties for offences relating to aforesaid matters.

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**Statement 2 is incorrect:** The Government of India enacted the Transplantation of Human Organs (Amendment) Act, 2011 which allows the swapping of organs and widens the donor pool by including grandparents and grandchildren in the list.

**Note:** The subject of artificial organs is not regulated under this Act.

**Source:** [PIB](#)

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

1. Natural sand with a regular shape does not liquefies easily compared to sand with an irregular shape.
2. The shear force required to break the inter-particle locking is more for the grains with relatively irregular shapes.

**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:** Natural sand with a regular shape liquefies easily compared to sand with an irregular shape.

**Statement 2 is correct:** The shear force (unaligned forces pushing one part of a body in one specific direction and another part of the body in the opposite direction) required to break the inter-particle locking is more for the grains with relatively irregular shapes.

Source: [PIB](#)

**Q.9) Which of the following impacts will occur when the rupee gets weaker?**

1. Freelancer in India working for a company in US will get more money.
2. An outbound tourist has to pay less for hotels and flights.
3. Imports will get costlier

**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**

**A WEAKER RUPEE IMPACTS YOU IN MANY WAYS...  
HERE IS WHAT YOU CAN DO TO SOFTEN THE BLOW**

The rupee has had a weakening bias because of India's consistent current account deficit (imports exceed exports). Corrections in exchange rate happen sporadically and that is when Indians feel the pain. But the impact is not uniform and depends on the demand & supply position in various sectors...

**If You Are...**

- > **A consumer** | Most of us who are already facing the brunt of inflation will see fresh **price surges on all imported items**
- > **An exporter** | You can now sell more price-sensitive products by **reducing rates**. Alternatively, you may get **more dollars** on the same number of sales
- > **A student in foreign college** | You will need to **draw a larger amount** to pay the same fees
- > **An outbound tourist** | Many currencies have depreciated against the dollar, but you will still **pay more as flights & hotel bookings are usually done in dollars**
- > **A freelancer** | An assignment billed in dollars will get you **more money**. But you may have **competition** as some other currencies have weakened more
- > **An Indian investor with \$ deposits** | Value of holdings has gone up **7% in rupee terms**
- > **An investor in US stocks** | Dow Jones index has fallen 14% in 2022, but in rupee terms the **losses are lower at about 8%**

**What Can You Do As...**

- > **A consumer** | Identify import substitutes. If not buying for the brand, you will find **local alternatives**
- > **An outbound student** | Visit your **dentist**, go for a **haircut**, shop for **clothes** and avail other such services before leaving. Look for **cheaper remittance services**
- > **An outbound tourist** | If destination country's currency has depreciated more (like Turkey) you may get **better deals by booking directly in that country**
- > **An investor in dollars** | Wait for rate hike cycle to end. Rates have shot up but are likely to go up further, which means **bonds and equities may get cheaper**
- > **A business owner** | Bargain hard with int'l suppliers as **they will be able to cut prices** due to depreciation
- > **A policymaker** | Take countercyclical measures to **encourage foreign investments** by lifting restrictions

**What Is RBI Doing To Check Slide...**

- 1 Selling large amounts (\$40bn+) of dollars to support rupee
- 2 Raising interest rates (90bps in 2022) to make Indian investment attractive
- 3 Removing reserve restrictions on dollar deposits with banks
- 4 Allowing traders to make settlements in rupees to reduce dollar dependence

Source: [Indian Express](#)

**Q.10) With reference to Atal Vayo Abhyuday Yojana(AVYAY), consider the following statements;**

1. The scheme aims to improve the quality of life of the Senior Citizens by providing basic amenities.
2. The Ministry of Social Justice & Empowerment is the nodal ministry of 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 scheme aims to improve the quality of life of the Senior Citizens by providing basic amenities such as shelter, food, medical care and entertainment opportunities and by encouraging productive and active ageing through providing support.

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

Source: [PIB](#)



**PRELIMS**

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

- 1) India's 90% of external trade by volume is by sea.
- 2) Almost 55% of India's trade with the Indo-Pacific region passes through the South China Sea

**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.** India is essentially a maritime nation and the oceans hold the key to India's future. India's external trade (over 90% by volume and 70% by value) is by sea.

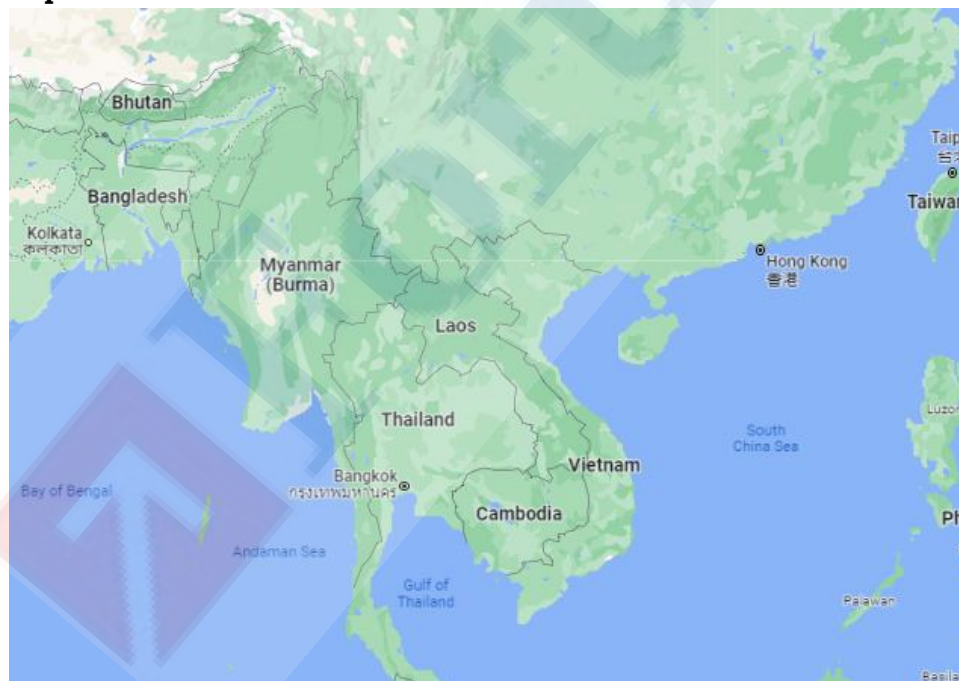
**Statement 2 is correct.** India's maritime strategic interests in the region are well established, including the fact that almost 55% of India's trade with the Indo-Pacific region passes through the South China Sea.

**Q.2) Which one of the following countries does not border Vietnam?**

- a) Laos
- b) Cambodia
- c) China
- d) Thailand

**Ans) d**

**Explanation**



**Q.3) FRESH framework, recently seen in news, has been developed by which of the following agencies?**

- a) UNESCO
- b) UNICEF
- c) World Bank
- d) All of the above

**Ans) d**

**Explanation**

UNESCO, UNICEF, the World Health Organization (WHO) and the World Bank have published an inter-agency framework called FRESH — an acronym for Focusing Resources on Effective School Health. The FRESH framework and tools propose four core areas and three supporting strategies. The core areas suggest that school health services need to focus on school health policies, i.e., water, sanitation and the environment; skills-based health education and school-based health and nutrition services. The supporting strategies include effective partnerships between the education and health sectors, community partnership and student participation.

**Q.4) Which of the following options is/are most likely to result in appreciation of Rupee value?**

- 1) Sell of dollars in the spot forex market by RBI
- 2) Encouraging non-resident Indian (NRI) deposits
- 3) Permission for foreign trade deals to be settled in rupees

**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**

One course of action to control the Rupee value is selling dollars by RBI in the spot forex market. Increase in non-resident Indian (NRI) deposits will bring in the Dollars in the account. It will increase supply and Dollar, thus the value of Rupee.

