Forum AS

10 PM Current Affairs Quiz Compilation

28th June to 3rd July, 2021

Science and Technology

Q.1) Consider the following statements regarding Unmanned Aerial Vehicles (UAV)

- 1. UAVs cannot be detected by radar system.
- 2. UAVs are regulated by the Ministry of Defense in India

Which of the statements given above is/are correct?

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

Correct answer: A

UAVs are generally called attackers delight and defender's nightmare for the following reasons.

- 1. UAVs have no restriction on the terrain nor the condition of the environment.
- 2. Drones fly low and therefore cannot be detected by any radar system because they are small and do not have much radar cross-section.
- 3. Difficult to detect also means **difficult to engage** as well.
- 4. They do not match the cost of the kill vs the cost of the target. For example, killing the \$1000 UAV with the Million \$ sophisticated missile. So, the defender needs soft kill systems like LASER, Radio Frequency jamming and Electronic Jamming etc.

Director General of Civil Aviation (DGCA) under the civil aviation ministry is regulating the UAVs in India.

Source: The Indian Express and The Hindu

Q.2) Consider the following statements regarding Agni Prime missile

- 1. It is a canisterised missile with range capability between 1,000 and 2,000 km.
- 2. The Agni-P will replace the Prithvi, Agni-1 and Agni-2 missiles

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

Correct answer: C

Explanation:

The DRDO has successfully flight tested a New Generation Nuclear Capable Ballistic Missile Agni P from Dr APJ Abdul Kalam island off the coast of Odisha.

About Agni Prime missile:

- Agni P is a canisterised based missile. Canisterisation of missiles reduces the time required to launch the missile while improving its storage and mobility,
 - This means that it can be launched from rail and road and stored for a longer period. It can also be transported across the length and breadth of the country.
- **Weight:** The missile weighs 50% less than Agni III and has new guidance and a new generation of propulsion.

- **Range:** The missile has a range between 1000km to 2000km.It has been developed specifically to strike targets in Pakistan.Its range is too short to reach targets in the Chinese mainland.
- The **Agni-P will replace the Prithvi, Agni-1 and Agni-2 missiles** that were built two decades ago with technologies that are now considered outdated.

Source: PIB

Q.3) Sea Guardian often seen in the news is related to which of the following?

- a) Nuclear-powered submarine
- b) An Unmanned Aerial Vehicle
- c) Advanced Research Vessel
- d) Stealth guided missile destroyer

Correct Answer: B

Explanation

• Sea Guardian, is the maritime variant of the Predator MQ-9 Unmanned Aerial Vehicle (UAV) of USA.

Q.4) Project Devil as seen in news is related to which of the following?

- a) Integrated Guided Missiles Development Programme
- b) Surveillance and intelligence monitoring by RAW
- c) Development of stealth frigates for Indian Navy
- d) Indigenous manufacturing of armored vehicles

Correct Answer A

Explanation:

- In 1972, Project Devil, for the development of a medium range Surface-to-Surface Missile was initiated. A large number of infrastructure and test facilities were established during this period.
- The main facilities established during this period included Aerodynamic, Structural and Environmental test facilities, Liquid and Solid propulsion facilities; fabrication and engineering facilities; Control, Guidance, FRP, Rubber component facilities, computer centers, ground and flight instrumentation and onboard power supplies development facilities. The development of components / systems for Project Devil formed the technology base for the future **IGMDP Programme**.

Source: Article

Q.5) Consider the following pairs.

Types of hydrogen: Produced using

- 1. Green hydrogen: Electrolysis of water using renewable energy
- 2. Brown hydrogen: Produced from natural gas
- 3. Grey hydrogen: Coal where the emissions are released to the air

Which of the above pairs is matched correctly?

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

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Correct Answer: A Explanation:

According to the International Renewable Energy Agency (IRENA), hydrogen will make up 12% of the energy mix by 2050. Hydrogen is one of the most abundant elements on earth for a cleaner alternative fuel option.

Type of hydrogen depend up on the process of its formation.

- **Green hydrogen**: It is produced by electrolysis of water using renewable energy (like Solar, Wind) and has a lower carbon footprint.
- Brown hydrogen: It is produced using coal where the emissions are released to the air.
- **Grey hydrogen**: It is produced from natural gas where the associated emissions are released to the air.
- **Blue hydrogen**: It is also produced from natural gas. But the emissions are captured using carbon capture and storage.

Source: Down To Earth

- **Q.6) Indrajaal** was sometimes seen in the news. Which of the following statements correctly explains it?
- a) It is India's maritime exercise with African nations
- b) It is India's aquatic show performed in the UK to improve India-UK ties.
- c) It is India's first indigenous drone defence dome has the capability to autonomously protect an area of 1000-2000 sq km
- d) It is India's first inland river museum that was planned in the banks of Ganga

Correct Answer: C

Explanation

Hyderabad-based technology R&D firm Grene Robotics has designed and developed India's first indigenous drone defence dome called "Indrajaal".

About Indrajaal:

- It has the capability to autonomously protect an area of 1000-2000 sq km against the aerial threats
- The ANTI-UAV systems will not only provide protection to defence bases but it will be beneficial for linear infrastructures like international borders against advanced weaponry.
- Salient Features:
 - Real-time situational awareness
 - Integrated and Intelligent meshed network
 - Integrated all current weapons suite and infrastructure
 - Honeycombed cell structure for seamlessly built
 - Synergic combination of 9-10 technologies
 - 24×7 persistent and autonomous monitoring, action and tracking

Source: All India Radio

Q.7) Consider the following statements:

- 1. Hydrogen production is mostly based on natural gas and coal.
- 2. India is expected to become a net exporter of green hydrogen from 2030.

