Forum AS

10 PM Current Affairs Quiz Compilation

19th to 24th June, 2023

PRELIMS

Q.1) Repetitive Transcranial Magnetic Stimulation (rTMS) was seen in the news recently, is associated with –

- a) Gene editing therapy
- b) Brain stimulation technique
- c) Cross fertilization
- d) Green technology

Answer: B

Explanation – Repetitive Transcranial Magnetic Stimulation (rTMS) therapy is a non-invasive brain stimulation technique that uses electromagnetic fields to generate electrical impulses in specific regions of the brain that are known to modulate moods.

Source: ForumIAS

Q.2) Consider the following statements:

- 1. Remittances is an important source of foreign exchange for India.
- 2. Remittance inflows in India represented very large shares of GDP in 2022.
- 3. Remittances are highly complementary to government cash transfers and essential to households during times of need.

Which of the statements given above are correct?

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

Answer: C

Explanation -

Statements 1 and 3 are correct. Remittances is an important source of foreign exchange for India. Remittances are highly complementary to government cash transfers and essential to households during times of need.

Statement 2 is incorrect. In India, the largest global recipient, remittances represented only 3.3% of GDP in 2022. Remittance inflows represented very large shares of GDP in countries such as Tajikistan (51% of GDP), Tonga (44%), Lebanon (35%), Samoa (34%), and the Kyrgyz Republic (31%).



Q.3) With reference to Impact Bonds, consider the following statements:

- 1. Impact bonds can be used for all sorts of purposes and in any sector.
- 2. Skill Impact Bond (SIB) is India's first development impact bond for skilling and employment.
- 3. Social Impact Bonds are entirely dependent upon the success of the social outcome.
- 4. Social Impact Bonds are affected by variables such as interest rate risk, reinvestment risk, or market risk.

How many of the above statements are correct?

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

Answer: C

Explanation -

Statements 1, 2 and 3 are correct. Impact bonds can be used for all sorts of purposes and in any sector, from social projects that help to reduce inequality or improve care for the elderly to projects that enhance public transport or sustainable energy projects. Skill Impact Bond (SIB) is India's first development impact bond for skilling and employment. Social Impact Bonds are entirely dependent upon the success of the social outcome.

Statement 4 is incorrect. Unlike normal bonds, social impact bonds are **not** affected by variables such as interest rate risk, reinvestment risk, or market risk.

Source: ForumIAS

Q.4) With reference to "Dugdh Sanakalan Sathi Mobile App" consider the following statements:

- 1. The app will help in online monitoring of daily milk poured at Milk Cooperative Societies.
- 2. The app has been developed by Rajasthan Electronics & Instruments Limited (REIL), Jaipur.

Select the correct statements using the codes given below:

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

Answer: C Explanation -

Statement 1 and 2 are correct. Dugdh Sanakalan Sathi Mobile App will help in online monitoring of daily milk poured at Milk Cooperative Societies. The app has been developed by Rajasthan Electronics & Instruments Limited (REIL), Jaipur.



Q.5) Which of the following statement is incorrect regarding the Ionosphere?

- a) The ionosphere acts as a gateway for radio communication between the ground and space.
- b) Weather from Earth, like hurricanes or large thunderstorm systems, can create pressure waves that ripple up into the ionosphere.
- c) Ionosphere is made up of uncharged particles.
- d) The ionosphere is a very active part of the atmosphere, and it grows and shrinks depending on the energy it absorbs from the Sun.

Answer: C

Explanation – The name ionosphere comes from the fact that gases in these layers are excited by solar radiation to form ions, which have an electrical charge.

Source: ForumIAS

Q.6) With reference to the United Nations Sustainable Development Cooperation Framework 2023-2027, consider the following statements:

- 1. The framework has been signed between Association for Democratic Reforms (ADR) and the European Union.
- 2. The framework is built upon four pillars.
- 3. The implementation, monitoring and reporting of the framework will be co-led by the Government of India and the United Nations, through a Joint Steering Committee.

Which of the statements given above are correct?

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

Answer: B

Explanation -

Statement 1 is incorrect. The framework has been signed between Niti Aayog and the United Nations.

Statements 2 and 3 are correct. The framework is built upon four pillars—People, Prosperity, Planet, and Participation. The implementation, monitoring and reporting of the framework will be co-led by the Government of India and the United Nations, through a Joint Steering Committee.

Source: ForumIAS

Q.7) Consider the following statements:

- 1. Cratons are pieces of ancient continents that formed several billions of years ago.
- 2. Greenstones are rock assemblages that are primarily composed of sub-marine volcanic rocks with minor sedimentary rocks.

Select the correct answer from the codes given below:

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

Answer: C

Explanation -



Statements 1 and 2 are correct. Cratons are pieces of ancient continents that formed several billions of years ago. Greenstones are rock assemblages that are primarily composed of submarine volcanic rocks with minor sedimentary rocks.

Source: ForumIAS

Q.8) Consider the following statements:

- 1. Nearly 48% of cyclones of the Arabian Sea never reached land.
- 2. The Bay of Bengal has a much deeper layer of warm water compared to the Arabian Sea.
- 3. Steering winds influence the direction and recurving of cyclones.

How many of the above statements are correct?

- a) Only one
- b) Only two
- c) All three
- d) None

Answer: B

Explanation -

Statements 1 and 3 are correct. Nearly 48% of cyclones of the Arabian Sea never reached land. Steering winds influence the direction and recurving of cyclones.