Permission of Foreign trade deals to be settled in Rupee will reduce the requirement of Dollar and increase the demand for Rupee, thus it will result in appreciation of Rupee value.

**Q.5) Consider the following statements regarding Minerals Security Partnership (MSP)**

- 1) It is an initiative to bolster critical mineral supply chains.
- 2) It is an alliance of all European countries and US.

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

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

**Ans) a**

**Statement 1 is correct.** Minerals Security Partnership (MSP), an ambitious new initiative to bolster critical mineral supply chains.



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**Statement 2 is incorrect.** MSP partners include Australia, Canada, Finland, France, Germany, Japan, the Republic of Korea, Sweden, the United Kingdom, the United States, and the European Commission.

**Q.6) With reference to Central Armed Police Forces (CAPFs), consider the following statements;**

1. The CAPF are headed by officers of the Indian Police Service and they operate under the authority of Ministry of Home Affairs.
2. CAPFs personnel are eligible for the Chakra series of medals for all of their individual operations.

**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 Central Armed Police Forces (CAPF) are headed by officers of the Indian Police Service and they operate under the authority of Ministry of Home Affairs.

**Statement 2 is incorrect:** CAPFs are eligible for the Chakra series of medals only if the battalions were placed under the operational control of the Army.

Source: [The Hindu](#)

**Q.7) Which of the following activities can reduce Maternal Mortality Ratio (MMR)?**

1. Improvements in access to contraceptives
2. Reduction of higher-order births
3. Focus on post-delivery health care

**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**

There is adequate proof that focusing on the following things will help to reduce MMR. These include, **a)** Improvements in access to contraceptives, **b)** Focus on antenatal care, post-delivery health care, body mass index, **c)** Economic status, **d)** A concerted reduction of higher-order births, births in higher ages.

Source: [The Hindu](#)

**Q.8) AK Rajan committee which was seen in news recently, is related to which of the following?**

- a) Removing certain regions of forest areas from Eco Sensitive Zones in Kerala.
- b) Increasing access to internet services in Tribal regions of North-East.
- c) Analyzing the impact of NEET on the admission process in medical colleges in Tamil Nadu.
- d) Reforming the Minimum Standard Prices in India and suggest reforms.

**Answer: C**

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The Tamil Nadu Assembly has passed a Bill to dispense with the National Entrance cum Eligibility Test (NEET). This bill is passed based on the recommendation of the high-level committee led by retired judge AK Rajan.

Justice A K Rajan Committee analyzed the impact of NEET on the admission process in medical colleges in Tamil Nadu. The report highlighted the inequity and injustice in the NEET.

Source: [The Hindu](#)

**Q.9) With reference to Weapons of Mass Destruction(WMD), consider the following statements;**

1. There is no single, authoritative definition of WMD in international law.
2. India does not have any specific law to regulate WMDs.

**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:** There is no single, authoritative definition of a WMD in international law. The expression is usually understood to cover nuclear, biological, and chemical(NBC) weapons.

**Statement 2 is incorrect:** WMDs are regulated under Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Act, 2005.

Recently, the Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Amendment Bill, 2022 was introduced in Rajya Sabha.

Source: [AIR](#)

**Q.10) Consider the following pairs,**

<b>Chakra Awards</b>	-	<b>Significance</b>
1. Ashoka Chakra	-	Highest wartime gallantry award
2. Param Vir Chakra	-	Highest peacetime gallantry award
3. Maha Vir Chakra	-	Second-highest wartime gallantry award
4. Kirti Chakra	-	Second-highest peacetime gallantry award

**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**

<b>Chakra Awards</b>	-	<b>Significance</b>
1. Ashoka Chakra	-	Highest peacetime gallantry award
2. Param Vir Chakra	-	Highest wartime gallantry award
3. Maha Vir Chakra	-	Second-highest wartime gallantry award
4. Kirti Chakra	-	Second-highest peacetime gallantry award

Source: [The Hindu](#)

**PRELIMS**

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**Q.1) Which of the following is an application of Antibiotic Adjuvants?**

- a) to use as a counter to the negative effect of antibiotics on the human body
- b) to use as an alternative to the existing antibiotics.
- c) to help counter resistance to existing antibiotics
- d) to convert the antibiotic bacteria into a useful bacterium for the treatment of cancer

**Ans) c**

**Explanation)**

Scientists at JNCASR, an autonomous institute of the Department of Science and Technology, have come up with the approach of revitalising the efficacy of existing antibiotics by using them in combination with antibiotic adjuvants -- ingredients that can help counter resistance to existing antibiotics. This novel idea can help strengthen the activity of obsolete antibiotics and bring them back into use for treating complicated infections.

Source

**Q.2) Consider the following statements regarding Low temperature thermal desalination (LTTD)**

- 1) It uses availability of temperature gradient between two water bodies.
- 2) India developed world's first low temperature thermal desalination plant based on this technology

**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.** Low temperature thermal desalination (LTTD) is one process that uses the availability of a temperature gradient between two water bodies or flows to evaporate the warmer seawater at low pressures and condense the resultant vapour with the colder seawater to obtain fresh water.

**Statement 2 is correct.** Scientists at the National Institute of Ocean Technology (NIOT), Chennai have developed world's first low temperature thermal desalination plant, which could address drinking water problems in India's ocean island territories and even offshore urban centres along the coastline.

**Q.3) Consider the following statements**

- 1) Cryptocurrency mining uses huge amount of energy and emit pollutants
- 2) 'Proof of work' is a consensus mechanism that allows miners to validate cryptocurrency transactions

**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.** Cambridge Bitcoin Electricity Consumption Index, by the Centre for Alternative Finance at the University of Cambridge, shows that Bitcoin mining alone used up more energy than Belgium and Finland ([bit.ly/3cpu86E](https://bit.ly/3cpu86E)). According to Digiconomist, Ethereum gobbled up as much power as Switzerland. The Bitcoin network generates huge amounts of carbon dioxide, as much as Turkmenistan, and Ethereum's CO2 emissions rival New Zealand's. As if this was not enough, the obsolete ASIC (Application Specific Integrated Circuit) mining equipment that crypto miners use produces a colossal 36,000 tonnes of electronic waste every year.

**Statement 2 is correct.** 'Proof of work' is a consensus mechanism that allows miners to validate cryptocurrency transactions by deciphering increasingly complicated mathematical puzzles. Whoever solves a puzzle validates that transaction and gets the mined crypto; solving these arcane problems requires heavy computing power and therefore uses tremendous energy.

**Q.6) India Innovation Index was released by which of the following organization/Ministry?**

- a) Ministry of Micro, Small and Medium Enterprises (MSME)
- b) NITI Aayog
- c) Centre for Policy Research
- d) Observer Research Foundation

**Answer: B**

NITI Aayog has released the India Innovation Index 2021. It is a comprehensive tool for the evaluation and development of the country's innovation ecosystem. It ranks the states and the union territories on their innovation performance to build healthy competition amongst them.

Karnataka topped in the 'Major States' category. Manipur emerged as a winner in the 'North East and Hill States' category. Chandigarh was the top performer in the 'Union Territories and City States' category.

Source: [PIB](#)

**Q.7) With reference to Glasgow Breakthrough agenda, consider the following statements;**

1. The agenda sets ambitious goals for 2030 to dramatically accelerate the innovation and deployment of clean technologies.
2. It was launched by Scotland and Finland.

**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 agenda sets ambitious goals for 2030 to dramatically accelerate the innovation and deployment of clean technologies in five key sectors of the economy – Power, Road Transport, Steel, Hydrogen, and Agriculture.

**Statement 2 is incorrect:** It was launched by the United Kingdom and a coalition of 42 world leaders including India at the COP26 World Leaders Summit.

Source: [PIB](#)

**Q.8) With reference to Low-temperature thermal desalination(LTTD), consider the following statements;**

1. The technique uses cold water from the ocean depths to produce fresh water from vapour.
2. The LTTD technology requires chemical pre- and post-treatment of seawater.