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

Correct Answer: C

Explanation:

Both statements are correct

- **Statement 1 is correct**: Today's hydrogen production is mostly based on natural gas and coal, which together account for 95% of production.
- **Statement 2 is correct**: The Global Hydrogen Council has in a recent study classified India as a net exporter of green hydrogen from 2030, thanks to cheap renewable tariffs.

Source: Article

Q.8) Consider the following statements regarding DRDO's detect-and-destroy technology for drones:

- 1. It has the ability to both jam drone signals and then destroy it with lasers.
- 2. It can detect can detect micro drones too.

Which of the above statements is/are correct?

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

Correct Answer: C Explanation:

The Defence Research and Development Organization (DRDO) has developed a **detect-and-destroy technology** for <u>drones</u>, but it is **not yet into mass production**.

- The DRDO's **Counter-Drone System was deployed for VVIP protection** at the Republic Day parades in 2020 and 2021, the Prime Minister's Independence Day speech last year, and former US President Donald Trump's visit to Motera Stadium, Ahmedabad in 2020.
- The DRDO system, developed in 2019, has **capabilities for hardkill** (destroying a drone with lasers) and **softkill** (jamming a drone's signals). Its softkill range is 3 km and hardkill range between 150 m and 1 km.
- It has a **360° radar** that can detect **micro drones** up to 4 km, and other sensors to do so within 2 km.

Source: Article

International Relations

- Q.1) Consider the following statements regarding Digital Millennium Copyright Act (DMCA)
- 1. It is the world's first law recognising Intellectual Property (IP) on the internet.
- 2. The DMCA oversees the implementation of two 1996 treaties signed by World Intellectual Property Organisation (WIPO) member nations.

Which of the statements given above is/are correct?

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

Correct answer: C Explanation:

Recently, The Union Minister for Electronics and Information Technology was locked out of his Twitter account for an hour allegedly over a notice received for violation of the Digital Millennium Copyright Act (DMCA).

Digital Millennium Copyright Act:

- **Digital Millennium Copyright Act or DMCA** is a 1998 law passed in the US and is among the world's first laws recognising intellectual property on the internet.
- **Purpose:** The law oversees the implementation of the two treaties signed and agreed upon by member nations of the World Intellectual Property Organisation(WIPO) in 1996.
 - o Namely the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty.

Source: Indian Express



Government Schemes and Initiatives

Q.1) Consider the following statements regarding National Technical Research Organisation (NTRO)

- 1. It is under the Ministry of Science and Technology
- 2. National Critical information Infrastructure Protection Centre (NCIIPC) operates under the NTRO

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

Correct answer: B Explanation:

The National Technical Research Organisation (NTRO) was established in 2004. It is under the National Security Advisor in the Prime Minister's Office. The NTRO focuses on intelligence gathering.

- The agency specializes in multiple disciplines. This includes remote sensing, data gathering and processing, cyber security, geospatial information gathering, cryptology, etc.
- The National Critical information Infrastructure Protection Centre (NCIIPC), an agency under the control of NTRO.
- NTRO has the same "norms of conduct" as the Intelligence Bureau (IB) and the Research and Analysis Wing (R&AW).

Source: The Indian Express

Q.2) Consider the following statements regarding National Small Savings Fund (NSSF):

- 1. Money in the NSSF is used by the Centre to finance their fiscal deficit.
- 2. All states in India use the NSSF fund for their financing needs except Kerala, Delhi, Arunachal Pradesh, and Madhya Pradesh

Which of the above statements is/are correct?

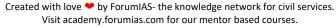
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Correct answer: C

Explanation

Both statements are correct

- The National Small Savings Fund (NSSF) is a fund body, which pools money from various small saving schemes. It was established in 1999 within the Public Account of India. It is administered by the Ministry of Finance, Government of India, under the National Small Savings Fund (Custody and Investment) Rules, 2001, derived from Article 283(1) of the Constitution.
- NSSF combines the collections obtained from different small saving schemes. The pool from all such schemes is credited to the NSSF and withdrawals under small saving schemes by depositors are made from this Fund.



- Further, the money parked in the NSSF is used by the Centre and states to finance their fiscal deficit, while the balance is invested in central and state government securities.
- As per the recommendations of the Fourteenth Finance Commission, all states in India use the NSSF fund for their financing needs except Kerala, Delhi, Arunachal Pradesh, and Madhya Pradesh as these states get loans at lower rates of interest.

Source: Article

Q.3) Consider the following statements with respect to Pradhan Mantri Kisan Samman Nidhi (PM-KISAN):

- 1. Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) is a Central Sector Scheme with funding from both State Governments and Central Government of India
- 2. Under the Scheme, income support of Rs.6000 per year is provided to all farmer families
- 3. The responsibility of identification of beneficiary farmer families rests with the State/UT Governments

Which of the above statements is/are correct?

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

Correct Answer: C Explanation:

- Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) is a Central Sector Scheme with 100% funding from Government of India. It was announced in February 2019. Under the Scheme, income support of Rs.6000/- per year is provided to all farmer families across the country in three equal instalments of Rs.2000/- each, every four months. The entire responsibility of identification of beneficiary farmer families rests with the State / UT Governments.
- The scheme is implemented by the Ministry of Agriculture and Farmers Welfare.

