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Inside UPSC 2025 Prelims and APTI PLUS Sources Overlap

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UPSC CSE Prelims 2025:
Reflected in Our Content

Questions Matched from Our Preparation Sources:

Current Affairs Portal	Prelims Test Series
64 Questions	**31 Questions**

(including overlaps)

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(UPSC Questions vs **APTI PLUS** Coverage)

Q1. Consider the following types of vehicles:

I. Full battery electric vehicles
II. Hydrogen fuel cell vehicles
III. Fuel Cellelectric hybrid vehicles

How many of the above are considered as alternative powertrain vehicles?

(a) Only one
(b) Only two
(c All the three
(d) None

Answer: C

The entire topic was covered ON IASGYAN here: https://www.iasgyan.in/daily-current-affairs/hybrid-electric-vehicles

iasgyan.in/daily-current-affairs/hybrid-electric-vehicles

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What is a hybrid electric vehicle?

- A hybrid electric vehicle (HEV) uses an ICE (a petrol/diesel engine) and one or more electric motors to run. It is **powered by the electric motor alone, which uses energy stored in batteries, by the ICE, or both.**
- The powertrain of the HEV is more complex than a regular ICE-powered car as it has EV components and a conventional ICE. That means a typical HEV will have a low-voltage auxiliary battery, a traction battery pack to store electricity for the electric motor, an electric generator, an AC/DC converter, a power electronics controller, a thermal system to maintain working temperature, an ICE, a fuel tank, a fuel filler, a transmission and an exhaust system.

How do HEV powertrains work?

- HEV powertrains are designed to power cars in a series, parallel or series-parallel (power split) methods. A series **HEV uses only the electric motor to drive the wheels, while the ICE powers the generator, which in turn recharges the battery**. A parallel HEV, based on the driving condition, uses the best power source to power the vehicle. It will alternate between the electric motor and the ICE to keep the car moving.
- A series-parallel HEV offers a combination of both models and allows splitting power, wherein power is routed from the ICE alone or from the battery to the electric motor to drive the vehicle. Moreover, in all three designs, the battery is charged through regenerative braking technology.

How does regenerative braking work?

- A regenerative braking system (RBS) used in automotive applications has several advantages like **better braking efficiency in stop-and-go traffic which enhances fuel economy and also helps in reducing carbon emissions**. Besides, RBS also helps in energy optimisation resulting in minimum energy wastage.

What are the different types of HEVs?

Q3. In the context of electric vehicle batteries, consider the following elements :

I. Cobalt
II. Graphite
III. Lithium

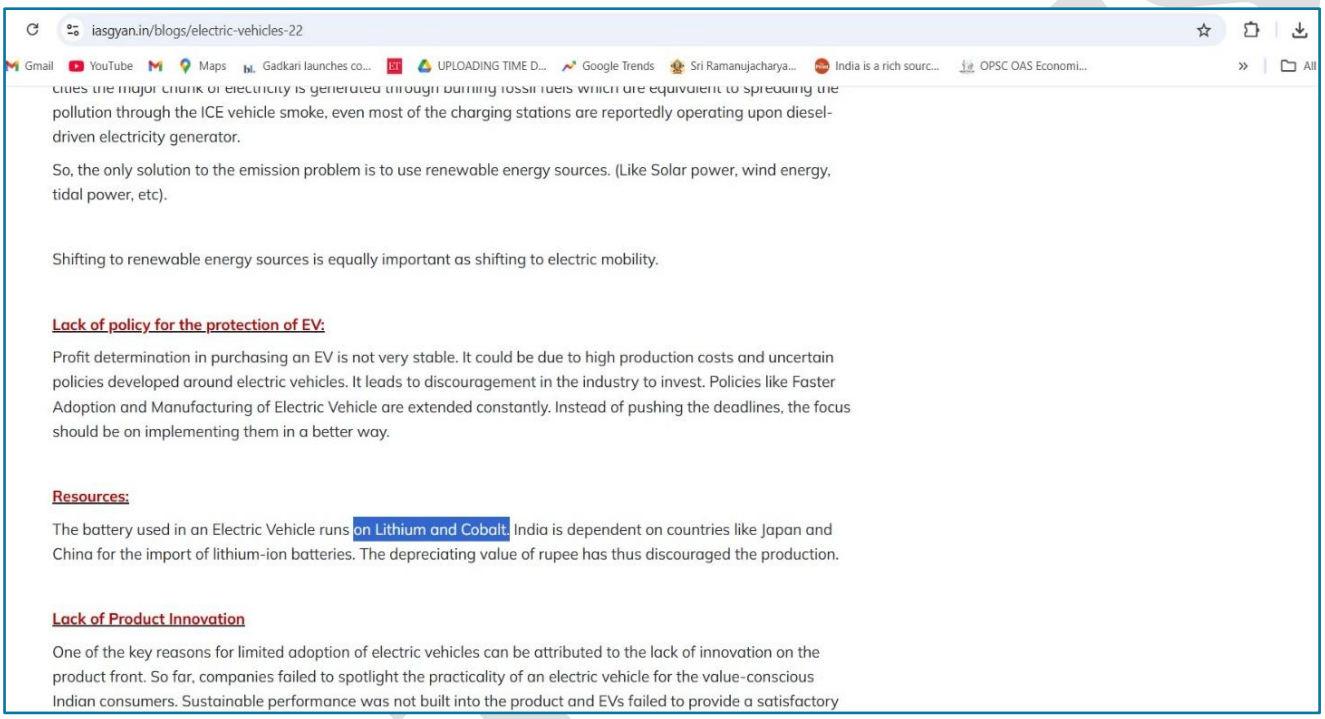
IV. Nickel

How many of the above usually make up battery cathodes?

(a) Only one
(b) Only two
(c) Only three
(d) All

Answer: C

It was covered in IASGYAN explicitly: https://www.iasgyan.in/blogs/electric-vehicles-22



iasgyan.in/blogs/electric-vehicles-22

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cities the major chunk of electricity is generated through burning fossil fuels which are equivalent to spreading the pollution through the ICE vehicle smoke, even most of the charging stations are reportedly operating upon diesel-driven electricity generator.

So, the only solution to the emission problem is to use renewable energy sources. (Like Solar power, wind energy, tidal power, etc).

Shifting to renewable energy sources is equally important as shifting to electric mobility.

Lack of policy for the protection of EV:

Profit determination in purchasing an EV is not very stable. It could be due to high production costs and uncertain policies developed around electric vehicles. It leads to discouragement in the industry to invest. Policies like Faster Adoption and Manufacturing of Electric Vehicle are extended constantly. Instead of pushing the deadlines, the focus should be on implementing them in a better way.

Resources:

The battery used in an Electric Vehicle runs on Lithium and Cobalt. India is dependent on countries like Japan and China for the import of lithium-ion batteries. The depreciating value of rupee has thus discouraged the production.

Lack of Product Innovation

One of the key reasons for limited adoption of electric vehicles can be attributed to the lack of innovation on the product front. So far, companies failed to spotlight the practicality of an electric vehicle for the value-conscious Indian consumers. Sustainable performance was not built into the product and EVs failed to provide a satisfactory

Q7. Consider the following statements :

I. It is expected that Majorana 1 chip will enable quantum computing.
II. Majorana 1 chip has been introduced by Amazon Web Services (AWS).
III. Deep learning is a subset of machine learning.