**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 technique works on the principle that water in the ocean 1,000 or 2,000 feet below is about 4° C to 8° C colder than surface water. So, salty surface water is collected in a tank and subject to high pressure (via an external power source).

This pressured water vapourises and is trapped in tubes or a chamber. Cold water plumbed from the ocean depths is passed over these tubes and the vapour condenses into fresh water and the resulting salt is diverted away.

**Statement 2 is incorrect:** The LTTD technology does not require any chemical pre- and post-treatment of seawater and thus the pollution problems are minimal and suitable for island territories.

Source: [PIB](#)



**Q.9) Which of the following is/are the applications of Synthetic biology?**

1. Developing synthetic organisms for vaccination
2. Dyeing jeans without producing hazardous waste
3. Deliver fixed nitrogen to plants

**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**

Synthetic biology enables scientists to design and synthesise new sequences of DNA from scratch.

It has applications in various fields. For instance, It can help in **a) Developing synthetic organisms for vaccination, b) Creating natural products in a lab** such as vanillin, extracted from vanilla seeds, can be grown in yeasts with additional plant genomes, **c) Use of gene editing systems** such as CRISPR will allow defective genes in animals, plants and even people to be silenced, or changed, and control biological outcomes.

**Pharmaceutical industry:** Synthetic biology can be used to make natural compounds such as artemisinin used for the treatment of malaria and Car T cell therapy for cancer treatment.

**In the fashion industry:** Some companies are exploring the possibility of dyeing jeans without producing hazardous waste using synthetic biology.

**In Agriculture:** Companies using synthetic biology to deliver fixed nitrogen to plants instead of using fertilisers, engineering microbes to create food additives or brew proteins.

Source: [DTE](#)

**Q.10) With reference to Aneurysms, consider the following statements;**

1. It is a swelling that happened only on arteries by the excessive sedimentation of cholesterol.
2. Pregnancy can increase the risk of aneurysms.

**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 swelling of the arteries and veins in any part of the body and is caused by the weakening of the walls.

**Statement 2 is correct:** Potential risk factors for aneurysms include smoking, age, high cholesterol, obesity, hypertension or tissue disorders. Pregnancy can also increase the risk of aneurysms of the spleen.

Source: [Indian Express](#)

**PRELIMS**

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**Q.1) Consider the following options**

- 1) Haryana
- 2) Rajasthan
- 3) UP
- 4) MP

**Which of the above states have presence of Aravalli range?**

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

**Ans) a**

The Aravalli range is Located in the north-western part of India. It is stretching from Gujrat to Delhi through Rajasthan and Haryana, with a length close to 692 Km.

[Source](#)

**Q.2) Consider the following statements**

- 1) India's national-mineral inventory has no lithium bearing reserves yet.
- 2) Bolivia has the largest reserves of lithium resources.

**Which of the above statements 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.** No reserves or resources of lithium-bearing metals are so far part of the national-mineral inventory.

**Statement 2 is correct.** According to the US Geological Survey, lithium resources worldwide total about 89 million tonnes (mt). The top countries with resources are: Bolivia (21 mt), Argentina (19 mt), Chile (9.8 mt), US (9.1 mt), Australia (7.3 mt), China (5.1mt). However, in terms of production, Australia is the largest.

[Source](#)

**Q.3) Which of the following statements is/are correct?**

1. Prevention of Corruption Act includes “judge” under the definition of “public servant”
2. Asset disclosure is not mandatory for judges.

**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**

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Prevention of Corruption Act includes “judge” under the definition of “Public Servant” as “any Judge, including any person empowered by law to discharge, whether by himself or as a member of any body of persons, any adjudicatory functions”;

Statement 2 is incorrect. In 1997, SC adopted a resolution, making asset disclosure mandatory for SC judges. However, there is no clear deadlines for that and it cannot be disclosed to the public.

### Q.4) Consider the following statements.

1. He enriched Sarasvati Mahal Library with priceless works, maps, dictionaries, coins and artwork
2. He founded a school called Navavidhya Kalanidhi Sala where languages, literature, the sciences, arts and crafts, Vedas and shastras were taught.
3. He established the Dhanavantari Mahal, a research institution that produced herbal (indigenous medicine) medicine for humans and animals.

### Which of the following personality was described in the statements above?

- a) Raja Shivaji
- b) Maharaja Serfoji
- c) Sinhavishnu
- d) Dantidurga

**Answer: B**

Source: [The Hindu](#)

### Q.5) Which of the following organization has released the “World report on the health of refugees and migrants”?

- a) United Nations High Commissioner for Refugees
- b) World Health Organization (WHO)
- c) Doctors Without Borders
- d) International Committee of the Red Cross

**Answer: B**

The World Health Organization(WHO) has released a report titled “World report on the health of refugees and migrants’. This is the first WHO report on the health of refugees and migrants.

Source: [Economic Times](#)

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

1. It aims to provide “informal mechanism” to support Pacific islands and to boost diplomatic, and economic ties in the pacific region.
2. India is a signatory to the Madrid 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

**Answer: B**

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**Statement 1 is incorrect:** The Protocol on Environmental Protection to the Antarctic Treaty, also known as the Antarctic-Environmental Protocol, or the Madrid Protocol, is part of the Antarctic Treaty System.

The treaty aims to strengthen the Antarctic Treaty system and for the development of a comprehensive regime for the protection of the Antarctic environment and dependent and associated ecosystems.

**Statement 2 is correct:** India signed the Protocol on Environmental Protection to the Antarctic Treaty in 1998.

Source: [PIB](#)

**Q.7) With reference to Positive Indigenisation List, consider the following statements;**

1. Only the Army and Air Force will procure the listed items from domestic manufacturers.
2. The term domestic manufacturer in Indigenization list includes both Private and Defence Public Sector Undertakings(DPSUs).

**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 positive indigenisation list essentially means that the Armed Forces—Army, Navy, and Air Force—will only procure the listed items from domestic manufacturers.

**Statement 2 is correct:** The term domestic manufacturer in Indigenization list include both Private and Defence Public Sector Undertakings(DPSUs).

Source: [Business Standard](#)

**Q.8) Which of the following statements clearly explains the term Windfall Tax?**

- a) It is a tax imposed for selling the assets of the company.
- b) It is a new tax imposed in Europe to reduce the use of fossil fuel.
- c) It is a higher tax rate on sudden big profits levied on a particular company or industry.
- d) It is a tax imposed on companies for their predatory pricing policies.

**Answer: C**

A windfall tax is a higher tax rate on sudden big profits levied on a particular company or industry. The government of India has recently slashed windfall tax on domestically produced crude, diesel and aviation turbine fuel, withdrew the levy on petrol and exempted exports of fuels from the special economic zone(SEZ) from it.

Source: [Indian Express](#)

**Q.9) Which of the following is/are the benefit of recognizing right to repair?**

1. Boost business for small repair shops
2. Reduce the electrical waste (e-waste)
3. Contribute to circular economy

**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**

**Benefits of recognizing right to repair**

- This will help boost business for small repair shops, which are an important part of local economies.
- It will help reduce the vast mountain of electrical waste (e-waste) that piles up each year on the continent.
- It will save consumers' money.
- It will contribute to circular economy objectives by improving the life span, maintenance, re-use, upgrade, recyclability and waste handling of appliances.

**Source:** [The Hindu](#)

**Q.10) Which of the following is/are India's permanent research base station in Antarctica?**

1. Dakshin Gangotri
2. Maitri
3. Himadri
4. Bharati

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

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

**Answer: D**

Indian Antarctic programme has built three permanent research base stations in Antarctica—named Dakshin Gangotri, Maitri, and Bharati. Currently, India has two operational research stations in Antarctica named Maitri and Bharati.