Statement 2 is incorrect. The Arabian Sea has a much deeper — up to 40 metres – layer of warm water compared to the Bay of Bengal.

Source: ForumIAS

Q.9) With reference to the Integrated Theatre Command, consider the following statements:

- 1. A theatre command is a military structure wherein all the assets of the army, air force and navy in a particular theatre of war are under the operational control of a three-star general.
- 2. These unified combat commands are organized either on a geographical basis or on a functional basis.

Select the correct statements using the codes given below:

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

Answer: C

Explanation -

Statements 1 and 2 are correct. A theatre command is a military structure wherein all the assets of the army, air force and navy in a particular theatre of war are under the operational control of a three-star general. These unified combat commands are organized either on a geographical basis or on a functional basis.



Q.10) Consider the following statements with respect to Synthetic embryos:

- 1. Synthetic embryos are embryos created by fertilization.
- 2. These embryos do not require an egg or sperm cell to facilitate their creation.
- 3. These embryos rely on self-assembling stem cell structures to mimic the natural process of early human development.

Which of the statements given above are correct?

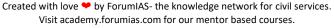
- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Answer: B

Explanation -

Statements 1 is incorrect. Synthetic embryos are embryos, which are created without fertilization. These are also known as artificial embryos.

Statements 2 and 3 are correct. Synthetic embryos do not require an egg or sperm cell to facilitate their creation. These embryos rely on self-assembling stem cell structures to mimic the natural process of early human development.





PRELIMS

Q.1) With reference to "Gandhi Peace Prize" consider the following statements:

- 1. The award is given once in three years.
- 2. The award is open to all persons.
- 3. The jury which decides the awardee of the Gandhi Peace Prize comprises the Prime Minister of India.

Which of the statements given above is/are correct?

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

Answer: B

Explanation -

Statement 1 is incorrect. Gandhi Peace Prize is an annual award instituted by the Government of India in 1995.

Statements 2 and 3 are correct. Gandhi Peace Prize is open to all persons regardless of nationality, race, language, caste, creed or gender. The jury which decides the awardee of the Gandhi Peace Prize comprises the Prime Minister of India, the Leader of the Opposition in the Lok Sabha, the Chief Justice of India, the Speaker of the Lok Sabha and one other eminent person.

Source: ForumIAS

Q.2) Consider the following statements:

- 1. Global warming is causing the Arabian Sea to heat up, which is resulting in more stronger cyclones.
- 2. The number of cyclonic disturbances originating from the Bay of Bengal has increased in the past few decades.

Select the correct statements using the codes given below:

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

Answer: A

Explanation -

Statement 1 is correct. Global warming is causing the Arabian Sea to heat up, which is resulting in more, stronger cyclones.

Statement 2 is incorrect. The number of cyclonic disturbances originating from the Bay of Bengal has decreased in the past few decades.



Q.3) Consider the following statements:

- 1. Soul of Steel Challenge is modelled on the lines of the 'Ironman triathlon'.
- 2. Team CLAW (Conquer Land, Air, Water) is a team of ex-Indian Special Forces commandos.
- 3. The Soul of Steel event will lay the foundation to galvanize the adventure sports potential of remote areas of India.

Which of the statements given above are correct?

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

Answer: D

Explanation -

Statements 1, 2 and 3 are correct. Soul of Steel Challenge is modelled on the lines of the 'Ironman triathlon'. Team CLAW (Conquer Land, Air, Water) is a team of ex-Indian Special Forces commandos. The Soul of Steel event will lay the foundation to galvanize the adventure sports potential of remote areas of India.

Source: ForumIAS

Q.4) With reference to Open Market Sale Scheme (OMSS) consider the following statements:

- 1. The scheme aims at integrating local shopkeepers in an open platform and sell their products online at pre-determined rates.
- 2. The government has recently announced to limit the number of registrations per area for the shopkeepers under the scheme.

Select the correct statements using the codes given below:

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

Answer: D

Explanation-

Statements 1 and 2 are incorrect. Under the Open Market Sale Scheme, the Food Corporation of India (FCI) sells surplus stocks of wheat and rice at pre-determined prices through e-auction in the open market. The Central Government has recently announced its decision to reduce the quantity of foodgrains a bidder can purchase under the Open Market Sale Scheme.



Q.5) With reference to Direct Seeding of Rice (DSR) consider the following statements:

- 1. In DSR, paddy is sown in the field after the nursery preparation, puddling or flooding.
- 2. DSR method reduces labor and drudgery by eliminating seedling uprooting and transplanting.
- 3. DSR increases total income by reducing cost of cultivation.

Which of the statements given above are correct?

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

Answer: B

Explanation -

Statements 1 is incorrect. In DSR, paddy is sown directly in the field without any nursery preparation, puddling or flooding.

Statements 2 and 3 are correct. DSR method reduces labor and drudgery by eliminating seedling uprooting and transplanting. DSR increases total income by reducing cost of cultivation.

Source: ForumIAS

Q.6) Consider the following statements with respect to Duck-billed Dinosaur:

- 1. Duck-billed Dinosaur is a species of carnivorous dinosaur.
- 2. They were common in North America, Asia and Europe during the Cretaceous period.

Select the correct statements using the codes given below:

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

Answer: B

Explanation-

Statement 1 is incorrect. Duck-billed Dinosaur is a species of herbivorous dinosaur.

Statement 2 is correct. Duck-billed Dinosaur were common in North America, Asia and Europe during the Cretaceous period.