Which of the statements given above are correct?

(a) I and II only
(b) II and III only
(c) I and III only
(d) I, II and III

Answer: C

Directly covered in IASGYAN:

https://www.iasgyan.in/daily-current-affairs/majorana-1#:~:text=The%20chip%20uses%20a%20custom,control%20over%20them%20in%202023.

iasgyan.in/daily-current-affairs/majorana-1#:~:text=The%20chip%20uses%20a%20custom,control%20over%20them%20in%202023.

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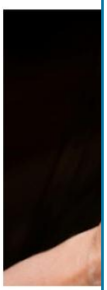
MAJORANA 1

Tags : Daily News Analysis Science and Technology

Microsoft unveiled Majorana 1, the first quantum chip with a topological core designed to scale to one million qubits. Using engineered indium arsenide-aluminum nanowires to generate Majorana zero modes, it offers 99% fidelity and improved coherence, promising breakthroughs in medicine, materials, climate modeling, and AI through error-resistant quantum computing innovations.

Last Updated on 24th February, 2025 3 minutes, 40 seconds



Description

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iasgyan.in/blogs/basics-of-artificial-intelligence

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MACHINE LEARNING

#	AI	ML
1	Overarching field	Subset of AI
2	The goal is to simulate human intelligence to solve complex problems	The goal is to learn from data and be able to predict results when new data is presented
3	Leads to intelligence or wisdom	Leads to knowledge
4	Tries to find the optimal solution	Tries to find the only solution whether it is optimal or not

Deep learning

Deep Learning is a subset of Machine Learning, which on the other hand is a subset of Artificial Intelligence.

Deep Learning is inspired by the structure of a human brain. Deep learning algorithms attempt to draw similar conclusions as humans would by continually analyzing data with a given logical structure. To achieve this, deep learning uses a multi-layered structure of algorithms called neural networks.

Artificial neural network (ANN)

Artificial neural network refers to a system or an algorithm used in deep learning that mimics how the human brain's neural circuits function, such as when making sense of things and events.

Biological Neural Network

The neuron is the basic working unit of the brain, a specialized cell designed to transmit information to other nerve cells, muscle, or gland cells. Neurons are cells within the nervous system that transmit information to other nerve cells, muscle, or gland cells. Most neurons have a cell body, an axon, and dendrites.

A biological neural network/circuit is a population of neurons interconnected by synapses to carry out a specific

Q8. With reference to monoclonal antibodies, often mentioned in news, consider the following statements:

1. They are man-made proteins.
2. They stimulate immunological function due to their ability to bind to specific antigens.
3. They are used in treating viral infections like that of Nipah virus.

Which of the statements given above are correct?

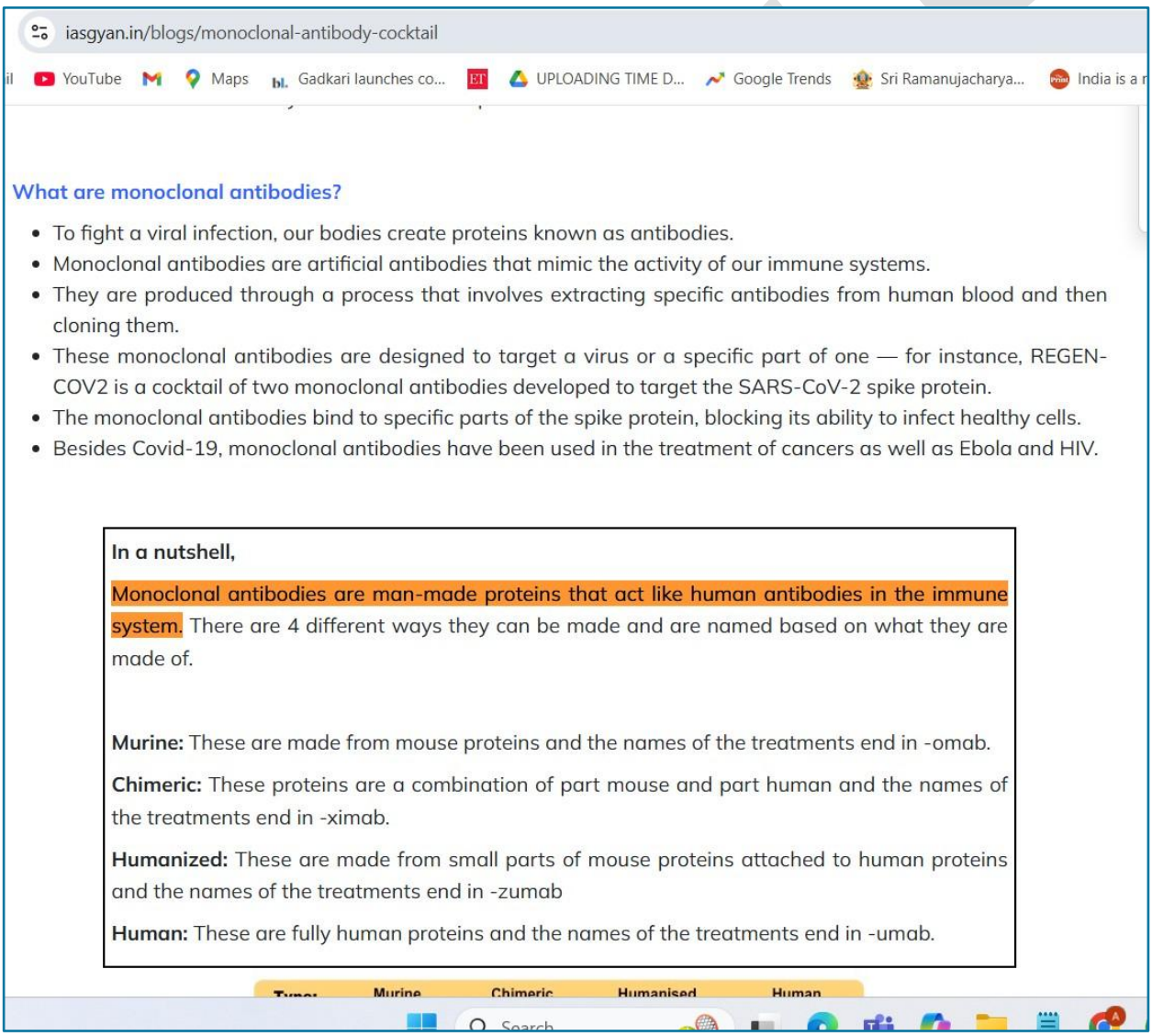
(a) I and II only
(b) II and III only
(c) I and III only
(d) I, II and III

Answer: D

Directly covered in our website IASGYAN

Directly covered in our website:

https://www.iasgyan.in/blogs/monoclonal-antibody-cocktail



iasgyan.in/blogs/monoclonal-antibody-cocktail

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What are monoclonal antibodies?