**Note:** Himadri is India's first permanent Arctic research station located at Spitsbergen, Svalbard, Norway.

Source: [PIB](#)



**PRELIMS**

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**Q.1) Consider the following statements regarding Gross Fixed Capital Formation (GFCF):**

1. GFCF includes both public and private investments.
2. GFCF calculates the total investments in the country after adjusting for depreciation.

**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**

**Exp.)**

Statement 1 is correct. Gross fixed capital formation (GFCF) refer to both private and public investments in infrastructure.

Statement 2 is incorrect. GFCF is not a measure of total investment, because only the value of net additions to fixed assets is measured, and all kinds of financial assets are excluded, as well as stocks of inventories and other operating costs.

[Source](#)

**Q.2) Which of the following are the hurdles to the implementation of National Mobile Monitoring Software (NMMS):**

1. Unstable network in rural India
2. Digital divide among genders
3. Bio-metrics mismatch
4. Malnutrition

**Answer using the codes given below**

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

**Ans.) a**

**Explanation)**

All 3 options are correct.

Implementation challenges

There is a lack of a stable network in rural India. Thus, many workers won't be able to mark their attendance, and would lose a day of wages. For example, Kerala and Jharkhand recorded such cases.

While selecting NREGA mates, **smartphone-owning men** are likely to be given preference over **women having no smartphone**. It is mandatory for the **NREGA Mates** to have a smartphone.

For example, Jharkhand and Andhra Pradesh have seen such cases.

Read this article

Malnutrition is not a challenge to the implementation of the app.

**Q.3) Consider the following statements regarding Fiberisation:**

1. Fiberisation is an alternative to the radio towers.
2. It help in carrying large amounts of data.

**Answer using the codes given below**

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

**Ans.) b**

**Explanation)**

Statement 1 is incorrect. Fiberisation is the process of connecting radio towers with each other via optical fibre cables.

Statement 2 is correct. It helps provide full utilisation of network capacity, carry large amounts of data, and aid in providing additional bandwidth.

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

**Type of agriculture - Method**

1. Greenhouse agriculture - Protected cultivation in polythene enclosures
2. Aeroponics - agriculture without soil
3. Hydroponics - Agriculture in water solution

**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**

Some new and innovative ways of cultivating plants in a limited space have opened up the way to transform this pastime into agri-business. These systems include vertical farming (stacking layers of plants vertically), greenhouse agriculture (protected cultivation in polythene enclosures), aeroponics (agriculture without soil), and hydroponics (nurturing plants in water solution).

**Q.5) Consider the following statements, as per the 2011 Census:**

1. The proportion of older persons in the overall population is more than 10%.
2. The proportion of female is higher than male in population of above 60.

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

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

**Ans.) b**

**Explanation)**

Statement 1 is incorrect. The proportion of older persons in the overall population is low (8.6%), their overall number is very high (104 million), as per the 2011 census.

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Statement 2 is correct. According to Population Census 2011 there are nearly 104 million elderly persons (aged 60 years or above) in India; 53 million females and 51 million males.

**Q.6) SHINYUU Maitri is a bilateral exercise between India and which of the following country?**

- a) South Korea
- b) Vietnam
- c) Singapore
- d) Japan

**Answer: D**

**DHARMA GUARDIAN:** It is an annual military exercise between India and Japan since 2018.

**SHINYUU Maitri:** It is a bilateral exercise between the Indian Air Force and the Japanese Air Self Defence Force (JASDF).

**JIMEX:** It is a bilateral maritime exercise between India and Japan.

**Sahayog-Kaijin:** Joint bilateral exercise between the Indian Coast Guard and the Japan Coast Guard.

Source: [PIB](#)

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

1. The tetrapod dissipates the force of the incoming waves by making the water flow against it.
2. These are placed along coastlines to prevent erosion and water damage.

**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:** Each of the Tetrapods' four legs extends out in a different direction, leaving space in between its legs. This allows the tetrapod to dissipate the force of the incoming waves by making the water flow around and not against it.

**Statement 2 is correct:** These are placed along coastlines to prevent erosion and water damage.

Source: [Indian Express](#)

**Q.8) Wentian** which was seen in news recently is related to which of the following?

- a) A laboratory module of China's Tiangong space station.
- b) A newly found element from Australia listed as noble gas in IUPAC.
- c) A new cruise missile developed by Ukraine.
- d) A newly found fish species that can mimic characteristics of Dolphin.

**Answer: A**

The Wentian (which means "quest for the heavens") laboratory module is the second module of China's Tiangong space station. The lab module will provide a bigger platform for scientific experiments in space. It will also function as a backup of the core module, Tianhe.

Source: [The Hindu](#)

**Q.9) With reference to Anusilan Samity, consider the following statements;**

1. From its foundation to its dissolution during the 1930s, the Samiti challenged British rule in India by engaging in militant nationalism.
2. It was founded by Deshabandhu Chittaranjan Das and Jatindranath Banerjee.

**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:** From its foundation to its dissolution during the 1930s, the Samiti challenged British rule in India by engaging in militant nationalism, including bombings, assassinations, and politically-motivated violence.

**Statement 2 is incorrect:** It was founded by Satish Chandra Pramatha Mitra, Aurobindo Ghose and Sarala Devi.

Source: [PIB](#)

**Q.10) For which of the following reason/s the court can deny bail to an accused?**

1. To prevent the accused from fleeing justice
2. Any scope that the accused might tamper with the evidence
3. The accused is not ready to apologize to victims

**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**

The conditions for not granting bail have specific objectives. Such as preventing the accused from fleeing justice and precluding any scope for tampering with evidence or influencing witnesses.

These objectives are usually secured by directing them to stay in a particular place and asking them to record their presence before a police officer or a court at a specified frequency.

Source: [The Hindu](#)

**PRELIMS**

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**Q.1) “It is a divide-and-conquer tactic used to dominate opposition territory, piece by piece. Such military operations are too small to result in a war. They leave a neighbouring country confused as it is not able to decide how and how much should it respond. These small military actions also help avoid international diplomatic attention.”**

The paragraph given above, describes which one of the following military strategies?

- a) Coercive diplomacy
- b) Deterrence
- c) Salami slicing
- d) Attrition

**Ans) c**

**Explanation)**

Salami Slicing is a divide-and-conquer tactic used to dominate opposition territory, piece by piece. Such military operations are too small to result in a war. They leave a neighbouring country confused as it is not able to decide how and how much should it respond. These small military actions also help avoid international diplomatic attention. These small actions cumulate over a period of time and result in a strategic advantage for the aggressive country.

**Q.2) Consider the following** statements regarding **Joint Theatre Command**

- 1) India is yet to establish any joint theatre command force.
- 2) It can be established only on the basis of geographical regions of a country.

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

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

**Ans) d**

**Statement 1 is incorrect.** At present, there are two joint services commands in India, the first one is Andaman and Nicobar Command (ANC) and the second, being Strategic Forces Command (SFC). Based on the principle of theatre command system, ANC is considered to be the only one of its kind in the country that amalgamates the army, navy and air force as SFC takes care of the nuclear assets of India and is not related to any specific theatre of war.

Statement 2 is incorrect. The USA was the first country to enforce a theatre command system with six geographical and four functional commands presently in place. Thus, commands can also be functional.



**Q.3) Which of the following statements correctly describes the effect of principle of cumulative causation, on the economy and society?**

- a) Those, who have more wealth than others, can accumulate even more wealth.
- b) Those, who are poor compared to others will also get wealthy in a short period of time.
- c) It is the principle used by government for the redistribution of wealth in an economy.
- d) Those, who have accumulated wealth, would be taxed heavily.

**Ans) a**

By the principle of cumulative causation, which is a natural law of societal governance, those who have more wealth, knowledge and power than others can accumulate even more because they have the power to fix the rules. Thus, inequalities will increase both within and among nations, as they have. The winners who benefit the most from the game urge others to continue with it. Until they begin to lose, that is, when they walk off the field with the ball.