Q.4) Consider the following statements regarding National Automotive Test Tracks (NATRAX)

- 1. There is no limit to maximum speeds on its straight patches.
- 2. It has been developed under Ministry of Road Transport and Highways (MoRTH)

Which of the above statements is/are incorrect?

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

Correct Answer: b

Explanation:

• NATRAX is one of the state-of-the-art automotive testing and certification centre under NATRiP, a flagship project of the Ministry of Heavy Industries, Govt of India planned under the Automotive Mission Plan launched by Government of India.

- The track has been designed for neutral speeds up to 250 kmph and a maximum speed of up to 375 kmph on curves. There is no limit to maximum speed on the straight patch.
- The zero-percent longitudinal slope makes this track an open-air test laboratory for precise measurement of the performance of vehicles.
- Moreover, the track is open to having vehicles from overseas being evaluated here as part of the testing process.

Source: Article

- **Q.5)** Which of the following statements are correct regarding Fund for Industrial Research Engagement (FIRE) Program?
- 1. It will promote research in Artificial Intelligence (AI)/Machine Learning (ML).
- 2. All research projects will belong to defence sector

Answer using the codes given below

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

Correct Answer: A

Explanation:

Statement 1 is correct. These projects will be in the space of Artificial Intelligence (AI)/Machine Learning (ML), platform systems, circuits & architecture, Internet of Things (IoT), security, and so on from edge to cloud.

Statement 2 is incorrect. The program intends to select highly impactful research projects in every cycle (typically once or twice a year) which have breakthrough potential at a national or global level.

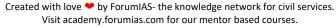
- **Q.6)** In which of the following railway station **first movable freshwater tunnel aquarium** has been opened?
- a) Chennai
- b) Delhi
- c) Allahabad
- d) Bengaluru

Correct Answer: D

Explanation:

Recently, Indian Railway (IR) has opened the first movable freshwater tunnel aquarium at Bengaluru Railway Station.

- The Krantivira Sangolli Rayanna Railway Station also known as Bengaluru City Railway Station has become the first railway station in India with a movable freshwater tunnel aquarium.
- The aquarium is a one-of-its-kind aquatic park based on the Amazon River (of South America) concept.
- This is a 12-feet long aquatic kingdom, **first paludarium** (vivarium that incorporates both terrestrial and aquatic elements) **with myriad flora and fauna**.



• It is home to various aquatic animals such as alligator gar ranging, stingrays, sharks, lobsters, snails and shrimps. The aquarium is adorned with natural rocks and splashes of driftwood, artificial coral rocks.

Source: <u>Indian Express</u>

Q.7) Consider the following statements regarding Reform Based Power Distribution Scheme:

- 1. A pre-defined financial assistance under the scheme will be provided based on the condition of a discom.
- 2. Artificial Intelligence would be used to analyse data generated to enable DISCOMs to make informed decisions.

Which of the above statements is/are correct?

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

Correct Answer: b Explanation:

- Statement 1 is wrong: The financial assistance under the Scheme will be based on meeting pre-qualifying criteria as well as upon achievement of basic minimum benchmarks by the DISCOM.
- Statement 2 is correct: Artificial Intelligence would be used to analyze data generated to enable DISCOMs to make informed decisions.

Source Article



History/Art and Culture

Q.1) Consider the following statements regarding Bankim Chandra Chattopadhyay

- 1. His epic Novel Anandamath was set in the background of the Sanyasi Rebellion.
- 2. He composed the song Vande Mataram in Sanskrit
- 3. He founded a English newspaper Bande Mataram

Which of the above statements is/are correct?

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

Correct Answer: B

Explanation:

Indian Prime Minister paid homage to Bankim Chandra Chattopadhyay on his Jayanti on 27th June.

About:

- He was one of the greatest novelists and poets of India.
- He composed the song Vande Mataram in Sanskrit, which was a source of inspiration to the people in their freedom struggle.
- His epic Novel Anandamath was set in the background of the Sanyasi Rebellion (1770-1820). The Novel made Bankim Chandra Chattopadhyay an influential figure on the Bengali renaissance.
- He also founded a monthly literary magazine, Bangadarshan, in 1872
 - o The magazine stopped publication in the late 1880s, but was resurrected in 1901 with Rabindranath Tagore as its editor
- His famous novels include Kapalkundala, Debi Choudhurani, Bishabriksha (The Poison Tree), Chandrasekhar, Rajmohan's wife and Krishnakanter Will.

Aurobindo Ghosh founded the English newspaper Bande Mataram

Source: PIB

Q.2) Consider the following statements regarding **kalbeliya dance**.

- 1. It is only performed by women while the men play the instruments and provide the music.
- 2. It is popular in Kerala
- 3. It was included in the United Nations Educational, Scientific and Cultural Organizations (UNESCO) list of Intangible Cultural Heritage (ICH)

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

Correct Answer: C

Explanation:

Recently, due to Covid-19-Pandemic an app called chendavia is gaining popularity among the students of kalbeliya dance.

About Kalbeliya dance:

- It is associated with a Rajasthani tribe of Kalbeliya
- In 2010, it was included in the United Nations Educational, Scientific and Cultural Organizations (UNESCO) list of Intangible Cultural Heritage (ICH).
- It is generally performed for any joyous celebration and is considered to be an integral part of the Kalbeliya culture.
 - o Women in flowing black skirts dance and swirl, replicating the movements of a serpent, while men accompany them on the "khanjari" instrument and the "poongi", a woodwind instrument traditionally played to capture snakes.
- It is only performed by women while the men play the instruments and provide the music.
- These songs disseminate mythological knowledge through stories.