- To fight a viral infection, our bodies create proteins known as antibodies.
- Monoclonal antibodies are artificial antibodies that mimic the activity of our immune systems.
- They are produced through a process that involves extracting specific antibodies from human blood and then cloning them.
- These monoclonal antibodies are designed to target a virus or a specific part of one — for instance, REGEN-COV2 is a cocktail of two monoclonal antibodies developed to target the SARS-CoV-2 spike protein.
- The monoclonal antibodies bind to specific parts of the spike protein, blocking its ability to infect healthy cells.
- Besides Covid-19, monoclonal antibodies have been used in the treatment of cancers as well as Ebola and HIV.

In a nutshell,

Monoclonal antibodies are man-made proteins that act like human antibodies in the immune system. There are 4 different ways they can be made and are named based on what they are made of.

Murine: These are made from mouse proteins and the names of the treatments end in -omab.

Chimeric: These proteins are a combination of part mouse and part human and the names of the treatments end in -ximab.

Humanized: These are made from small parts of mouse proteins attached to human proteins and the names of the treatments end in -zumab

Human: These are fully human proteins and the names of the treatments end in -umab.

Type: Murine Chimeric Humanised Human

Directly covered in our website:
https://www.iasgyan.in/daily-current-affairs/monoclonal-antibodies

Q.9 Consider the following statements:

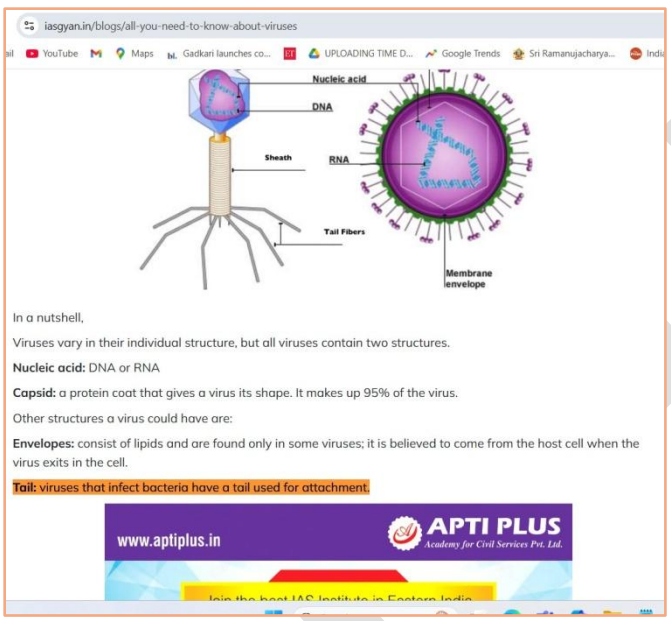
I. No virus can survive in ocean waters.
II. No virus can infect bacteria.
III. No virus can change the cellular transcriptional activity in host cells.

How many of the statements given above are correct?

(a) Only one
(b) Only two
(c) All the three
(d) None

Answer: D

Covered directly in our website:
https://www.iasgyan.in/blogs/all-you-need-to-know-about-viruses



Q13.Consider the following statements:

Statement I:
Scientific studies suggest that a shift is taking place in the Earth's rotation and axis.

Statement II:
Solar flares and associated coronal mass ejections bombarded the Earth's outermost atmosphere with tremendous amount of energy.

Statement III:
As the Earth's polar ice melts, the water tends to move towards the equator.

Which one of the following is correct in respect of the above statements?

(a) Both Statement II and Statement III are correct and both of them explain Statement I
(b) Both Statement II and Statement III are correct but only one of them explains Statement I

(c) Only one of the Statements II and III is correct and that explains Statement I
(d) Neither Statement II nor Statement III is correct

Answer: B

These statements in the question are direct/that can be solved using our content in IASGYAN:

https://www.iasgyan.in/daily-current-affairs/polar-wandering
https://www.iasgyan.in/daily-current-affairs/effect-of-climate-change-on-days-length
https://www.iasgyan.in/daily-current-affairs/solar-flares-49

iasgyan.in/daily-current-affairs/polar-wandering

Last Updated on 3rd May, 2021 2 minutes, 29 seconds

Description

UPSC GS PAPER I: Salient features of World's Physical Geography.

Context: Melting glaciers due to climate change caused Earth's axis to shift since mid-90s

- The drift happened as the melting glaciers redistributed water, which made the direction of the polar wander turn and accelerate.
- The latest research has that the Earth's North and South poles have moved since the mid-1900s.
- They have been affected due to the melting of glaciers and other factors caused by humans, namely climate change.
- The rapid melting of glaciers has also affected the rotation of Earth.
- This study was conducted by researchers from the University of the Chinese Academy of Sciences and the Technical University of Denmark (DTU).
- Melting glaciers due to climate change caused Earths axis to shift since mid90s.
- The drift happened in the mid-1990s as the melting glaciers redistributed water which made the direction of the polar wander turn and accelerate.
- The new study uses data from the Gravity Recovery and Climate Experiment (GRACE) and observations from the 2018 **project GRACE-FO** to explain the drift in the Earth's axis due to glacier melting.

Polar wandering

- It is the **migration of the magnetic poles over Earth's surface through geologic time.**
- Polar wander is the **motion of a pole in relation to some reference frame**.
- It can be used, for example, to measure the degree to which Earth's magnetic poles have been observed to move relative to the Earth's rotation axis.
- It is also possible to use continents as reference and observe the relative motion of the magnetic pole relative to

iasgyan.in/daily-current-affairs/effect-of-climate-change-on-days-length

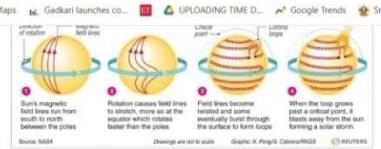
- Even minor changes in the length of a day can affect systems dependent on exact synchronization, such as **GPS satellites and global communication networks**.
- Environmental Impact: The movement of water masses also contributes to rising sea levels, which have more immediate and **devastating consequences** for low-lying coastal areas.
  - Flooding, erosion, and habitat destruction are some of the severe outcomes faced by these regions.
- Climate Feedback Loops: Changes in rotational velocity may also contribute to other climate feedback mechanisms, further exacerbating climate change.
  - The **redistribution of mass can influence atmospheric dynamics**, ocean currents, and weather patterns.

Impact on Timekeeping	Even minor changes in Earth's rotation can affect **global timekeeping systems, digital infrastructure, and GPS satellites,** leading to significant navigation and spacecraft communication errors.
Effects of Melting Polar Ice	The melting of polar ice contributes to **sea-level rise and redistributes mass** from poles to the equator, increasing Earth's oblateness and impacting rotational dynamics.
Human Impact	**Human activities** are altering Earth's climate and fundamental physical properties, with significant responsibilities for the future.
Need for Climate Action	Urgent and sustained efforts are needed to **reduce greenhouse gas emissions and implement sustainable practices** to mitigate far-reaching consequences, including changes in Earth's rotation.
Broader Implications	The melting of polar ice caps is a planetary issue that affects Earth's **rotation and the length of days**, emphasizing the critical need for global cooperation and climate action.