**Q.4) Which of the statements given below is/are correct, regarding Special Economic Zones (SEZs)?**

- 1) WTOs rules of fair trade does not apply on the Indian SEZs.
- 2) All states in India have atleast one SEZs.

**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.** In 2019, the **World Trade Organization (WTO)** held that subsidies given to Indian SEZ units violated WTOs rules of fair trade. Thus, the new bill will ensure compliance to the WTO rules.

Statement 2 is incorrect. Some states like Jharkhand and Tripura does not have any SEZs yet.

**Q.6) With reference to Genetically Modified (GM) Crops, consider the following statements;**

- 1. Bt cotton is the only GM crop which has been approved for commercial cultivation in India.
- 2. Clearance of Institutional Biosafety Committees (IBSC) is mandatory for the environmental release of GM 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: A**

**Statement 1 is correct:** Bt cotton is the only GM crop which has been approved for commercial cultivation in India.

**Statement 2 is incorrect:** Clearance of Genetic Engineering Appraisal Committee (GEAC) is mandatory for the environmental release of Genetically Modified (GM) crops. As per the "Rules 1989", State/UT Biotechnology Coordination Committees and District Level Committees are

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responsible for monitoring instances of illegal cultivation of GM crops and taking appropriate action under Environment (Protection) Act, 1986.

Source: [PIB](#)

**Q.7) With reference to Digital Banking Units(DBUs), consider the following statements;**

1. DBU units are licensed under the Banking Regulation Act.
2. Only existing commercial banks may establish DBUs.

**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:** DBUs are treated as banking outlets, equivalent to a branch. These units do not have a legal personality and are not licensed under the Banking Regulation Act.

**Statement 2 is correct:** Only existing commercial banks may establish DBUs.

Source: [The Hindu](#)

**Q.8) N-Treat Technology which was seen in news recently, is related to which of the following statements?**

- a) It is a technology to treat nuclear waste generated in nuclear reactors.
- b) It is a natural and environmentally friendly way for sewage treatment.
- c) It is a new way to treat single use plastic waste.
- d) It is a way to treat monkey pox infections.

**Answer: B**

N-Treat is a seven-stage process for waste treatment that uses screens, gates, silt traps, curtains of coconut fibres for filtration, and disinfection using sodium hypochlorite.

It is a natural and environment friendly way for sewage treatment. Its set up takes place within the nullah channels, that is through the in-situ or on-site method of treatment, and does not require additional space

Source: [Indian Express](#)

**Q.9) Which of the following is/are the benefits of effective manure management?**

1. Generation of biogas equivalent to 50% of India's present LPG consumption.
2. Production of bio-slurry equivalent to 44% of India's NPK requirement.
3. Tackle the problem of stray cattle

**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: D**

The benefits of effective manure management are,

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**Firstly**, manure management initiatives have the potential to generate biogas equivalent to 50% of India's present LPG consumption and to produce bio-slurry equivalent to 44% of India's NPK (nitrogen, phosphorous and potash) requirement.

**Secondly**, it will open avenues of additional income for dairy farmers from the sale of slurry/dung.

**Thirdly**, efficient manure management promotes general well-being & cleanliness and contributes to increasing the productive economic life cycle of the milch animals beyond milking. Thereby helping tackle the problem of stray cattle & lowering GHG emissions.

Source: [PIB](#)

**Q.10) With reference to Migratory Monarch Butterflies, consider the following statements;**

1. They are important pollinators and provide various ecosystem services such as maintaining the global food web.
2. These are listed as Vulnerable under IUCN Red list.

**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:** They are important pollinators and provide various ecosystem services such as maintaining the global food web.

These butterflies follow a unique lifestyle. They traverse the length and breadth of the American continent twice a year, feasting on nectar from a variety of flora. But they breed in only one particular plant — the milkweeds.

**Statement 2 is incorrect:** The International Union for Conservation of Nature (IUCN) has classified Migratory Monarch Butterflies as Endangered under IUCN Red List.

Source: [DTE](#)

**PRELIMS**

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**Q.1) With regard to history of North-East regions of India, consider the following statements**

- 1) Myanmar was annexed into India on the pretext of misgovernance.
- 2) Burma was separated from the rest of India in 1945.

**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**

**Explanations**

Statement 1 is incorrect. Burma acquired a border with British Bengal in 1785, when Burmese forces seized the coastal kingdom of Arakan. A Burmese invasion of Assam, north of Bengal, was seen as a threat to British India, and led to the first Anglo-Burmese War (1824-1826). As a result of this war, the British acquired parts of Lower Burma (in southern Myanmar). Further wars in 1852 and 1885 led to the conquest of the rest of Lower Burma and Upper Burma.

Statement 2 is incorrect. The Government of Burma Act 1935 confirmed that separation would occur on April 1, 1937, ending 51 years of the country being ruled as a province of India.

**Q.2) Consider the following statements**

- 1) Sir Creek is the Westernmost Point in India
- 2) Kuttanad has the lowest altitude in India
- 3) Assam shares border with all other North-East states of India

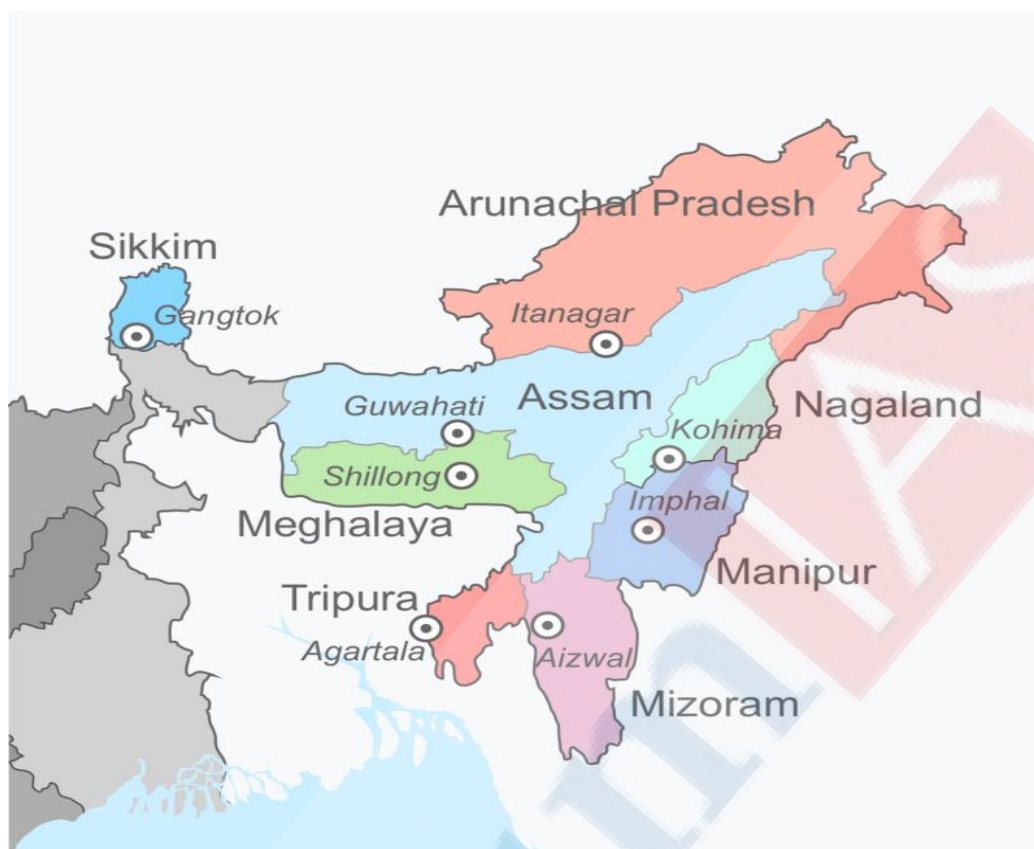
**Which of the statements given above is/are correct?**

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

**Ans) a**

**Explanation)**

The first 2 statements are correct. Kuttanad is the lowest point of India, lying at an elevation of 2.2 m below the sea level. It is situated in the state of Kerala, in the Alappuzha and Kottayam districts.