Source: ForumIAS

Q.7) With reference to 'Armado' consider the following statements:

- 1. It is a type of Geosynchronous Satellite Launch Vehicle (GSLV).
- 2. It is a fully indigenous vehicle.
- 3. It can accommodate a driver and 5 passengers.

Which of the statements given above are correct?

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

Answer: B

Explanation -



Statement 1 is incorrect. Armado is India's first Armoured Light Specialist Vehicle (ALSV). **Statements 2 and 3** are correct. Armado is a fully indigenous vehicle designed and built by the Mahindra Defence Systems (MDS) for the Indian armed forces. It can accommodate a driver and 5 passengers.

Source: ForumIAS

Q.8) Consider the following statements:

- 1. Currently, renewable energy accounts for only 12% of India's power generation.
- 2. The variable nature of renewable energy power makes it difficult to integrate it with the transmission of power produced by conventional sources.

Select the correct statements using the codes given below:

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

Answer: C Explanation -

Statements 1 and 2 are correct. Currently, renewable energy accounts for only 12% of India's power generation. The variable nature of renewable energy power makes it difficult to integrate it with the transmission of power produced by conventional sources.

Source: ForumIAS

Q.9) With reference to the "Reserve Currency" consider the following statements:

- 1. These are also known as soft currencies.
- 2. Reserve currencies are required to meet the gap between a country's international payments and receipts.
- 3. These currencies are non-convertible currencies.

Which of the statements given above is/are correct?

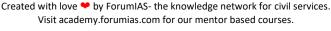
- a) 1 and 2 only
- b) 2 only
- c) 2 and 3 only
- d) 1 only

Answer: B

Explanation -

Statements 1 and 3 are incorrect. Reserve Currencies are known as hard currency. These currencies are fully convertible currencies.

Statement 2 is correct. Reserve currencies are required to meet the gap between a country's international payments and receipts.





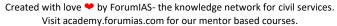
Q.10) Open-Radio Access Networks (O-RAN) was seen in the news recently, is related to -

- a) Missile Technology
- b) Radar Coverage
- c) 5G Technology
- d) Genome Sequencing

Answer: C

Explanation – Open RAN is an ongoing shift in mobile network architectures that enables service providers the use of non-proprietary subcomponents from a variety of vendors. India has become a leader in testing Open-Radio Access Networks (O-RAN) as a pathway to 5G coverage.

Source: ORF





PRELIMS

Q.1) With reference to Orchid plants, consider the following statements:

- 1. These plants are capable of growing in polluted air.
- 2. The highest number of orchid species is recorded from Arunachal Pradesh.
- 3. These are listed in Appendix I of Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Which of the statements given above is/are correct?

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

Answer: B

Explanation -

Statements 1 and 3 are incorrect. Orchids are natural gauges of air quality because they don't grow in polluted air. The entire orchid family is listed under appendix II of CITES and hence any trade of wild orchid is banned globally.

Statement 2 is correct. The highest number of orchid species is recorded from Arunachal Pradesh.

Source: ForumIAS

Q.2) Consider the following statements:

- 1. The Mesolithic period existed prior to the Paleolithic period.
- 2. Mesolithic people made bow and arrow for hunting.
- 3. The Mesolithic people used non-microlithic tools made of flakes and blades.

How many of the above statements are correct?

- a) Only one
- b) Only two
- c) All three
- d) None

Answer: B

Explanation -

Statement 1 is incorrect. The Mesolithic period also called the Middle Stone Age existed between the Paleolithic (Old Stone Age), and the Neolithic (New Stone Age).

Statements 2 and 3 are correct. Mesolithic people made bow and arrow for hunting. The Mesolithic people also used non-microlithic tools made of flakes and blades.



Q.3) With reference to "LEED Certification" consider the following statements:

- 1. The certification has been developed by United States Green Building Council (USGBC).
- 2. The certification is widely used in development of energy efficient bulbs.
- 3. LEED Zero recognises projects that have reached a net-zero or net-positive status in the categories of carbon, energy, water, or waste.

Which of the statements given above are correct?

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

Answer: C

Explanation -

Statements 1 and 3 are correct. LEED (Leadership in Energy and Environmental Design) certification has been developed by United States Green Building Council (USGBC). LEED Zero recognises projects that have reached a net-zero or net-positive status in the categories of carbon, energy, water, or waste.

Statement 2 is incorrect. LEED Certification is the world's most widely used green building rating system in the world.

Source: ForumIAS

Q.4) Which of the following statement is incorrect regarding the Brahmani Natural Arch?

- a) It is located in Narsapur Forest in the Andhra Pradesh.
- b) It is composed of ferruginous sandstone from the Upper Kamthi Formation.
- c) It dates back to the lower to middle Jurassic age.
- d) It showcases primary sedimentary structures and is believed to have formed due to fault activities and sub-aerial weathering.

Answer: A

Explanation – Brahmani Natural Arch is located at Kanika range of Sundargarh forest division of Odisha.

Source: ForumIAS

Q.5) With reference to the National Working Plan Code 2023, consider the following statements:

- 1. The code aims at monitoring the budgetary allocations and providing guidelines in implementing budgetary promises.
- 2. The 2023 code has prescribed state forest departments to engage in continuous data collection and its updation in a centralized database.

Select the correct answer from the codes given below:

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

Answer: B

Explanation -



Statement 1 is incorrect. National Working Plan Code is the main instrument through which the scientific management of Forests is being achieved in India. The code was first adopted in 2004 with a subsequent amendment in 2014.