Conclusion

- The effect of climate change on the length of a day illustrates the interconnectedness of Earth's systems.
- While the lengthening of days might not have a direct impact on our daily lives, the broader implications for

iasgyan.in/daily-current-affairs/solar-flares-49



Impact of Solar Flares and CMEs on Earth

Not all solar flares reach Earth, but solar flares/storms, solar energetic particles (SEPs), high-speed solar winds, and coronal mass ejections (CMEs) that come close can impact space weather in near-Earth space and the upper atmosphere.

- **Space-dependent services:** Solar storms can hit operations of space-dependent services like **global positioning systems (GPS), radio, and satellite communications**.
- **Radio communication:** Geomagnetic storms interfere with high-frequency radio communications and GPS navigation systems.
- **Magnetosphere:** CMEs, with ejectiles loaded with matter traveling at millions of miles an hour, can potentially create disturbances in the magnetosphere, the protective shield surrounding the Earth.
- **Astronauts:** Astronauts on spacewalks face health risks from possible exposure to solar radiation outside the Earth's protective atmosphere.
- **Other:** Aircraft flights, power grids, and space exploration programs are vulnerable.

Categories

- There are five categories of solar flare according to their brightness in the x-ray wavelengths which include **A, B, C, M, and X**; each class is at least ten times more potent than the one before it.
- **X-class Flares (Big):** They are **major** events that can trigger radio blackouts around the whole world and long-lasting radiation storms in the upper atmosphere.
- **M-class Flares (Medium-Sized):** They generally cause brief radio blackouts that affect Earth's polar regions.

Q14. Consider the following statements:

Statement I:

Article 6 of the Paris Agreement on climate change is frequently discussed in global discussions on sustainable development and climate change.

Statement II:

Article 6 of the Paris Agreement on climate change sets out the principles of carbon markets.

Statement III:

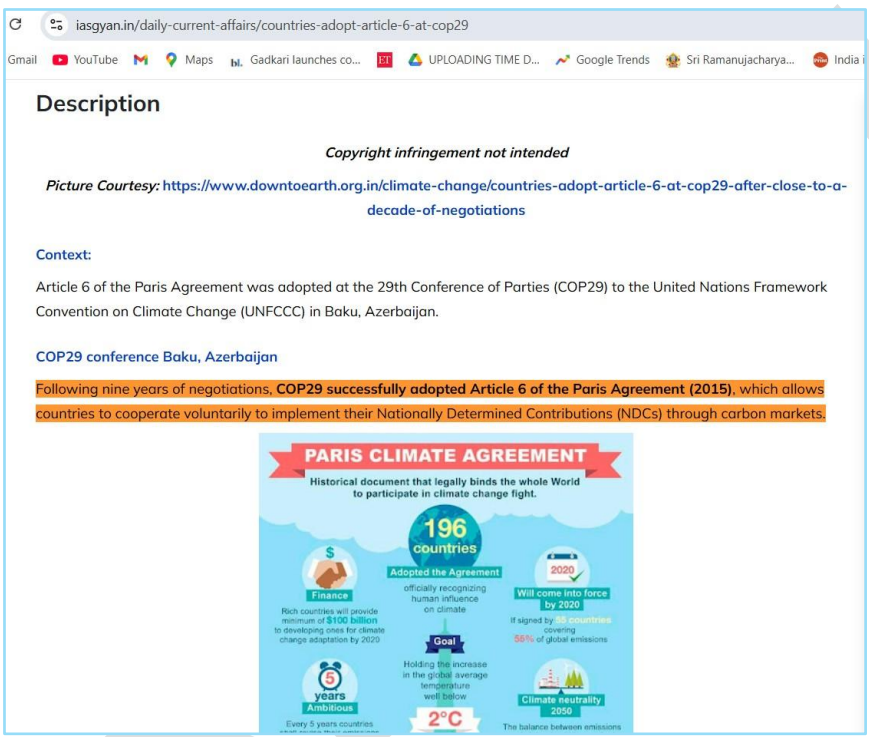
Article 6 of the Paris Agreement on climate change intends to promote inter-country non-market strategies to reach their climate targets.

Which one of the following is correct in respect of the above statements?

(a) Both Statement II and Statement III are correct and both of them explain Statement I
(b) Both Statement II and Statement III are correct but only one of them explains Statement I
(c) Only one of the Statements II and III is correct and that explains Statement I
(d) Neither Statement II nor Statement III is correct

Answer: A

This question can be solved easily using our content ON IASGYAN: https://www.iasgyan.in/daily-current-affairs/countries-adopt-article-6-at-cop29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Description

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Picture Courtesy: https://www.downtoearth.org.in/climate-change/countries-adopt-article-6-at-cop29-after-close-to-a-decade-of-negotiations

Context:

Article 6 of the Paris Agreement was adopted at the 29th Conference of Parties (COP29) to the United Nations Framework Convention on Climate Change (UNFCCC) in Baku, Azerbaijan.

COP29 conference Baku, Azerbaijan

Following nine years of negotiations, **COP29 successfully adopted Article 6 of the Paris Agreement (2015)**, which allows countries to cooperate voluntarily to implement their Nationally Determined Contributions (NDCs) through carbon markets.

Q16. With reference to 'Direct Air Capture', an emerging technology, which of the following statements is/are correct?

I. It can be used as a way of carbon sequestration.
II. It can be a valuable approach for plastic production and in food processing.
III. In aviation, it can be a source of carbon for combining with hydrogen to create synthetic low-carbon fuel.

Select the correct answer using the code given below.

(a) I and II only
(b) III only
(c) I, II and III
(d) None of the above statements is correct

Answer: C

0This question can be easily solved using this content from IASGYAN: https://www.iasgyan.in/daily-current-affairs/carbon-capture-utilisation-technologies-26

iasgyan.in/daily-current-affairs/carbon-capture-utilisation-technologies-26

- **In forests:** plant-rich landscapes like forests, rangelands and grasslands absorb about 25% of the global carbon emissions. When the trees, branches and leaves die and fall to the ground, they release the carbon they had stored into the soil.
- **In soils:** carbon can be sequestered in soil by plants through photosynthesis. Soil can also store carbon as carbonates.
- **In grasslands:** grasslands and rangelands are more reliable areas of storing carbon than forests due to the rapid wildfires and deforestation affecting forests.

2. **Geological Carbon Sequestration:** This is where carbon dioxide is stored in underground geologic formations, such as in rocks. Industrial sources of carbon dioxide such as steel or cement production companies or energy-related sources like power plants or natural gas processing facilities will release their carbon dioxide, which is then injected into porous rocks for long-term storage.
3. **Technological Carbon Sequestration:** This is a relatively new way of capturing and storing carbon dioxide. This method uses innovative technologies for removing CO2 from the atmosphere.
4. **Graphene production**: Technology is being used to produce graphene from carbon dioxide as its raw material. Graphene can be used as a viable resource and solution in reducing carbon's emissions from the atmosphere.
5. **Engineered molecules:** engineering molecules can act as filters and only attract the element they are engineered to seek.
6. **Direct air capture (DAC):** this is a means of capturing carbon dioxide from the air using advanced technology plants. It is an effective technological method of sequestrating carbon but it is **energy-intensive**.
7. **Industrial Carbon Sequestration:** This is not a widely renowned method, that can capture the carbon in three ways **a. Pre-combustion**: the carbon is captured in power plants before the fuel is burned. The aim is to remove the carbon from coal before it is burned. The coal is reacted with oxygen to produce synthesis gas, a mixture of carbon monoxide and hydrogen gases.
8. **Post-combustion:** carbon is removed from a power station's output after the fuel has been burned. This means waste gases are captured and scrubbed clean of their carbon dioxide before they travel up smokestacks.
9. **Oxyfuel or oxy-combustion:** the point is to burn fuel in more oxygen and the process traps the entire output from the smokestacks and stores it all. Pure oxygen is blown into the furnaces to purify the exhaust, so the fuel burns completely, producing relatively pure steam and carbon dioxide gas.