Assam shares borders with all North-East states except Sikkim.

**Q.3) Which of the following statements correctly describes the term 'High tax buoyancy'?**

- a) High tax collection without changing the tax rate
- b) low tax collection on the unchanged tax rates
- c) No change in the collection despite the high tax rate
- d) change in the tax rate does not affect collection in any way.

**Ans) a**

Tax buoyancy refers to the responsiveness of tax revenue growth to changes in GDP. When a tax is buoyant, its revenue increases without increasing the tax rate.



**Q.4) Consider the following statements regarding 'public health emergencies of international concern (PHEIC)'**

- 1) States have a legal duty to respond promptly to a PHEIC.
- 2) A PHEIC is declared by the United Nations.
- 3) PHEIC may cover events caused by chemical agents or radioactive materials.

**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) c**

**Statement 1 is correct.** Under the 2005 International Health Regulations (IHR) states have a legal duty to respond promptly to a PHEIC.

Statement 2 is incorrect. A PHEIC is a formal declaration by WHO of 'an extraordinary event which is determined to constitute a public health risk to other States through the international spread of disease.

Statement 3 is correct. PHEIC are not confined to only infectious diseases and may cover events caused by chemical agents or radioactive materials. However, to date, all PHEIC declarations have been for viral emerging infectious diseases, not for bacterial diseases, nor for chemical or radioactive materials.

**Q.5) Dewan Chaman Lal committee which was seen in news recently, was related to which of the following?**

- a) To increase private players in space sector in India.
- b) The committee for the first time recognized the service charge in India.
- c) To improve the daily wages of unorganised sector workers.
- d) The committee which demanded to reduce construction activities in the Himalayas.

**Answer: B**

**Hotel Standards and Rate Structure Committee:** The committee was formed under the chairmanship of Dewan Chaman Lal in 1958. The committee recognised the service charge and recommended the following,

a) There be a uniform charge of 10% on the customer's bill throughout India, b) Condemned the practice of solicitation of tips, calling it injurious to the dignity of the worker and causing harassment to the customer, c) Demand for the introduction of comprehensive legislation to provide a minimum-wage structure, uniform rate of service charge and the utilisation and allocation of the service charge for the benefit of the staff, and d) A portion of the service charge so collected may be utilised to provide benefits such as provident funds, pensions and life insurance.

Source: [Indian Express](#)

**Q.6) Which of the following benefit/s will occur by integrating satellite networks (SatNets) with terrestrial 5G networks?**

1. Seamless connectivity in case of public safety, disaster management and emergency situations.
2. It will reduce digital divide.
3. The operators can provide service to stationery and in-motion users.

**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**

There are three main benefits of integrating satellite networks (SatNets) with terrestrial 5G networks are,

- 1) Service continuity:** Integration will provide a seamless transition between terrestrial networks and SatNets in case of public safety, disaster management and emergency situations;
- 2) Service ubiquity:** Integration can provide 5G services in unserved and underserved areas of the world;
- 3) Service scalability:** This utilises the unique capabilities of SatNets in multicasting and broadcasting similar content over a large geographical area. The LEO SatNets can provide service not only to stationary but also to in-motion users.

Source: [The Hindu](#)

**Q.7) Consider the following pairs,**

<b>Wetlands</b>	-	<b>Associated States</b>
1. Pallikaranai Marsh Reserve Forest-		Tamil Nadu
2. Pala wetland	-	Assam
3. Sakhya Sagar Lake	-	Madhya Pradesh

**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 pairs

**Answer: B**

India has added five more Ramsar Sites or Wetlands of International Importance. With this, the number of Ramsar Sites in India has increased from 49 to 54. These are,

<b>Wetlands</b>	-	<b>Associated States</b>
1. Pallikaranai Marsh Reserve Forest-		Tamil Nadu
2. Karikili Bird Sanctuary	-	Tamil Nadu
3. Pichavaram Mangrove	-	Tamil Nadu
4. Pala wetland	-	Manipur
5. Sakhya Sagar Lake	-	Madhya Pradesh

Source: [PIB](#)

**Q.8) With reference to service charges in hospitality sector, consider the following statements;**

1. The practice of levying a service charge has been followed by the hospitality industry since 1991.
2. So far, the levying of service charges has not been upheld by the Supreme Court.

**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:** The practice of levying a service charge has been followed by the hospitality industry since Independence.

**Statement 2 is incorrect:** The levying of service charges has been upheld by various decisions of the Supreme Court as well as the National Consumer Disputes Redressal Commission.

Source: [Indian Express](#)

**Q.9) Which of the following countries is/are not part of MIST Submarine Cable System?**

1. India
2. Sri Lanka
3. Turkmenistan

**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**

MIST is an 8,100 Km long international submarine cable communication network. It will traverse undersea to connect India with countries such as Myanmar, Thailand, Malaysia and Singapore.



Source: [The Hindu](#)

**PRELIMS**

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

- 1) This region falls under dry deciduous forest eco-region.
- 2) The area was identified as the most suitable locations for the reintroduction of Asiatic Lion.
- 3) The area was once a prime cheetah habitat and a principal site for their capture during the Mughal era.

**Which of the following options has been described in the statements given above?**

- a) Panna National Park
- b) Nauradehi Wildlife Sanctuary
- c) Kuno National Park
- d) Gir National Park

**Ans) c**

Kuno National Park predominantly consists of grasslands and sparse forests that are home to an abundance of mammals, reptiles, birds and butterflies. The region was once a prime cheetah habitat and a principal site for their capture during the Mughal era.

Biogeographically this area falls under the Kathiawar-Gir dry deciduous forest eco-region and the forest types found in this area include the Northern tropical dry deciduous forest, Southern tropical dry deciduous forest, Dry Savannah forest & grassland, Tropical riverine forest.

[Base article](#)

**Q.2) Which of the following statements is/are correct?**

- 1) While Regional Comprehensive Economic Partnership (RCEP) includes all ASEAN countries, Indo-Pacific Economic Framework (IPEF) does not.
- 2) While RCEP includes all Quad countries, IPEF does not.

**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 and 2 is incorrect.** The Regional Comprehensive Economic Partnership (Rcep) includes all 10 Asean nations plus Japan, South Korea, Australia, New Zealand and China but not the US. The IPEF includes the four Quad countries plus South Korea, New Zealand, Fiji and seven out of the 10 members of the Association of South-East Asian Nations (Asean).

[Source](#)

**Q.3) Consider the following objectives of “Defence Production and Export Promotion Policy 2020”**

- 1) To achieve a defence production turnover of \$25 Bn by 2025.
- 2) To achieve \$5Bn in defence exports by 2025.

**Which of the above objectives are correct?**

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

**Ans) c**

**Explanation**

The DPEPP set the following targets

Achieve a defence production turnover of \$25 Bn by 2025.

The above to include \$5Bn or 35,000 Crs. in defence exports by 2025.

**Q.4) Which of the following statements is/are correct regarding Swachh Sagar, Surakshit Sagar campaign?**

- 1) It will be the cleanliness campaign along India’s entire coastline.
- 2) It will celebrate International Coastal Cleanup Day.

**Answer using 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.** This year on 17th September 2022, the Government of India along with other voluntary organizations, and the local society will run a cleanliness campaign "Swachh Sagar, Surakshit Sagar" along India’s entire coastline.

Statement 2 is correct. Globally, "International Coastal Clean-up Day" is celebrated on the third Saturday of September, every year. Swachh Sagar, Surakshit Sagar campaign will celebrate International Coastal Cleanup Day.