Statement 2 is correct. The 2023 code has prescribed state forest departments to engage in continuous data collection and its updation in a centralized database.

Source: ForumIAS

Q.6) Consider the following statements:

- 1. Earth's geographic north and south poles are where its axis intersects the surface.
- 2. The Earth's poles are not fixed.
- 3. The rotation of the Earth is unaffected by the movement of water worldwide.

Which of the statements given above is/are correct?

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

Answer: B

Explanation -

Statement 1 and 2 are correct. Earth's geographic north and south poles are where its axis intersects the surface. These poles are not fixed. The poles fluctuate due to variations in the Earth's mass distribution.

Statement 3 is incorrect. The movement of water around the world influences the Earth's rotation.

Source: ForumIAS

Q.7) With reference to "Remittances" consider the following statements:

- 1. For India, remittances represent a greater source of external finance than the Foreign Direct Investment (FDI).
- 2. Remittances play a significant role in poverty reduction.
- 3. The low transaction cost of receiving remittances may lead to lower spending.

Which of the statements given above is/are correct?

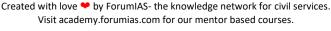
- a) 1 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 2 only

Answer: C

Explanation -

Statements 1 and 2 are correct. Remittances, for India, are a source of external finance larger in size than FDI, portfolio or development assistance flows. Remittances play a significant role in poverty reduction and improve health and educational outcomes of the recipient households. **Statement 3** is incorrect. The low transaction cost of receiving remittances may lead to higher

spending because people then will get more money in their hands.





Q.8) With reference to Copernicus programme, which of the following statement is correct?

- a) The programme aims at encouraging participation in literature works.
- b) The progarmme has been designed for the Economically Weaker Sections (EWS) to get enrollment in higher education through scholarships.
- c) It is a student exchange programme for Indian and French students to acquire and exchange historical knowledge.
- d) The program's goal is to offer accurate, timely, and freely available information to help enhance environmental management and protect civil security.

Answer: D

Explanation – Copernicus programme provides accurate, timely and easily accessible information to improve the management of the environment, understand and mitigate the effects of climate change and ensure civil security. This initiative is headed by the European Commission (EC) in partnership with the European Space Agency (ESA).

Source: ForumIAS

Q.9) Consider the following statements:

- 1. The tilt of the Earth' axis remains constant throughout the year.
- 2. The summer solstice is the time when the sun is directly above the Tropic of Capricorn.
- 3. The summer solstice leads to an increase in the process of photosynthesis.

How many of the above statements are correct?

- a) Only one
- b) Only two
- c) All three
- d) None

Answer: B

Explanation -

Statement 1 and 3 are correct. The Earth's axis is inclined approximately 23.5 degrees relative to its orbital plane around the sun. This tilt remains constant throughout the year, causing changing seasons as Earth orbits the sun. The summer solstice leads to an increase in the process of photosynthesis because there is an increase in solar energy on the day since the Sun is directly overhead.

Statement 2 is incorrect. The summer solstice is the time when the sun is directly above the Tropic of Cancer.

Source: India Today

Q.10) The Tropic of Cancer passes through

- a) Niger, Libya, Egypt, Saudi Arabia
- b) Australia, Brazil, Paraguay, Botswana
- c) Chile, Namibia, South Africa, Madagascar
- d) Canada, Greenland, Iceland, Norway

Answer: A

Explanation – The Tropic of Cancer passes through Algeria, Niger, Libya, Egypt, Saudi Arabia, United Arab Emirates, Oman, India, Bangladesh, Myanmar, China, Taiwan, Mexico, Bahamas, Mauritania and Mali.

Source: India Today



Q.1) With reference to the "Heat Strokes" consider the following statements:

- 1. A heat stroke happens when the ambient temperature is too low and the body is continuously sweating.
- 2. When the humidity levels are high, perceived temperatures are higher than the actual reading for ambient temperature.

Select the correct statements using the codes given below:

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

Answer: B

Explanation -

Statement 1 is incorrect. A heat stroke happens when the ambient temperature is so high that the body is unable to sweat to regulate the core temperature.

Statement 2 is correct. When the humidity levels are high, perceived temperatures are higher than the actual reading for ambient temperature. High humidity levels also mean that sweat does not evaporate effectively to keep the body cool.

Source: ForumIAS

Q.2) Which of the following was the objective of the Raghavan Committee?

- a) To study the need for a competition law and policy.
- b) To bring technical changes in the generation of atomic energy.
- c) To come up with the Pension Scheme for Unorganized Sector.
- d) Improvement in the Customer Service at Primary (Urban) Cooperative Banks.

Answer: A

Explanation – Raghavan Committee was set up by the government of India to study the need for a competition law and policy. Competition Commission of India (CCI) was set up on the recommendation of this committee.

Source: ForumIAS

Q.3) Consider the following statements:

- 1. The Hindu Kush and Himalayan Range (HKH) is known as the earth's "second pole".
- 2. The western end of the Hindu Kush in the south merges with the Karakoram Range.
- 3. Terich Mir is the highest mountain of the Hindu Kush range.

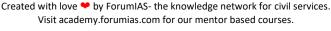
How many of the above statements are correct?

- a) Only one
- b) Only two
- c) All three
- d) None

Answer: A

Explanation -

Statements 1 and 2 are incorrect. The Hindu Kush and Himalayan Range (HKH) is famously known as the earth's "third pole" as it forms the largest area of permanent ice cover outside of





the North and South Poles. The eastern end of the Hindu Kush in the north merges with the Karakoram Range.