Examples of Carbon Sequestration

1. **Photosynthesis:** This is the process where plants and trees absorb and store carbon dioxide during growth, releasing oxygen in turn.
2. **Century Plant:** This is the single biggest carbon capture and storage plant in the world.

iasgyan.in/daily-current-affairs/carbon-capture-utilisation-technologies-26

- The report explores the importance of Carbon Capture, Utilisation, and Storage as an emission reduction strategy to achieve deep decarbonization from the hard-to-abate sectors.
- The report outlines broad level policy interventions needed across various sectors for its application.
- **As, India has updated its NDC targets for achieving 50% of its total installed capacity from non-fossil-based energy sources, 45% reduction in emission intensity by 2030 and taking steps towards achieving Net Zero by 2070, the role of Carbon Capture, Utilisation, and Storage (CCUS) becomes important as reduction strategy to achieve decarbonization from the hard-to abate sectors.**
- CCUS can enable the production of clean products while still utilizing our rich endowments of coal, reducing imports and thus leading to an Atmanirbhar Indian economy
- **CCUS projects will also lead to a significant employment generation. It estimates that about 750 mtpa of carbon capture by 2050 can create employment opportunities of about 8-10 million on full time equivalent (FTE) basis in a phased manner.**
- India's dependency on the fossil-based Energy Resources is likely to continue in future, hence CCUS policy in Indian Context is needed.
- **The report indicates that CCUS can provide a wide variety of opportunities to convert the captured CO2 to different value-added products like green urea, food and beverage form application, building materials (concrete and aggregates), chemicals (methanol and ethanol), polymers (including bio-plastics) and enhanced oil recovery (EOR) with wide market opportunities in India, thus contributing substantially to a circular economy.**
- Indian Scientists under Mission Innovation program, have discovered a strategy to synthesize novel solid adsorbents for CO2 capture and utilization.

NCERT BOOK - https://www.iasgyan.in/ig-uploads/images/ncert_amazon_(1).jpg

link - https://amzn.to/3UKtDWk

Need for such technologies:

- Mitigate global warming by reducing CO2 emissions.
- Existing technologies are not economical viable
- Existing critical materials fails to capture and utilize CO2 completely.

What is carbon sequestration?

- Carbon dioxide is the most commonly produced greenhouse gas.

Q18. Consider the following statements:

I. Carbon dioxide (CO_2) emissions in India are less than 0.5 t CO_2 / capita.
II. In terms of CO_2 emissions from fuel combustion, India ranks second in Asia-Pacific region.
III. Electricity and heat producers are the largest sources of CO_2 emissions in India.

Which of the statements given above is/are correct?

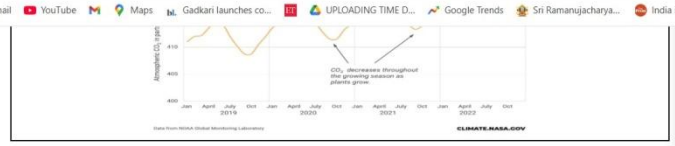
(a) I and III only
(b) I and II only
(c) II and III only
(d) I, II and III

Answer: C

This question can be easily solved using the content uploaded on IASGYAN. Statement I is there in three options.:https://www.iasgyan.in/daily-current-affairs/rising-co2-emission

Answer would be C.

iasgyan.in/daily-current-affairs/rising-co2-emission



According to the Global Carbon Project's latest report presented at COP29 in Baku, Azerbaijan, the contributions in global emissions are as follows:

India's Contribution to Global Emissions	
Rising Emissions	• India's CO2 emissions are expected to grow by 4.6% in 2024, the highest among major economies. • This includes increases from coal **(4.5%), oil (3.6%), natural gas (11.8%), and cement production (4%).**
Global Standing	• India contributes 8% of global fossil CO2 emissions, ranking third after China (31%) and the U.S. (13%). **The European Union (EU-27) contributes 7%.**
Per Capita Emissions	• India's per capita CO2 emissions are 0.6 tonnes, significantly lower than the global average of 1.3 tonnes, the U.S. at 3.**9 tonnes, China at 2.3 tonnes, and the EU-27 at 1.5 tonnes.**
Global Trends in Emissions	• Emissions from coal, oil, and natural gas are expected to rise by **0.2%, 0.9%, and 2.4%, respectively, in 2024.** • **CO2 concentrations** in the atmosphere are projected to reach 422.5 ppm in 2024, which is 52% higher than pre-industrial levels.
	• The remaining global carbon budget is depleting, with a consistent **breach of**

Q 20. With reference to the planet Earth, consider the following statements:

I. Rain forests produce more oxygen than that produced by oceans.
II. Marine phytoplankton and photosynthetic bacteria produce about 50% of world's oxygen.
III. Well-oxygenated surface water contains several folds higher oxygen than that in atmospheric air.

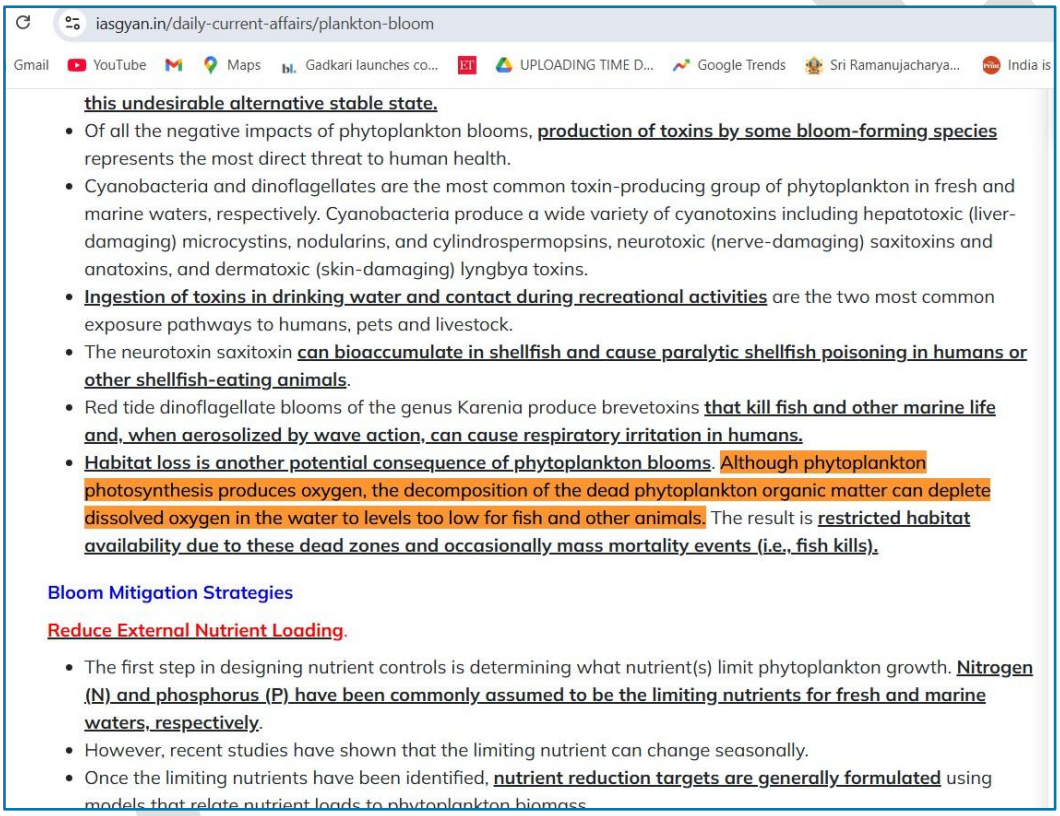
Which of the statements given above is/are correct?