**Q.5) Which of the statements given above is/are correct?**

- 1) Climatic conditions of India are most suitable for the storage of medicines.
- 2) Schedule H drugs purchase require mandatory doctor’s prescription.
- 3) The law regulating Drugs and Cosmetics in India, at present, was enacted before independence.

**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) c**

Statement 1 is incorrect. Climatic conditions require medicines to be stored at below 30 degrees Celsius and 70 per cent relative humidity — it is unattainable in most of India.



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Statement 2 is correct. There are presently over 540 Schedule H drugs that require a doctor's prescription and the fact that they can be easily accessed over-the-counter is well known.

Statement 3 is correct. Drugs and cosmetics in India are governed by 1940 Drugs and Cosmetics Act.

**Q.6) Which of the following action/s can be considered a part of the “fiscal stimulus” package?**

1. Increasing government spending
2. Reducing tax rates
3. Discontinuing subsidies after economic recession.

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

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

**Answer: B**

Increasing government spending and Reducing tax rates are done to encourage and support economic growth. Hence, these are considered as a form of fiscal stimulus.

Discontinuing subsidies after economic recession is a step towards fiscal consolidation rather than fiscal stimulus.

Source: [The Hindu](#)

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

1. It is a cyber-attack wherein a computing device is hijacked.
2. Cryptojackers demand victim's crypto assets.
3. It is hard to detect and the victims of these attacks mostly remain unaware that their systems have been compromised.

**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:** It is a cyber attack wherein a computing device is hijacked and its resources are used to illicitly mine cryptocurrency.

**Statement 2 is incorrect:** Cryptojackers co-opt devices, servers and cloud infrastructure, and use their resources for mining. The use of 'stolen' or cryptojacked resources is used only to reduce the cost involved in mining.

**Statement 3 is correct:** Cryptojacking is hard to detect and the victims of these attacks mostly remain unaware that their systems have been compromised. Some telltale signs are the device slowing down, heating up or the battery getting drained faster than usual.

Source: [Indian Express](#)

**Q.8) With reference to Prevention of Money Laundering Act, consider the following statements;**

1. Enforcement Directorate could arrest a person even without informing him of the charges.
2. The Act was enacted in response to India's global commitment under the Vienna Convention.

**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:** Enforcement Directorate could arrest a person even without informing him of the charges.

**Statement 2 is correct:** The Act was enacted in response to India's global commitment under the Vienna Convention. The primary purpose of the Act was to combat money laundering in India.

Source: [TOI](#)

**Q.9) With reference to Delimitation, consider the following statements;**

1. Delimitation commission orders have the force of law and they cannot be challenged before any court.
2. The Delimitation Commission is appointed by the Election Commission 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:** Delimitation commission orders have the force of law and they cannot be challenged before any court.

**Statement 2 is incorrect:** The Delimitation Commission is appointed by the President of India and works in collaboration with the Election Commission of India.

Source: [Business Standard](#)

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**Q.10) With reference to Light-mantled Albatross**, consider the following statements;

1. These are species native to the Antarctic seas and found only in Antarctica.
2. These Albatross has a broad pelagic habits and maintains a circumpolar distribution in the Southern Ocean.

**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:** Recently Light-mantled Albatross, a species native to the Antarctic seas, was recorded in Tamil Nadu. This is the first time that the bird – a native of Antarctica -- was being spotted in the Asian continent.

**Statement 2 is correct:** The Light-mantled Albatross, with broad pelagic habits, maintains a circumpolar distribution in the Southern Ocean.

Source: [The Hindu](#)

**PRELIMS**

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

- 1) India's gross expenditure on R&D (GERD) is more than 1%
- 2) Karnataka tops NITI Aayog's **India Innovation Index 2021**.

**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. India's gross expenditure on R&D (GERD) as a percentage of GDP has been consistent and hovered around 0.7% for about a decade.

Statement 2 is correct. Karnataka topped the India Innovation Index followed by **Telangana and Haryana**.

[Base Article](#)

**Q.2) Which of the following statements is/are correct regarding Directorate General of Civil Aviation?**

- 1) Air Traffic coming into India is not responsibility of DGCA, it is just responsible for regulation of air transport services within India and going from India.
- 2) It co-ordinates all regulatory functions with International Civil Aviation Organisation.

**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.** It is responsible for regulation of air transport services to/from/within India and for enforcement of civil air regulations, air safety, and airworthiness standards.

**Statement 2 is correct.** DGCA co-ordinates all regulatory functions with International Civil Aviation Organisation.

[Base Article](#)

**Q.3) Consider the following statements regarding UNCTAD World Investment Report (WIR) 2022**

- 1) Overall, India's FDI inflow has increased compared to 2020-21.
- 2) Automobile Industry has received the highest percentage of FDI among all industries.
- 3) Government approval or security clearance from MHA is required for investments from Bangladesh.

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

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

**Ans) b**

**Statement 1 is correct.** Despite the ongoing pandemic and global developments, India received the highest annual FDI inflows of USD 84,835 million in FY 21-22 overtaking last year's FDI by USD 2.87 billion. Earlier, FDI inflows increased from USD 74,391 million in FY 19-20 to USD 81,973 million in FY 20-21.

Statement 2 is incorrect. Top 5 sectors receiving highest FDI Equity Inflow during FY 2021-22 are Computer Software & Hardware (24.60%), Services Sector (Fin., Banking, Insurance, Non Fin/Business, Outsourcing, R&D, Courier, Tech. Testing and Analysis, Other) (12.13%), Automobile Industry (11.89%), Trading 7.72% and Construction (Infrastructure) Activities (5.52%).

Statement 3 is correct. Prior government approval or security clearance from MHA is required for investments in sensitive sectors such as defence, media, telecommunication, satellites, private security agencies, civil aviation and mining, besides any investment from Pakistan and Bangladesh.

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

- 1) Black tigers are only found in Odisha's Simlipal.
- 2) The fencing of tiger reserves can lead to their extinction.

**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) c**

**Statement 1 is correct.** Tigers have a distinctive dark stripe pattern on a light background of white or golden. A rare pattern variant, distinguished by stripes that are broadened and fused together, is also observed in both wild and captive populations. This is known as pseudo-melanism, which is different from true melanism, a condition characterised by unusually high deposition of melanin, a dark pigment.

Statement 2 is correct. fencing tiger reserves and isolating them can result in high extinction. It is because the population of tigers cannot move and increase their population. Decades of research in ecology and evolution suggest that numbers are critical to avoid extinction. Populations that are smaller than 100 breeding individuals have a high probability of extinction

[Base article](#)



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**Q.6) With reference to the suspension of MPs, consider the following statements;**

1. In Lok Sabha, the House must move a motion to suspend the MP until the end of the session.
2. In Rajya Sabha, the Chairmen can “name” an MP, who shall then automatically stand suspended for five days or the remaining part of the session.

**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.** The statements are interchanged.

The presiding officers can direct an MP to withdraw from the House for any disorderly conduct. If the MP continues disrupting the House, the presiding officer can “name” the legislator. After that, the House can move a motion to suspend the MP until the end of the session. These powers are common to the presiding officers of both Houses.

However, in 2001, Lok Sabha changed its rules to give the Speaker more powers. As per this new rule, the Speaker can “name” an MP, who shall then automatically stand suspended for five days or the remaining part of the session. This rule removes the need for the House to pass a motion for suspension.

Rajya Sabha has not incorporated this provision in its procedures.

Source: [Indian Express](#)

**Q.7) Which of the following statements clearly describes the term “Genetic drift”?**

- a) Complete change in the genome of an organism due to excessive out breeding.
- b) Small populations of the same species lose their advantageous genetic variants and get detrimental genetic variants very often.
- c) A drastic reduction in genetic diversity of various species in eco system due to cross breeding.
- d) A drift in genetic diversity of various species in environment due to climate change.

**Answer: B**

Small populations are subject to chance/random events. These chance events may cause them to lose advantageous genetic variants. Further, other detrimental genetic variants might increase in frequency. This process is called genetic drift.