Statement 3 is correct. Terich Mir is the highest mountain of the Hindu Kush range, and the highest mountain in the world outside of the Himalayas–Karakoram range. It is located in the Chitral District of Khyber Pakhtunkhwa, Pakistan.

Source: ForumIAS

Q.4) Consider the following statements:

- 1. Global Stocktake (GST) is an exercise aimed at assessing the progress in the fight against climate change and deciding ways and means to enhance global action to bridge the adequacy gap.
- 2. Mitigation Work Programme (MWP) is a temporary emergency exercise focused only on increasing emission cuts.

Select the correct statements using the codes given below:

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

Answer: C

Explanation -

Statements 1 and 2 are correct. Global Stocktake (GST) is an exercise aimed at assessing the progress in the fight against climate change and deciding ways and means to enhance global action to bridge the adequacy gap. Mitigation Work Programme (MWP) is a temporary emergency exercise focused only on increasing emission cuts. These two were recently discussed in the Bonn Climate Change Conference, held recently.

Source: ForumIAS

Q.5) With reference to GEMCOVAC-OM vaccine, consider the following statements:

- 1. It is India's first indigenous mRNA vaccine for the Delta variant of the novel coronavirus.
- 2. It has been developed by Gennova Biopharmaceuticals Ltd.
- 3. It is a thermo-stable vaccine, which does not require ultra-cold chain infrastructure used for other approved mRNA-based vaccines.

Which of the statements given above is/are correct?

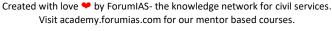
- a) 1 and 3 only
- b) 2 only
- c) 2 and 3 only
- d) 3 only

Answer: C

Explanation -

Statement 1 is incorrect. GEMCOVAC-OM is India's first indigenous mRNA vaccine for the Omicron variant of the novel coronavirus.

Statements 2 and 3 are correct. The vaccine has been developed by Gennova Biopharmaceuticals Ltd. It is a thermo-stable vaccine, which does not require ultra-cold chain infrastructure used for other approved mRNA-based vaccines.





Q.6) With reference to the "Alligator Gar" consider the following statements:

- 1. It is one of the biggest freshwater fish in North America.
- 2. It is categorized as Least Concerns in the IUCN Red Data List.
- 3. They have sharp teeth which help them to bite their prey.

Which of the statements given above are correct?

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

Answer: A Explanation –

Statements 1 and 2 are correct. Alligator Gar is a close relative of the bowfin species. It is a ray-finned euryhaline fish and is one of the biggest freshwater fish in North America and the largest species in the 'gar' family. It is categorized as Least Concerns in the IUCN Red Data List.

Statement 3 is incorrect. They do not have the ability to bite off pieces of flesh, so they swallow their prey.

Source: ForumIAS

Q.7) Consider the following statements:

- 1. Precision Fermentation methods use live bacterial culture to make curd from milk.
- 2. Precision fermentation uses microbial hosts as "cell factories" for producing specific functional ingredients.
- 3. Precision fermentation is widely used to produce insulin in labs.
- 4. Food ingredients made using precision fermentation are cheaper.

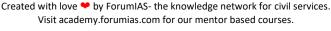
How many of the above statements are correct?

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

Answer: B Explanation -

Statements 1 and 4 are incorrect. Traditional fermentation methods use live bacterial culture to make curd from milk. But precision fermentation teaches a microbe how to make a protein by using a genetic code—also known as the recombinant DNA technology. Currently, food ingredients made using precision fermentation are expensive.

Statements 2 and 3 are correct. Precision fermentation uses microbial hosts as "cell factories" for producing specific functional ingredients. Precision fermentation is widely used to produce insulin in labs.





Q.8) Consider the following statements:

- 1. The US is the largest Foreign Portfolio Investors (FPI) in India.
- 2. India imports more from the US than it exports.
- 3. India's imports from the US include crude, petroleum products, coal.

Which of the statements given above are correct?

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

Answer: C Explanation -

Statements 1 and 3 are correct. The US is the largest FPI investor in India, accounting for around Rs 38 of every Rs 100 worth of FPI holdings. India's imports from the US are largely made up of a few categories, including crude, petroleum products, coal and others. The top five accounted for around 49 per cent of imports in 2022-23.

Statement 2 is incorrect. India exports more to the US than it imports. The exports in 2022-23 were \$79 billion, compared to imports of \$50 billion.

Source: ForumIAS

Q.9) Consider the following statements:

- 1. Transgenic crops are plants that have had their DNA altered using genetic engineering techniques.
- 2. Bt maize, a transgenic variety of maize, is widely grown in India.
- 3. Transgenic crops are developed to reduce the use of chemical pesticides.

Which of the statements given above is/are correct?

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

Answer: B Explanation -

Statements 1 and 3 are correct. Transgenic crops are plants that have had their DNA altered using genetic engineering techniques. Transgenic crops like these are developed to improve crop yield, enhance nutritional value, reduce the use of chemical pesticides, and increase resistance to environmental stressors like drought or frost.

Statement 2 is incorrect. GE maize is undertrial in India while Bt cotton is widely grown in India.



Q.10) Consider the following:

- 1. Blueberries
- 2. Soya beans
- 3. Spinach
- 4. Refined Grains
- 5. Whole grains
- 6. Nuts and seeds

Which of the above are categorized as superfoods?