(a) I and II
(b) II only
(c) I and III
(d) None of the above statements is correct

Answer: B

Can be solved using lateral knowledge after going through the content available on our IASGYAN website.

https://www.iasgyan.in/daily-current-affairs/amazon-forests-and-climate-change
https://www.iasgyan.in/daily-current-affairs/dark-oxygen-13
https://www.iasgyan.in/daily-current-affairs/ocean-anoxic-event-1a
https://www.iasgyan.in/daily-current-affairs/plankton-bloom


iasgyan.in/daily-current-affairs/plankton-bloom

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this undesirable alternative stable state.

- Of all the negative impacts of phytoplankton blooms, production of toxins by some bloom-forming species represents the most direct threat to human health.
- Cyanobacteria and dinoflagellates are the most common toxin-producing group of phytoplankton in fresh and marine waters, respectively. Cyanobacteria produce a wide variety of cyanotoxins including hepatotoxic (liver-damaging) microcystins, nodularins, and cylindrospermopsins, neurotoxic (nerve-damaging) saxitoxins and anatoxins, and dermatoxic (skin-damaging) lyngbya toxins.
- Ingestion of toxins in drinking water and contact during recreational activities are the two most common exposure pathways to humans, pets and livestock.
- The neurotoxin saxitoxin can bioaccumulate in shellfish and cause paralytic shellfish poisoning in humans or other shellfish-eating animals.
- Red tide dinoflagellate blooms of the genus Karenia produce brevetoxins that kill fish and other marine life and, when aerosolized by wave action, can cause respiratory irritation in humans.
- Habitat loss is another potential consequence of phytoplankton blooms. Although phytoplankton photosynthesis produces oxygen, the decomposition of the dead phytoplankton organic matter can deplete dissolved oxygen in the water to levels too low for fish and other animals. The result is restricted habitat availability due to these dead zones and occasionally mass mortality events (i.e., fish kills).

Bloom Mitigation Strategies

Reduce External Nutrient Loading.

- The first step in designing nutrient controls is determining what nutrient(s) limit phytoplankton growth. Nitrogen (N) and phosphorus (P) have been commonly assumed to be the limiting nutrients for fresh and marine waters, respectively.
- However, recent studies have shown that the limiting nutrient can change seasonally.
- Once the limiting nutrients have been identified, nutrient reduction targets are generally formulated using models that relate nutrient loads to phytoplankton biomass

Q23. The irrigation device called 'Araghatta' was

(a) a water bag made of leather pulled over a pulley
(b) a large wheel with earthen pots tied to the outer ends of its spokes
(c) a larger earthen pot driven by bullocks
(d) a large water bucket pulled up by rope directly by hand

Answer: B

Araghatta has been directly covered on our IASGYAN Website: https://www.iasgyan.in/daily-current-affairs/rainwater-harvesting

iasgyan.in/daily-current-affairs/rainwater-harvesting

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Northern India

Kuls/Kuhls (Himachal Pradesh)

Long channels mainly found in Himachal Pradesh and in some parts of Jammu and Kashmir. The kul begins at the glacier and leads into a circular tank from where, when water is needed to irrigate the fields, a trickle of water is let out. This distribution is regulated by the villagers.

-

Araghatta (Kashmir)

Araghattas are water wheels found in the Kashmir Valley. Also known as the Persian wheel, these wooden wheels help lift water from the river Jhelum to the complex irrigation system of canals which irrigate rice fields in the Valley.[18]

Johads (Rajasthan and Haryana)

Johads are small earthen check dams that hold rainwater, aiding groundwater recharge and slow percolation to the underground aquifer.

Khadins

Khadins are ingenious constructions designed to harvest surface runoff water for agriculture. The main feature of a khadin, also called dhora, is a long earthen embankment that is built across the hill slopes of gravelly uplands. Sluices and spillways allow the excess water to drain off and the water-saturated land is then used for crop production. First designed by the Paliwal Brahmins of Jaisalmer in the 15th century, this system is very similar to the irrigation methods of the people of ancient Ur (present Iraq).

Jhalaras

Jhalaras are typically rectangular-shaped stepwells that have tiered steps on three or four sides. These stepwells collect the subterranean

Q24 Who among the following rulers in ancient India had assumed the titles Mattavilasa, Vichitrachitta, and Gunabhara?

(a) Mahendravarman I
(b) Simhavishnu
(c) Narasimhavarman I
(d) Simhavarman

Answer: A

Was covered on IASGYAN Website: https://www.iasgyan.in/daily-current-affairs/pallava-dynasty

iasgyan.in/daily-current-affairs/pallava-dynasty

Sivaskandavarman	3rd Century AD	First great Pallava king according to early Prakrit records. Ruled Kanchi, Andhrapatha, and surrounding districts. Performed the Ashvamedha sacrifice. Introduced a hierarchy of secret officials.
Vishnugopa	4th Century AD	Defeated by Samudragupta in the mid-4th century. Pallavas fell into obscurity for over a century and a half.
Simha Vishnu	575–600 AD	Restored the Pallava dynasty. Expanded domain beyond Kanchi. Defeated Pandyas, Cholas, and Cheras. Conquered the ruler of Ceylon (Sri Lanka). Represented in the Adivaraha Mandapa bas-relief at Mahabalipuram.
Mahendravarman I	600–630 AD	Engaged in the Pallava-Chalukya struggle. Defeated by Pulakesin II, losing Vengi in 610 AD. Pioneered rock-cut temples. Built temples at Pallavaram, Dalavanur, and other sites. Authored *Mattavilasa Prahasanam* and *Bhagavada Jjuka*. Converted from Jainism to Shaivism. Titles: Gunabhara, Satyasandha, Chitrakarapuli, etc.
Narasimhavarman I	630–668 AD	Avenged his father's defeat by defeating Pulakesin II and capturing Vatapi. Assumed the title *Vatapikonda*. Conducted a naval expedition to Sri Lanka and restored Manavarma's throne. Founded Mamallapuram (Mahabalipuram). Host to Chinese traveler Hiuen Tsang, who described Kanchi as a learning center.
		Known as Rajasimha. Period of peace and focus on art and

Q25. Fa-hien (Faxian), the Chinese pilgrim, travelled to India during the reign of

(a) Samudragupta
(b) Chandragupta II
(c) Kumaragupta I
(d) Skandagupta

Answer: B

This information has been directly covered in our Article on IAGGYAN:https://www.iasgyan.in/blogs/list-of-foreign-travellers-to-india

iasgyan.in/blogs/list-of-foreign-travellers-to-india

Ptolemy (130 A.D.)