Source: [The Hindu](#)

**Q.8) Which of the following Act/s does Enforcement Directorate has been given the task of enforce?**

1. The Foreign Exchange Management Act, 1999
2. The Fugitive Economic Offenders Act, 2018
3. The Prevention of Money Laundering Act, 2002

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

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

**Answer: C**

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ED has been given the task of enforcing the provisions of two special fiscal laws

- Foreign Exchange Management Act, 1999 (FEMA).
- The Prevention of Money Laundering Act, 2002 (PMLA).

Source: [Indian Express](#)

**Q.9) With reference to Family courts, consider the following statements;**

1. The setting up of family courts and their functioning comes under the purview of the State governments in consultation with their respective high courts.
2. These courts are governed under the state legislation.

**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 setting up of family courts and their functioning comes under the purview of the State governments in consultation with their respective high courts.

**Statement 2 is incorrect:** Family Courts Act, 1984 enacted by the Centre governs the family courts. Recently, the Lok Sabha has passed the Family Courts (Amendment) Bill, 2022 to establish family courts in Himachal Pradesh and in Nagaland.

Source: [Indian Express](#)

**Q.10) With reference to Samudrayaan Mission, consider the following statements;**

1. The project proposes to send a submersible vehicle with robots to a depth of about 1000 meters.
2. The project is being undertaken by the National Institute of Ocean Technology.

**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 project proposes to send a submersible vehicle with three persons to a depth of about 6000 metres to carry out deep underwater studies

**Statement 2 is correct:** The project is being undertaken by National Institute of Ocean Technology.

Source: [PIB](#)

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### Q.1) Consider the following statements

- 1) India is not among top 3 world's largest country in terms of coal deposits.
- 2) Commercial coal mining to a private player is permitted in India.
- 3) Peat type of coal is the first stage of transformation from wood to coal.

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

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

#### Ans) d

**Statement 1 is correct.** India has the fifth-largest proven coal reserves in the world, **totalling around 106 billion tonnes in 2019** – just under 10% of the global total. Jharkhand, Odisha and Chhattisgarh in the east of the country are the states containing the largest coal deposits. Statement 2 is correct. The sector has been opened up for commercial coal mining by private players in 2020 and first ever successful auction of commercial mining was concluded with allocation of 19 coal mines in 2020.

Statement 3 is correct. **Peat** has less than 40 per cent carbon content. It is in the first stage of transformation from wood to coal. It has low calorific value and burns like wood.

### Q.2) Which of the following statements is/are correct regarding bio-decomposers?

1. Bio-decomposers contain strains of decomposing Bacteria and Fungus.
2. It requires absence of moisture and good sunlight to get activated.

#### Answer using the codes given below:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neother 1 nor 2

#### Ans) a

**Statement 1 is correct.** Bio-decomposers contain strains of decomposing Bacteria and Fungus. Dormant form of decomposing Bacteria and cell mass of Fungal spore, accelerate the process of decomposition under aerobic and anaerobic condition.

Statement 2 is incorrect. Since it is a biological material, there shouldn't be any exposure to sunlight, and the moisture content should be adequate, for it to work.

### Q.3) Which of the following statements is/are correct?

- 1) With James Webb Space Telescope (JWST), galaxies from the past can be seen.
- 2) We see the Sun's image with the lag of 8.3 minutes.

#### Answer using the codes given below:

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

#### Ans) c

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Statement 1 and 2 are correct. Light can take time to reach us as per the distance it has covered before reaching us. Thus, we see the object as it was when it emitted that light. For example, Sunlight takes 8.3 minutes to reach earth. Thus, we see the sun as it was 8.3 minutes ago.

**Q.4) With regard to International Organisation for Migration, consider the following statements.**

- 1) It promotes international cooperation on migration issues
- 2) The IOM Constitution recognizes the link between migration and economic, social and cultural development, as well as to the right of freedom of movement.

**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) c**

Statement 1 is correct. IOM works to help ensure the orderly and humane management of migration to promote international cooperation on migration issues, to assist in the search for practical solutions to migration problems and to provide humanitarian assistance to migrants in need, including refugees and internally displaced people.

Statement 2 is correct. The IOM Constitution recognizes the link between migration and economic, social and cultural development, as well as to the right of freedom of movement.

IOM works in the four broad areas of migration management:

- Migration and development
- Facilitating migration
- Regulating migration
- Forced migration.

**Q.5) Consider the following statements**

- 1) Varaha-1's functions will be restricted to the collection and pumping of nodules.
- 2) blue economy is one of the ten core dimensions for national growth

**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) c**

**Statement 1 is correct.** Varaha-1 is a self-propelled seabed mining machine for the collection of polymetallic nodules (PMN). Unlike Matsya 6000, this one will not have any passengers. Its work is restricted to the collection and pumping of nodules, steadily and continuously over prolonged durations, in the deep-sea conditions up to 6,000m.

Statement 2 is correct. The Government of India's Vision of New India by 2030 enunciated in February 2019 highlighted the Blue Economy as one of the ten core dimensions of growth.



**Q.6) Which of the following benefit/s can occur if the Parliament increased House sitting time?**

1. Lead to healthy functioning of the house
2. Increase the cases of guillotine closure
3. Increase in private members' bills

**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:** Increased sitting in Houses (State or Parliament) would provide more time to the members for discussion on the bills, have a healthy debate. This will eventually lead to healthy functioning of the house.

**Statement 2 is incorrect:** Increased sittings would provide more time for the discussion and reduce the cases of guillotine closure.

**Statement 3 is correct:** Increased sittings would provide more time to the private members to not only prepare and present the bill in the house, but also have a detailed and healthy discussion for its passage.

Source: [The Hindu](#)

**Q.7) With reference to Agriculture Census, consider the following statements;**

1. The agriculture census is conducted every 10 years.
2. It is the main source of information on a variety of agricultural parameters at a relatively minute level.
3. The first census was carried out after the Green Revolution.

**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**

The agriculture Census is conducted every 5 years.

**Purpose:** It is the main source of information on a variety of agricultural parameters at a relatively minute level, such as the number and area of operational holdings, their size, class-wise distribution, land use, tenancy and cropping pattern among others.

**The first Agriculture Census** was conducted in 1970-71. The Tenth Agriculture Census was conducted in 2015-16 and the 11th Census was delayed due to the corona pandemic.

Source: [PIB](#)



**Q.8) Which of the following metal/s can be called bullion?**

1. Gold
2. Platinum
3. Silver

**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**

Bullion refers to physical gold and silver of high purity that is often kept in the form of bars, ingots, or coins. It can sometimes be considered legal tender and is often held as reserves by central banks or held by institutional investors.

Source: [The Hindu](#)

**Q.9) With reference to Spinal Muscular Atrophy, consider the following statements;**

1. The person suffering from this disease cannot control the movement of their muscles.
2. It was caused by Varicella zoster 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: A**

**Statement 1 is correct:** Spinal muscular atrophy is a rare genetic disease. The person suffering from this disease cannot control the movement of their muscles.

**Statement 2 is incorrect:** It is caused by the loss of nerve cells that carry electrical signals from the brain to the muscles. The protein needed for this signaling is coded by a gene. Everyone has two copies of this gene- one from the mother and the other from the father. A child develops this disorder only if both the copies are faulty.

**Note:** Varicella zoster virus causes shingles and chickenpox.

Source: [PIB](#)

**Q.10) With reference to Nowcasting, consider the following statements;**

1. It is a technique used to cast any event live without any delay.
2. In this method, radar and satellite observations are processed and displayed rapidly by computers.

**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:** Nowcasting is weather forecasting on a very short term e.g. 2 hrs.

**Statement 2 is correct:** In this method, radar and satellite observations of local atmospheric conditions are processed and displayed rapidly by computers to project weather several hours in advance.

Source: [PIB](#)