Source: <u>The Hindu</u>

Environment

Q.1) Consider the following statements regarding Bengal monitor or common Indian monitor

- 1. These are carnivorous and non-poisonous
- 2. The Bengal monitor lizard is protected under Schedule I of WPA
- 3. It is listed under the 'Vulnerable' category on the International Union for Conservation of Nature Red List.

Which of the above statements is/are correct?

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

Correct Answer: C Explanation:

Recently, the forest department of Odisha busted an organised trafficking racket recently and seized seven Bengal monitor lizards — five dead and two alive.

- The Bengal monitor or common Indian monitor (Varanus bengalensis) is a large lizard that is mainly terrestrial. It is 61-175 cm long. The monitors are carnivorous and non-poisonous.
- Bengal monitor is a lesser-known species and does not enjoy the same status as crocodiles and other reptiles
- The monitor lizard is protected under Schedule I of WPA but is regularly killed for its meat, blood and oil. Its genitals are sold as a charm or an aphrodisiac as well as cure for several ailments
- The species is listed under the 'Least Concern' category on the International Union for Conservation of Nature Red List but its population is dwindling due to rampant poaching
- It plays an important role in maintaining the balance and health of the forest ecosystem

Source: Down To Earth

Q.2) Consider the following statements regarding Particulate Matter (PM):

- 1. PM can include both solid particles and liquid droplets.
- 2. Gestational exposure to PM2.5 increases likelihood of pregnancy loss.
- 3. NASA's GISS global climate model can estimate the amount of particular matter deposited on surface worldwide.

Which of the above statements is/are correct?

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

Correct Answer: D

Explanation:

All statements are correct.

- Particulate matter, or PM, is the term for particles found in the air, including dust, dirt, soot, smoke, and **liquid droplets.**
 - o Particles can be suspended in the air for long periods of time.

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- o Some particles are large or dark enough to be seen as soot or smoke. Others are so small that individually they can only be detected with an electron microscope.
- o Many manmade and natural sources emit PM directly or emit other pollutants that react in the atmosphere to form PM.
- <u>Gestational exposure to PM2.5</u> was also associated with an increased likelihood of pregnancy loss and this remained significant after adjusting for other factors.
 - o Each increase in $10 \, \mu g/m^3$ was estimated to increase a mother's risk of pregnancy loss by 3%. The increase in risk was greater for mothers from rural areas or those who became pregnant at an older age, compared to younger mothers from urban areas.
- NASA's GISS Global Climate Model not only calculates the amount of sun's energy blocked by the airborne pollutants but also estimates the amount of particular matter deposited on surface worldwide.

Source: Article

Q.3) Consider the following statements regarding Barnadi Wildlife Sanctuary: Assam

- 1. The sanctuary was established specifically to protect the Pygmy Hog and Hispid Hare.
- 2. The Sanctuary is bordered by Brahmaputra River

Which of the statements given above is/are correct?

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

Correct answer: A

Explanation:

Recently, the World-Wide Fund for Nature-India (WWF) found a few tigers inhabiting the Barnadi Wildlife Sanctuary in Assam.

About the Barnadi Wildlife Sanctuary:

- It is one of the smallest WS (Wildlife Sanctuary) of Assam and covers an area of 26.22 sq. Km.
- The Sanctuary is bordered by the Barnadi river and Nalapara river to the west and east respectively.
- It was established specifically to protect the Pygmy Hog and Hispid Hare/Assam Rabit Source: The Hindu

Q.4) Consider the following statements regarding the Great Indian Bustard:

- 1. It is endemic to Indian subcontinent.
- 2. It is listed as a vulnerable species in the IUCN Red List.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation

- **Statement 1 is correct**: It is endemic to the Indian subcontinent. It is found in Rajasthan (Desert National Park), Gujarat, Madhya Pradesh, Karnataka and Andhra Pradesh in India and parts of Pakistan.
- **Statement 2 is incorrect**: It is a critically Endangered species with less than 150 birds left in the wild. It is one of the heaviest flying birds (weighing up to 15kgs).

• Read <u>more.</u> **Source**: Article

Q.5) Bonn Challenge sometimes seen in news is related to?

- a) Restoration of degraded land
- b) Conservation of Migratory Species
- c) Protection of Ozone layer
- d) Convention on Biological Diversity

Correct Answer: A Explanation

• At the UN Framework Convention on Climate Change (UNFCCC) Conference of Parties (CoP) 2015 in Paris, the government of India made a Bonn Challenge pledge to bring 13 million hectares of degraded land into restoration by 2020 and an additional 8 million hectares by 2030.

Source: Article

Q.6) Green pass as sometimes seen in news is related to?

- a) Specific exception clauses to LDCs under Kyoto protocol
- b) Europe's new vaccine passport programme
- c) Relaxations in immigration rules to citizens of island nations
- d) Base Erosion and Profit Shifting compliant practices

Correct Answer: B Explanation

• Europe's new 'vaccine passport' programme is also called Green Pass. It is a digital or paper document that indicates whether individuals have received a COVID-19 vaccination or, in some cases, recently tested negative for COVID-19.

Source: Article

Q.7) Consider the following statements with respect to Chilika Lake:

- 1. Chilika lake is the Asia's largest brackish water lake
- 2. It is located in Bay of Bengal.
- 3. Chilika lake was also designated as a wetland of international importance under the Ramsar Convention

Which of the above statements is/are correct?