- From Greece
- Geographer
- Wrote "the geography of India"-which describes ancient Indian geography.

Faxian (AD 405-411)

- The Chinese wayfarer arrived in India on foot during the days of Chandragupta Vikramaditya.
- The first Buddhist pilgrim to visit India, Faxian has given valuable details about the Gupta dynasty, and the social and economic spheres.
- He is known for his visit to Lumbini.
- His voyage is described in his travelogue "Record of Buddhist Kingdom"
- 'Foguoji' is one of his famous books.

Xuanzang (630 AD)

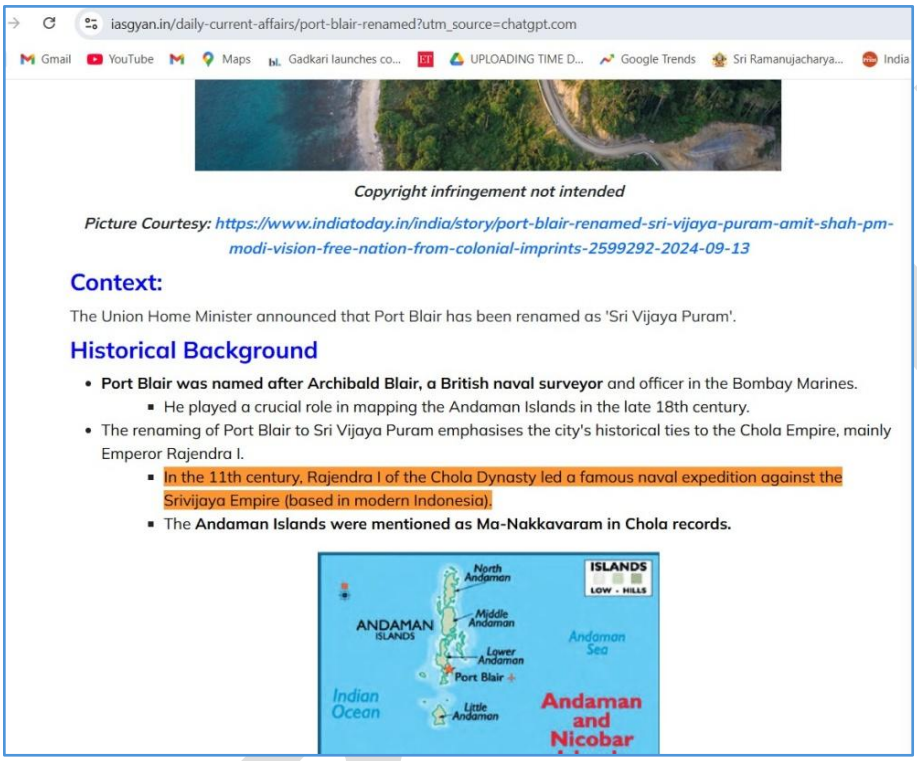
- The Chinese traveller visited India in and stayed on for 15 years.
- He visited India during the supremacy of Harsha Vardhana.
- He studied about the caste system of the days and wrote the book 'Si-Yu-Ki.'/ 'THE RECORDS OF WESTERN WORLD'

Q26. Who among the following led a successful military campaign against the kingdom of Srivijaya, the powerful maritime State, which ruled the Malay Peninsula, Sumatra, Java and the neighbouring islands?

(a) Amoghavarsha (Rashtrakuta)
(b) Prataparudra (Kakatiya)
(c) Rajendra I (Chola)
(d) Vishnuvardhana (Hoysala)

Answer: C) Rajendra I (Chola)

This information has been directly covered in Current Affairs on our Website:https://www.iasgyan.in/daily-current-affairs/port-blair-renamed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Picture Courtesy: https://www.indiatoday.in/india/story/port-blair-renamed-sri-vijaya-puram-amit-shah-pm-modi-vision-free-nation-from-colonial-imprints-2599292-2024-09-13

Context:

The Union Home Minister announced that Port Blair has been renamed as 'Sri Vijaya Puram'.

Historical Background

- **Port Blair was named after Archibald Blair, a British naval surveyor** and officer in the Bombay Marines.
  - He played a crucial role in mapping the Andaman Islands in the late 18th century.
- The renaming of Port Blair to Sri Vijaya Puram emphasises the city's historical ties to the Chola Empire, mainly Emperor Rajendra I.
  - In the 11th century, Rajendra I of the Chola Dynasty led a famous naval expedition against the Srivijaya Empire (based in modern Indonesia).
  - The **Andaman Islands were mentioned as Ma-Nakkavaram in Chola records.**

Q27. With reference to ancient India (600–322 BC), consider the following pairs:

Territorial Region	River Flowing in the Region
I. Asmaka	Godavari
II. Kamboja	Vipas
III. Avanti	Mahanadi
IV. Kosala	Sarayu

How many of the pairs given above are correctly matched?

(a) Only one
(b) Only two
(c) Only three
(d) All the four

Answer: B

Details pertaining to all the 16 Mahajanapadas have been o=covered on our website:https://www.iasgyan.in/blogs/the-16-mahajanpadas