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

Answer: B

Explanation – Superfoods are nutrient-dense foods that are high in vitamins, minerals, and antioxidants that are good for one's health. They are often plant-based; however, some are also dairy and fish-based. Refined grains, such as white bread, white rice, and refined pasta, undergo processing that removes the bran and germ, stripping them of many beneficial nutrients and fiber.

Source: **DNA**

Q.1) With reference to the G20's Common Framework for Debt Treatments, consider the following statements:

- 1. Under the framework, rich and developing countries are provided a platform to discuss the need and negotiate the amount required for climate financing.
- 2. The International Monetary Fund (IMF) and the World Bank play crucial roles in supporting the implementation of the Common Framework.

Select the correct answer from the codes given below:

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

Answer: B Explanation -

Statement 1 is incorrect. The G20 Common Framework provides a platform for creditor countries, including both official bilateral creditors and private sector creditors, to coordinate and collaborate on debt relief efforts. Its primary objective is to facilitate the implementation of timely, orderly, and sustainable debt treatments for eligible countries.

Statement 2 is correct. The International Monetary Fund (IMF) and the World Bank play crucial roles in supporting the implementation of the G20 Common Framework.

Source: NDTV



Q.2) Consider the following statements:

- 1. Extreme heat is defined from a baseline of the average temperature in any one location, which varies widely across the world.
- 2. Warm air holds less moisture than the cold air.
- 3. Carbon dioxide, methane and nitrous oxide play a crucial role in stopping heat from being reflected or lost from our atmosphere.

Which of the statements given above are correct?

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

Answer: C

Explanation -

Statements 1 and 3 are correct. Extreme heat is defined from a baseline of the average temperature in any one location, which varies widely across the world. Carbon dioxide, methane and nitrous oxide play a crucial role in stopping heat from being reflected or lost from our atmosphere.

Statement 2 is incorrect. Warm air holds more moisture, which produces stronger and more frequent storms.

Source: NDTV

Q.3) Consider the following statements:

- 1. During the summer solstice, the rays of the sun strike the Southern hemisphere at a more direct angle, resulting in prolonged daylight.
- 2. One of the effects of summer solstice is the decrease in the solar energy.
- 3. In Russia, summer solstice marks the White Night celebration.

How many of the above statements are correct?

- a) Only one
- b) Only two
- c) All three
- d) None

Answer: A

Explanation -

Statements 1 and 2 are incorrect. During the summer solstice, the rays of the sun strike the Northern hemisphere at a more direct angle, resulting in prolonged daylight. One of the major effects is an increase in solar energy during the day since the sun is directly overhead.

Statement 3 is correct. The summer solstice has been observed and commemorated by several cultures. In Russia, summer solstice marks the White Night celebration.

Source: NDTV



Q.4) Consider the following statements:

- 1. India has emerged as a key advocate for the Global South, articulating the concerns and aspirations of developing nations on the international stage.
- 2. The cultural respect for India has increased globally.
- 3. India is recognised as a collaborator in the global economy.

Which of the statements given above are correct?

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

Answer: D

Explanation -

Statements 1, 2 and 3 are correct. India has emerged as a key advocate for the Global South, articulating the concerns and aspirations of developing nations on the international stage. There's also increased cultural respect for India globally due to initiatives like the International Day of Yoga, the global popularity of Ayurveda, and other aspects of Indian culture. India is recognised as a collaborator in the global economy. This is reflected in increased Foreign Direct Investment, rising exports, and collaboration in high-tech industries like semiconductors.

Source: NDTV

Q.5) With reference to Aditya L-1 mission, consider the following statements:

- 1. The mission is aimed at studying the tidal effects of moon on the earth and its associated phenomenon.
- 2. Among its seven payloads, four will directly view the Sun, while the remaining three will carry out in-situ studies of particles and fields at the Lagrange point L1.

Select the correct statements suing the codes given below:

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

Answer: B

explanation -

Statement 1 is incorrect. The Aditya L-1 mission is India's maiden mission to observe the Sun. It will be launched nearly 1.5 million kilometers away from Earth to Lagrange Point 1 (L1), a stable point where the gravitational forces between the Earth and the Sun, as well as the centrifugal force of the rotating system, balance out.

Statement 2 is correct. Among the seven payloads, four will directly view the Sun, while the remaining three will carry out in-situ studies of particles and fields at the Lagrange point L1.

Source: India Today



Q.6) With reference to the "Global Gender Gap Report, 2023" consider the following statements:

- 1. Under the report, Iceland is also the only country with a score which is above 90%.
- 2. As per the report, there has been a significant increase in the gender gap globally.
- 3. As per the report, the gender gap in India has decreased from the previous year.

Which of the statements given above is/are correct?

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

Answer: D

Explanation -

Statements 1 and 3 are correct. Iceland topped the ranking for the 14th consecutive year with 91.2% of its overall gender gap closed. It is also the only country with a score which is above 90%. India was ranked 127 among 146 countries in gender parity — up eight places from 2022. India was ranked 135 in 2022. India had closed 64.3% of the overall gender gap.

Statement 2 is incorrect. The gender gap globally decreased by 0.3% compared to the previous year.

Source: ForumIAS

Q.7) Consider the following statements:

- 1. Submersibles are able to be fully submerged into water and cruise using their own power supply and air renewal system.
- 2. Submersibles have enough power to leave port and come back to port under its own power while submarine has very limited power reserves so it needs a mother ship that can launch it and recover it.

Select the correct statements using the codes given below:

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

Answer: A

Explanation -

Statement 1 is correct. Submersibles are small, limited-range watercraft designed for a set mission, that are built with characteristics that allow them to operate in a specific environment. These vessels are typically able to be fully submerged into water and cruise using their own power supply and air renewal system.