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

Correct Answer: D

Explanation

All statements are correct

- Chilika lake is the Asia's largest brackish water lake. It is located at the Daya River flowing into the Bay of Bengal.
- The lake is also the second largest coastal lagoon in the world after the New Caledonian barrier reef in New Caledonia. Chilika lake was also designated as a wetland of international importance under the Ramsar Convention in 1981.
- The lake is also home to the largest wintering ground for migratory birds on the Indian subcontinent. These birds travel great distances to reach Chilika Lake. The Irrawaddy dolphin (IUCN Red List –Endangered) is the flagship species of Chilika Lake

Q.8) Consider the following statements

- 1. Black carbon is not harmful.
- 2. Black carbon is formed through the incomplete combustion of fossil fuels, biofuel, and biomass.
- 3. Blue carbon includes coastal carbon sink

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

Correct Answer: B

Explanation:

Statement 1 is incorrect. A 10-point increase in air pollution from black carbon led to an average 5% increase in mortality.

Statement 2 is correct. Black carbon is formed through the incomplete combustion of fossil fuels, biofuel, and biomass.

Statement 3 is correct. Blue Carbon refers to coastal, aquatic and marine carbon sinks held by vegetation, marine organisms, and sediments.

Q.9) Consider the following statements regarding LEAF (Lowering Emissions by Accelerating Forest Finance) Coalition

- 1. It is a coalition of African Counties to improve global co-operation in lowering emissions.
- 2. They intend to mobilize at least USD 1 billion in financing to countries committed to protecting their tropical forests.

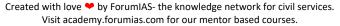
Which of the statements given above is/are correct?

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

Correct Answer: B

Explanation:

LEAF (Lowering Emissions by Accelerating Forest Finance) Coalition was announced at the Leaders Summit on Climate, 2021.





About the LEAF Coalition:

- It is a collective of the governments of the USA, United Kingdom and Norway.
- LEAF coalition will be one of the largest ever public-private efforts to protect tropical forests and intend to mobilize at least USD 1 billion in financing to countries committed to protecting their tropical forests.
- As it is a public-private effort, thus also supported by transnational corporations (TNCs) like Unilever plc, Amazon.com, Nestle, Airbnb etc.
- The LEAF coalition initiative is a step towards concretising the aims and objectives of the Reducing Emissions from Deforestation and Forest Degradation (REDD+) mechanism.
 - o REDD+ was created by the United Nations Framework Convention on Climate Change (UNFCCC). It monetised the value of carbon locked up in the tropical forests of most developing countries, thereby propelling these countries to help mitigate climate change.

Source: **Down To Earth**

Q10). Consider the following statements regarding a Heat Dome?

- 1. It is more likely to form during La Nina years.
- 2. Under the dome, air sinks and is compressed to release heat.
- 3. The hotter the temperature, the stronger a heat dome gets.

Select the correct answer from the codes given below:

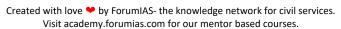
- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Answer: d

All statements are correct

• Heat dome is more likely to form during La Niña years like 2021, when waters are cool in the eastern Pacific and warm in the western Pacific.

Source: <u>Heat Dome</u>



POLITY

Q.1) What does the Prakash Singh & Ors vs Union of India & Ors case relate to?

- a) Judicial review in the 9th schedule
- b) Police reforms in India
- c) Right to fair trial of the victims
- d) Decriminalization of electoral politics

Correct Answer: B Explanation

In 2006, the Supreme Court issued following directives for police reform in Prakash Singh and others vs Union of India and others.

- Fixing the tenure and selection of the DGP to avoid situations where officers about to retire in a few months are given the post.
- A minimum tenure was sought for the Inspector General of Police so that they are not transferred mid-term by politicians.
- Postings of officers being done by Police Establishment Boards (PEB) comprising police officers and senior bureaucrats
- Setting up the State Police Complaints Authority (SPCA)
- Separation of investigation and law and order functions to better improve policing
- Setting up State Security Commissions (SSC) that would have members from civil society and forming a National Security Commission.

Source: Article

Q.2) Consider the following statements regarding Attorney General (AG) of India

- 1. S/he must be a person who is qualified to be appointed a judge of the Supreme Court
- 2. Procedures and grounds for the removal of AG is similar to the Judge of the Supreme Court

Which of the statements given above is/are correct?

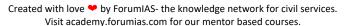
- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Correct answer: A Explanation:

The central government has extended the term of K.K. Venugopal as Attorney General (AG) for one more year.

About the Attorney General (AG) of India:

- The Attorney General (AG) of India is a part of the Union Executive. AG is the highest law officer in the country.
- **Appointment**: AG is appointed by the President on the advice of the government. S/he must be a person who is qualified to be appointed a judge of the Supreme Court. i.e.
 - o s/he must be a citizen of India
 - o S/he must have been a judge of some high court for five years or an advocate of some high court for ten years or an eminent jurist, in the opinion of the President.



• Procedures and grounds for the removal of AG are not mentioned in the Constitution. S/he holds office during the pleasure of the President (may be removed by the President at any time).

Source: The Hindu

Q.3) Consider the following statements regarding Central government and Union Government debate.

- 1. The term Central government is not used in the original Constitution as passed by the Constituent Assembly.
- 2. Recently, the Tamil Nadu government decided to use Central Government instead of Union Government.