Statement 2 is incorrect. Submarines have enough power to leave port and come back to port under its own power while submersibles have very limited power reserves so it needs a mother ship that can launch it and recover it.



Q.8) With reference to the Betelgeuse star, consider the following statements:

- 1. It is a red supergiant star with a distinctive orange-red hue.
- 2. It can be easily spotted in the constellation Orion.
- 3. In Indian astronomy, Betelgeuse is called Punarvasu.

Which of the statements given above are correct?

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

Answer: A

Explanation -

Statements 1 and 2 are correct. Betelgeuse star is a red supergiant star with a distinctive orange-red hue. It can be easily spotted in the constellation Orion.

Statement 3 is incorrect. In Indian astronomy, Betelgeuse is called 'Thiruvathirai' or 'Ardra'.

Source: ForumIAS

Q.9) With reference to the Rainbow Diet Campaign, consider the following statements:

- 1. The campaign has been launched by ICAR-Central Tuber Crops Research Institute (CTCRI).
- 2. The primary objective of the campaign is to raise awareness about the diverse cultures of various indigenous tribes within the country and foster positive relationships between the general population and tribal communities.

Select the correct statements using the codes given below:

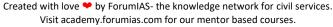
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: A

Explanation -

Statement 1 is correct. Rainbow Diet Campaign has been launched by ICAR-Central Tuber Crops Research Institute (CTCRI).

Statement 2 is incorrect. The aim of the campaign is to popularize biofortified tubers and value-added products made from them among the tribal communities for tackling malnutrition and ensuring a balanced diet.





Q.10) With reference to Solar Ultraviolet Imaging Telescope (SUIT), consider the following statements:

- 1. It will study the Sun's ultraviolet (UV) emissions and capture high-resolution images of the Sun's atmosphere in various UV wavelengths.
- 2. The telescope is set to be integrated with the ADITYA-L1 mission.

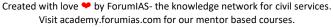
Select the correct statements using the codes given below:

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

Answer: C

Explanation -

Statements 1 and 2 are correct. SUIT will study the Sun's ultraviolet (UV) emissions and capture high-resolution images of the Sun's atmosphere in various UV wavelengths. The telescope is set to be integrated with the ADITYA-L1 mission.





PRELIMS

Q.1) New Collective Quantified Goal (NCQG) was seen in the news recently, is associated with -

- a) Climate financing
- b) China Plus One strategy
- c) Space exploration
- d) Free Trade Agreements

Answer: A

Explanation – NCQG was established in the 2015 Paris Climate Agreement. The intent of the NCQG is at the bare minimum for developed nations to provide developing countries with the necessary funding to address adaptation and mitigation gaps.

Source: ForumIAS

Q.2) Consider the following statements:

- 1. Under the Indian Constitution, public libraries are a state subject.
- 2. The National Mission on Libraries was launched by the Ministry of Tribal Affairs.
- 3. No reliable data exist for functioning libraries at the national, state and district level.

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

Explanation -

Statements 1 and 3 are correct. Under the Indian Constitution, public libraries are a state subject. There is conflicting data on the state of the Indian public library system in India and no reliable data exist for functioning libraries at the national, state and district level.

Statement 2 is incorrect. The National Mission on Libraries was launched by the Ministry of Culture in 2013.

Source: ForumIAS

Q.3) With reference to the Innovation for Defence Excellence (iDEX), consider the following statements:

- 1. It is funded and managed by the Defence Innovation Organization (DIO).
- 2. Its goal is to formulate a strategy for importing defense equipment based on the required technology.
- 3. It has showcased the power of collaborative teamwork among diverse organizations within the Ministry of Defence.

How many of the above statements are correct?

- a) Only one
- b) Only two
- c) All three
- d) None

Answer: B

Explanation -



Statements 1 and 3 are correct. iDEX is funded and managed by the Defence Innovation Organization (DIO). It was launched by the Government of India in 2018. It has showcased the power of collaborative teamwork among diverse organizations within the Ministry of Defence. Statement 2 is incorrect. iDEX primarily aims at creation of an ecosystem to foster innovation and technology development in Defence and Aerospace by engaging Industries including MSMEs, start-ups among others. Thus, reducing the dependence on defence imports.

Source: ForumIAS

Q.4) With reference to India-US Defense Acceleration Ecosystem (INDUS-X) consider the following statements:

- 1. It aims to foster collaboration and innovation between Indian and US defence startups, promoting technological advancements in the sector.
- 2. India's Innovations for Defense Excellence (iDEX) and the Office of the Secretary of Defense (OSD) are leading INDUS-X activities.

Select the correct statements using the codes given below:

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

Answer: C

Explanation -

Statements 1 and 2 are correct. INDUS-X aims to foster collaboration and innovation between Indian and US defence startups, promoting technological advancements in the sector. India's Innovations for Defense Excellence (iDEX) and the Office of the Secretary of Defense (OSD) are leading INDUS-X activities.

Source: ForumIAS

Q.5) Consider the following statements with respect to Supercapacitor:

- 1. A supercapacitor is a device that stores kinetic energy using magnetic fields.
- 2. It differs from traditional capacitors in that it has a much higher capacitance, allowing it to store a larger amount of energy.
- 3. They are used in power-smoothening, pitch-control, start-stop, regenerative-braking, smart-grid, active heave compensation, etc.

Which of the statements given above are correct?

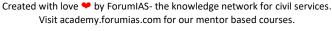
- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Answer: B

Explanation -

Statement 1 is incorrect. A supercapacitor is an electrochemical charge storage device with a fast charging/discharging cycle, high power density and a longer life cycle.

Statements 2 and 3 are correct. Supercapacitor differs from traditional capacitors in that it has a much higher capacitance, allowing it to store a larger amount of energy. They are used in





power-smoothening, pitch-control, start-stop, regenerative-braking, smart-grid, active heave compensation, etc.

Source: ForumIAS

Q.6) With reference to "Seaweeds" consider the following statements:

- 1. Seaweed is a type of fish that can be found in freshwater lakes and rivers.
- 2. They are rich in vitamins and minerals and are consumed as food in various parts of the world.
- 3. Green seaweed has a high amount of a particular type of cellulose in its cell wall.
- 4. Phaeophyta, a classification of seaweeds, holds more potential components in the cell wall than the others.

How many of the above statements are correct?

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

Answer: B

Explanation -

Statements 1 and 4 are incorrect. Seaweed is the name given to the many species of marine algae and plants. These species grow in water bodies such as rivers, seas and oceans. Seaweeds are classified as *chlorophyta* (green), *rhodophyta* (red) and *phaeophyta* (brown) on the basis of their pigmentation. Among them, chlorophyta holds more potential components in the cell wall. Such as carbohydrates, lipids, proteins and bioactive compounds.

Statements 2 and 3 are correct. Seaweeds are rich in vitamins and minerals and are consumed as food in various parts of the world. Green seaweed has a high amount of a particular type of cellulose in its cell wall.

Source: ForumIAS

Q.7) With reference to Jeera spice (Cumin), consider the following statements:

- 1. India accounts for around 70% of the world's production of Cumin.
- 2. Andhra Pradesh is the leading producer of Cumin.
- 3. It grows well in humid and in heavy rainfall climatic conditions.

How many of the above statements are correct?

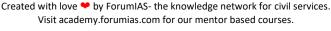
- a) Only one
- b) Only two
- c) All three
- d) None

Answer: A

Explanation -

Statement 1 is correct. India accounts for around 70% of the world's production of Jeera.

Statements 2 and 3 are incorrect. Rajasthan and Gujarat total account for 99% of cumin production of India. Jeera is an extremely weather-sensitive crop. It requires a moderately cool and dry climate.





Q.8) With reference to the Textile Effluent, consider the following statements:

- 1. It refers to the pollution generated in the air during the manufacturing of the renewable or green energy products.
- 2. Textile effluent is characterized by its intense color, high chemical oxygen demand (COD), biological oxygen demand (BOD), and suspended solids.
- 3. These effluents have the capacity to deplete the oxygen level in the air.

Which of the statements given above is/are correct?

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

Answer: B

Explanation -

Statements 1 and 3 are incorrect. Textile effluent refers to wastewater generated during various processes in the textile industry. It is the liquid discharge resulting from activities such as dyeing, printing, finishing, washing, and rinsing of textiles. These pollutants can be detrimental to aquatic life and ecosystems, as they can deplete oxygen levels in water, block sunlight penetration, and introduce toxic substances.

Statement 2 is correct. Textile effluent is characterized by its intense color, high chemical oxygen demand (COD), biological oxygen demand (BOD), and suspended solids.

Source: ForumIAS

Q.9) Consider the following statements with respect to Lab Grown Diamond:

- 1. In India, the share of lab-grown diamonds in the overall diamond business is presently 10 percent.
- 2. The lab grown diamond has the same chemical and physical properties as that of the natural diamond.
- 3. Lab Grown Diamonds have no nitrogen.
- 4. High-Pressure High Temperature (HPHT) method is more popular in India for creating lab grown diamonds.

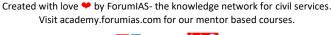
Which of the statements given above are correct?

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

Answer: D Explanation -

Statements 1 and 4 are incorrect. In India, the share of lab-grown diamonds in the overall diamond business is presently only 2-3 percent. Lab-grown diamonds can be created by two processes: 1) High-Pressure High Temperature (HPHT) and 2) Chemical Vapor Deposition (CVD). The CVD method is more popular in India while HPHT method is used in China.

Statements 2 and 3 are correct. Both natural and lab-grown diamonds have the same chemical composition, which is pure carbon arranged in a crystal lattice structure. This means that they have the same physical and chemical properties. Natural Diamonds have tiny amounts of nitrogen, while Lab Grown Diamonds have no nitrogen.





Q.10) With reference to the Medicines Patent Pool (MPP) consider the following statements:

- 1. It is a United Nations-backed group working towards increasing access to, and facilitating the development of, life-saving medicines for low- and middle-income countries.
- 2. MPP partners with civil society, governments, international organisations, industry, patient groups, and other stakeholders, to prioritise and license needed medicines and pool intellectual property to encourage generic manufacture and the development of new formulations.

Select the correct statements using the codes given below:

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

Answer: C Explanation -

Statements 1 and 2 are correct. MPP is a United Nations-backed group working towards increasing access to, and facilitating the development of, life-saving medicines for low- and middle-income countries. partners with civil society, governments, international organisations, industry, patient groups, and other stakeholders, to prioritise and license needed medicines and pool intellectual property to encourage generic manufacture and the development of new formulations. It partners with civil society, governments, international organisations, industry, patient groups, and other stakeholders, to prioritise and license needed medicines and pool intellectual property to encourage generic manufacture and the development of new formulations.