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

Correct answer: A Explanation:

Recently, the Tamil Nadu government has decided to shun the usage of the term 'Central government' in its official communications and replace it with 'Union government'. The state government provided reasons such as,

- After going through the 395 Articles in 22 Parts and eight Schedules in the original Constitution, it can be stated that the term 'Centre' or 'Central government' is nowhere used.
- Even though there is no reference to the 'Central government' in the original Constitution, the General Clauses Act, 1897 gives a definition for it.
- Therefore, the real question is whether such definition for 'Central government' is constitutional as the Constitution itself does not approve of centralising power.

Which is better?

- 'Centre' or 'Central government' has a tendency of centralising powers in one unit.
- The 'Union government' or the 'Government of India' has a unifying effect as the message sought to be given is that the government is of all.
- According to Subash Kashyap, using the term 'Centre' or 'central government' would mean state governments are subservient to it.

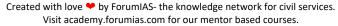
Source: The Indian Express

Q.4) Consider the following statements regarding National Disaster Management Authority (NDMA)

- a) It functions under the Ministry of Home Affairs.
- b) The President is the ex-officio chairperson of the NDMA

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





Correct answer: A Explanation:

The Supreme Court directed the National Disaster Management Authority (NDMA) to frame guidelines for payment of ex-gratia compensation to family members of persons who succumbed to COVID-19.

About NDMA:

- **Objective**: To coordinate response to natural or man-made disasters and for capacity-building in disaster resiliency and crisis response.
- It functions under the Ministry of Home Affairs.
- The Prime Minister is the ex-officio chairperson of the NDMA. S/he chairs a 9-member board.

Source: The Hindu

Q.5) Consider the following statements regarding the seat of Supreme Court in India:

- 1. Constitution of India provides for Delhi to be seat of the Supreme Court.
- 2. The Supreme Court can sit at any places as determined by the Parliament from time to time.

Which of the statements given above is/are correct?

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

Correct Answer: A

Explanation:

- The Constitution of India has specific provision for seat of the Supreme Court under the Article 130, which states that:
- "The Supreme Court shall sit in Delhi or in such other place or places, as the Chief Justice of India may, with the approval of the President, from time to time, appoint."
- Other seats/benches for the Supreme Court have been suggested by various Bar Councils as well as current Attorney General of India.

Q.6) Consider the following statements regarding Rajyasabha:

- 1. A bill for amendment to the constitution cannot be introduced in Rajya Sabha.
- 2. A Rajya Sabha resolution supported by not less than two thirds of the members present and voting empowers the parliament for creation of a new All India Service.

Which of the above statement is/are correct?

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

Correct Answer: b

Explanation:

• **Statement 1 is incorrect:** The bill for amendment to the constitution under Article 368 can be introduced in either house of the parliament.

• **Statement 2 is correct**: **Article 312** of the constitution states "... if the Council of States has declared by resolution supported by not less than two thirds of the members present and voting that it is necessary or expedient in the national interest so to do, Parliament may by law provide for the creation of one or more all India services..."



MISC

Q.1) Sunil Mehta committee sometimes seen in news is related to?

- a) Resolution of stressed assets
- b) NBFC sector reforms
- c) Rural microfinance Institutions
- d) Long-term food policy

Correct Answer: a

Explanation

• A committee under Sunil Mehta was set up to give recommendation on formation of an Asset Reconstruction Company for quicker resolution on stressed assets

Source: Article

Q.2) The term 'TENG', sometimes seen in news is related to which of the following?

- a) A nanogenerator device
- b) Gene-editing tool
- c) Night-Vision amplifier
- d) A super capacitor

Correct Answer: a

Explanation

• A triboelectric nanogenerator (TENG) is a self-powered device that makes use of mechanical energy in the form of vibrations present everywhere in different forms to generate electricity.

Source: Article

Q.3) Consider the following statements regarding iDEX:

- **1.** It aims to promote innovation and technology development in both Defence and Aerospace sectors.
- **2.** Defence Innovation Organization, a non-profit, shall manage iDEX.

Which of the above statements is/are incorrect?

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

Correct Answer: d

Explanation:

Both statements are correct

- Innovations for Defence Excellence (iDEX) was launched by the Government of India in 2018.
- **Aim:** It aims to create an ecosystem to promote innovation and technology development in Defence and Aerospace. For that, it will attract industries including MSMEs, startups, individual innovators, R&D institutes & academia.

o It will also provide grants/funding and other support to them to carry out R&D. However, R&D should have a good potential for future adoption for Indian defence and aerospace needs.

• Objectives of IDEX:

- o **Facilitate rapid development** of new, indigenized, and innovative technologies for the Indian defence and aerospace sector in shorter timelines.
- o **Create a culture** of engagement with innovative startups, to encourage cocreation for defence and aerospace sectors.
- o **Empower a culture of technology** co-creation and co-innovation within the defence and aerospace sectors.
- **Nodal Body:** iDEX will be funded and managed by Defence Innovation Organisation (DIO).
 - o Defence Innovation Organisation (DIO) is a not-for-profit Organisation, incorporated under Section 8 of the Companies Act.

Source: Article

Q.4) Konkan is a bilateral maritime exercise between India and which other country?

- a) UK
- b) Thailand
- c) USA
- d) France

Correct Answer: A

Explanation:

• It is an annual maritime bilateral exercise between Indian Navy and the Royal Navy of Britain.

Q.5) Mendez principles sometimes seen in news are?

- a) set of standards for non-coercive interviewing
- b) safeguards to be followed at nuclear installations
- c) ethical best practices in the area of genetic testing
- d) vaccination protocols governing prisoners of war

Correct Answer: A

Explanation:

• These principles called for the development of a universal set of standards for non-coercive interviewing and associated procedural safeguards during investigations to ensure that no person — including suspects, witnesses, victims, and other persons being interviewed — is subjected to torture, ill-treatment, or coercion while being questioned.

Source: Article

Q.6) Global Economic Prospects Report is released by?

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

Correct Answer: C

Explanation:

• Global Economic Prospects report is released by World Bank

Source: Article

Q.7) Which of the following countries is/are a part of G4?

- 1. India
- 2. Germany
- 3. Australia

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

Correct Answer: A

Explanation:

• The G4 nations comprising Brazil, Germany, India, and Japan are four countries which support each other's bids for permanent seats on the United Nations Security Council.

Source: Article



MAPPING

Q.1) Arrange the following from North to South:

- 1. Hokkaido
- 2. Kyushu
- 3. Shikoku
- 4. Honshu

Select the correct answer from the codes given below:

- a) 4-2-1-3
- b) 1-4-3-2
- c) 2-3-4-1
- d) 3-2-4-1

Correct Answer: b

Explanation

4 major islands of Japan from North to South are:

- Hokkaido
- Honshu
- Shikoku
- Kyushu

Source: Article

Q.2) Arrange the following straits from North to South:

- 1. Kerch
- 2. Dardanelles
- 3. Bosporus

Select the correct answer from the codes given below:

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

Correct Answer: d

Explanation

• The correct order is - Kerch Strait - Bosporus Strait - Dardanelles Strait

Source: Places in news

Q.3) Which of the following countries is/are not a part of the SAHEL region?

- 1. Tanzania
- 2. Nigeria
- 3. Burkina Faso

Select the correct answer from the codes given below:

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

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Correct Answer: a

Explanation:

The Sahel stretches from the Atlantic Ocean eastward through the following countries:

- Senegal
- Mauritania
- Mali
- Burkina Faso (formerly Upper Volta)
- Niger
- Nigeria
- Chad
- Sudan
- Eritrea
- Ethiopia

Source: Places in news

Q.4) Which of the following mountain pass(s) is/are correctly matched to their State/UT?

- a) Bomdila Pass Arunachal Pradesh
- b) Sela Pass Ladakh
- c) Zozila Pass Himachal Pradesh

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

Correct Answer: A

Explanation:

- **Option 1 is correctly matched:** The Bomdi-La pass in Arunachal Pradesh connects it with Lhasa, the capital city of Tibet.
- **Option 2** is incorrectly matched: The Sela Pass is a high-altitude mountain pass located on the border between the Tawang and West Kameng Districts of Arunachal Pradesh state in India.
- Option 3 is incorrectly matched: Zoji La pass in the Himalayas in the Union territory of Ladakh connects the Kashmir Valley to its west with the Drass and Suru valleys to its northeast and the Indus valley further east.

ECONOMY

Q.1) Which of the following steps is/are taken by the government following a counter-cyclical fiscal policy:

- 1. Increase in expenditure during a recession or a slowdown.
- 2. Raising of tax rates during an economic boom.

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

Correct Answer: C

Explanation

- Counter-cyclical Fiscal Policy refers to the steps taken by the government that go against the direction of the economic or business cycle.
- This means that during a recession or slowdown, the government increases expenditure and reduces taxes to create a demand that can drive an economic boom.
- On the other hand, during a boom in the economy, the policy aims at raising taxes and cutting public expenditure to control inflation and debt.

Source: Article

Q.2) Public Private Partnership (PPP) is routinely seen in news. In this respect consider the following statements:

- 1. It can be a partnership between a government or govt-owned entity on one side and a private sector entity on the other.
- 2. Government shares a minimal risk with the private sector.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation

- Statement 1 is correct: Infrastructure projects owned, developed and implemented jointly by the Government and private sector, through a partnership arrangement. Public Private Partnership means an arrangement between government or statutory entity or government owned entity on one side and a private sector entity on the other, for the provision of public assets and/or related services for public benefit, through investments being made by and/or management undertaken by the private sector entity for a specified period of time
- Statement 2 is incorrect: A substantial risk sharing with the private sector is involved and the private sector receives performance linked payments that conform (or are benchmarked) to specified and pre-determined performance standards, measurable by the public entity or its representative.

Source: Article

Q.3) Consider the following statements regarding Independent Director of a company:

- 1. He/She represents minority shareholders in a company.
- 2. All listed public companies need to have at least one-third of the total Directors as Independent Directors.

Which of the above statements is/ are correct?

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

Correct Answer: C Explanation:

Both statements are correct

- An independent Director is a director on a board of directors representing minority shareholders. He/she does not have a pecuniary relationship with the company or related persons, except for sitting fees.
- Their role is to take an unambiguously and independently stand to have a check and balance on the majority shareholders. It reduces exposure of the company to unwarranted risks.
- As per the Companies Act, 2013 all listed public companies need to have at least one-third of the total Directors to be independent.

Source: Article

- Q.4) Which of the following statement is correct regarding accredited investors?
- a) They are not government by rules of SEBI.
- b) An investor needs to have an annual income greater than ₹20 crores to become an accredited investor.
- c) They get relaxation in the minimum amount to be invested in the Alternative Investment Funds (AIF).
- d) Accredited Investors are those investors, who have passed a certification course from the government institute.

Correct Answer: C Explanation:

Statement 1 is incorrect. Securities and Exchange Board of India(SEBI) has come up with a framework for creating so-called accredited investors.

Statement 2 is incorrect. An investor need to have an annual income greater than ₹2 crores to become an accredited investor.

Statement 3 is correct. They get relaxation in the minimum amount to be invested in the Alternative Investment Funds (AIF)

Statement 4 is incorrect. Accredited Investors are those investors who may be considered to be well-informed or well-advised about investment products.

Q.5) Consider the following statement regarding Consumer Price Index (CPI):

- 1. Amongst all four measures of CPI in India, data for only CPI(IW) is released by Central Statistics Office.
- 2. RBI has adopted CPI as the key measure for determining the inflation situation of the Indian economy.

Which of the above statements is/are incorrect?

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

Correct Answer: d Explanation:

Both statements are correct

- Four types of CPI are as follows:
 - o CPI for Industrial Workers (IW).
 - o CPI for Agricultural Labourer (AL).
 - o CPI for Rural Labourer (RL).
 - o CPI (Rural/Urban/Combined).
- Of these, the first three are compiled by the Labour Bureau in the Ministry of Labour and Employment. Fourth is compiled by the Central Statistics Office (CSO) in the Ministry of Statistics and Programme Implementation
- RBI has adopted CPI as the key measure for determining the inflation situation of the Indian economy on the recommendation of the Urjit Patel Committee.

Source: Article

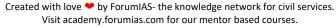
- **Q.6)** Shares with superior voting rights (SR shares) was seen in news. In this respect, consider the following statements:
- 1. Currently, SR shares can be granted only to promoters and founders.
- 2. Major aim of superior voting rights framework is to attract large scale FDI into India's tech firms.

Which of the above statements is/are correct?

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

Correct Answer: A Explanation:

- o **The Securities and Exchange Board of India (SEBI)** has introduced the Superior Voting Rights (SR) Framework in 2019.
- o **Aim of the framework:** to allow the founders of technology start-ups to retain control of their companies after they started trading publicly.
- Need: Promoters or founders of tech companies who are instrumental in starting up a company often lose control of the firm when they dilute their stakes to raise multiple rounds of funding.







o Currently SR shares can be granted only to promoters and founders. In a consultation paper, SEBI has said that trusts and other corporate structures could be made eligible.

Source: Article



Geography and Agriculture

- **Q.1) Baihetan Dam** was seen in news sometimes. In which of the following country the dam is located?
- a) Myanmar
- b) China
- c) India
- d) Spain

Correct Answer: B

Explanation:

Recently, China has put into operation the Baihetan Dam, world's Second Biggest Hydropower Dam. (Three Gorges Dam, opened in 2003 on the Yangtze, is the world's biggest hydroelectric dam.)

About the Baihetan Dam:

- The Baihetan Dam on the Jinsha River, a tributary of the Yangtze, is part of Chinese efforts to curb surging fossil fuel demand by building more hydropower capacity
- The 289-m-tall Baihetan Dam will have 16 generating units with a capacity of 1 million kilowatts each.
- It will eventually be able to generate enough electricity each day once to meet the power needs of 5,00,000 people for an entire year.

Source: Livemint

- Q.2) Consider the following statements regarding Rock Phosphate
- a) It is the key raw material for DAP and NPK fertilisers
- b) India is self-sufficient in Rock Phosphate sources.

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

Correct Answer: A

Explanation:

Recently Department of Fertilisers has released an Action Plan for making India Aatmanirbhar in fertiliser production through indigenous resources.

About Rock Phosphate:

- Rock Phosphate is the key raw material for DAP and NPK fertilisers
- India is 90% dependent on imports so the volatility in international prices affects domestic prices of fertilisers and hinders the progress and development of agriculture sector in the country.
- India has almost 30 lakh MT of Phosphorite deposits. It is available in Rajasthan, central part of peninsular India, Hirapur(MP) ,Lalitpur(UP) , Mussoorie syncline , Cuddapah basin(AP).

Source: PIB

Statutory, Regulatory and various Quasi-judicial Bodies

Q.1) Consider the following statements regarding Export Credit Guarantee Corporation (ECGC):

- 1. It works under the administrative control of Ministry of Commerce
- 2. It protects exporters from consequences of the payment risks, both political and commercial

Which of the above statements is/are correct?

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

Correct Answer: C

Both statements are correct

- ECGC Ltd. (Formerly Export Credit Guarantee Corporation of India Ltd.), wholly owned by Government of India, was set up in 1957 with the objective of promoting exports from the country by providing Credit Risk Insurance and related services for exports. It functions under the administrative control of **Ministry of Commerce & Industry**, and is managed by a Board of Directors comprising representatives of the Government, Reserve Bank of India, banking, and insurance and exporting community.
- The commercial risks of a foreign buyer going bankrupt or losing his capacity to pay are aggravated due to the political and economic uncertainties. Export credit insurance is designed to protect exporters from the consequences of the payment risks, both **political** and commercial, and to enable them to expand their overseas business without fear of loss

Source: Article

Q.2) Consider the following statements regarding Science and Engineering Board (SERB):

- 1. It is a statutory body.
- 2. Prime Minister is the ex-officio chairman of SERB.

Which of the above statements is/are correct?

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

Correct Answer: A

Explanation:

- **SERB** is a statutory body established in 2009. It functions under the Department of Science and Technology, Ministry of Science and Technology.
- **Functions:** It was set up for promoting basic research in science and engineering. It also provides financial assistance to scientists, academic institutions, Research and Development laboratories, industrial concerns, and other agencies for such research.
- **Chaired by:** It is chaired by the Secretary to the Government of India in the Department of Science and Technology. Further, it has other senior government officials and eminent scientists as members.

Source: Article