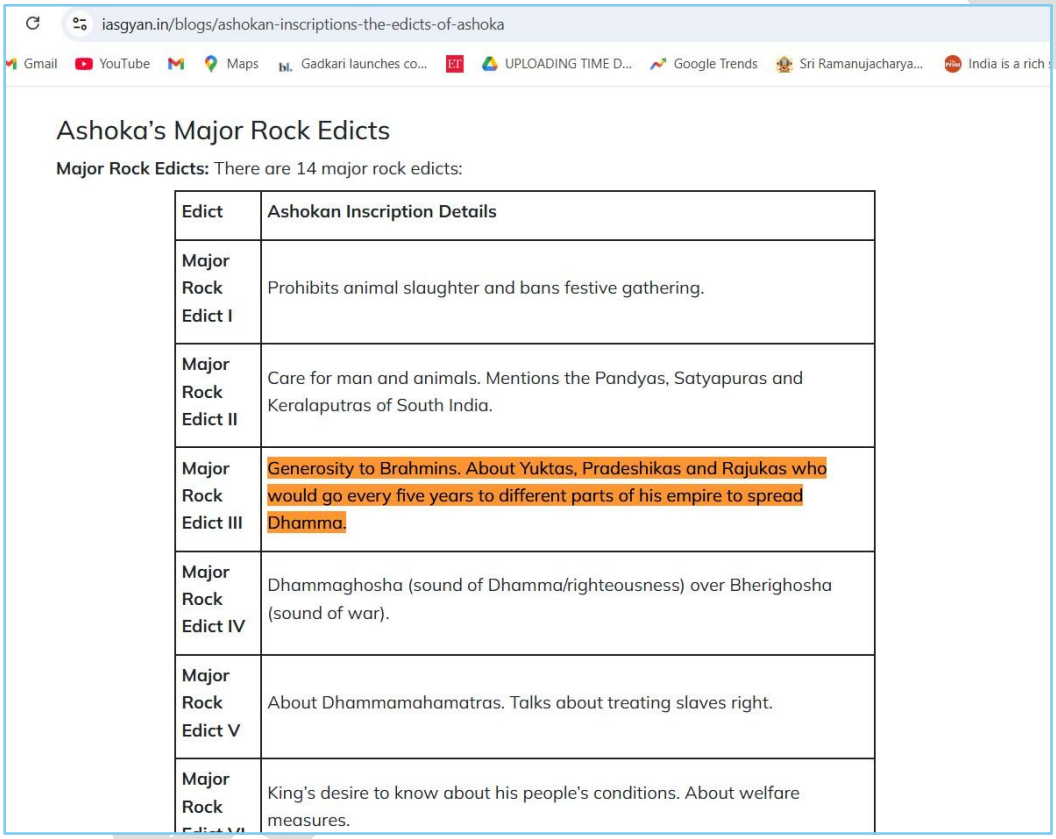
If an aspirant goes through the content and map, she can easily solve it.

Q29. Ashokan inscriptions suggest that the 'Pradeshika', 'Rajuka' and 'Yukta' were important officers at the

(a) village-level administration
(b) district-level administration
(c) provincial administration
(d) level of the central administration

Answer: B

This has been explicitly covered in our website blog: https://www.iasgyan.in/blogs/ashokan-inscriptions-the-edicts-of-ashoka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Ashoka's Major Rock Edicts

Major Rock Edicts: There are 14 major rock edicts:

Edict	Ashokan Inscription Details
Major Rock Edict I	Prohibits animal slaughter and bans festive gathering.
Major Rock Edict II	Care for man and animals. Mentions the Pandyas, Satyapuras and Keralaputras of South India.
Major Rock Edict III	Generosity to Brahmins. About Yuktas, Pradeshikas and Rajukas who would go every five years to different parts of his empire to spread Dhamma.
Major Rock Edict IV	Dhammaghosha (sound of Dhamma/righteousness) over Bherighosha (sound of war).
Major Rock Edict V	About Dhammamahamatras. Talks about treating slaves right.
Major Rock	King's desire to know about his people's conditions. About welfare measures.

Q31. With reference to investments, consider the following:

I. Bonds
II. Hedge Funds
III. Stocks
IV. Venture Capital

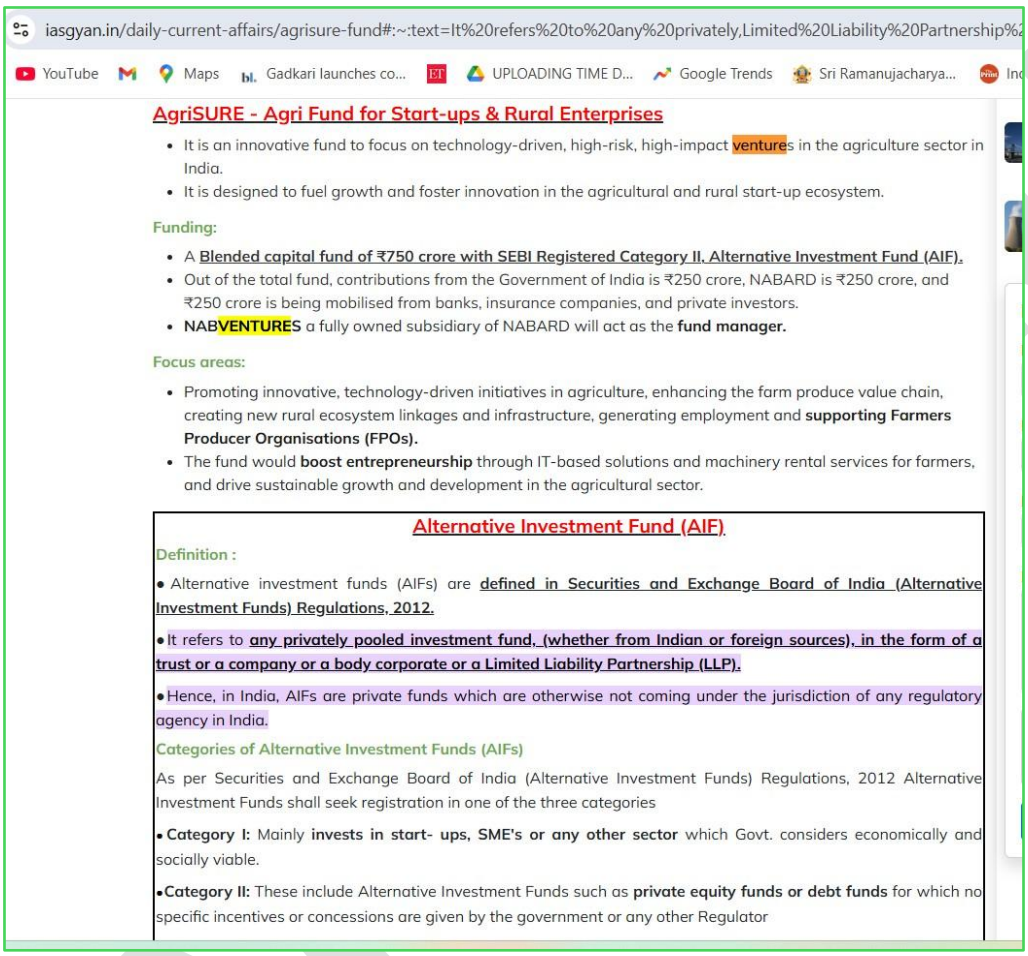
How many of the above are treated as Alternative Investment Funds (AIFs)?

(a) Only one
(b) Only two

(c) Only three
(d) All the four

Answer: B

Information pertaining to AIFs have been covered in our Current Affairs. One can easily navigate to the answer:https://www.iasgyan.in/daily-current-affairs/agrisure-fund#:~:text=It%20refers%20to%20any%20privately,Limited%20Liability%20Partnership%20(LLP).&text=Hence%2C%20in%20India%2C%20AIFs%20are,any%20regulatory%20agency%20in%20India.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AgriSURE - Agri Fund for Start-ups & Rural Enterprises

- It is an innovative fund to focus on technology-driven, high-risk, high-impact ventures in the agriculture sector in India.
- It is designed to fuel growth and foster innovation in the agricultural and rural start-up ecosystem.

Funding:

- A Blended capital fund of ₹750 crore with SEBI Registered Category II, Alternative Investment Fund (AIF).
- Out of the total fund, contributions from the Government of India is ₹250 crore, NABARD is ₹250 crore, and ₹250 crore is being mobilised from banks, insurance companies, and private investors.
- NABVENTURES a fully owned subsidiary of NABARD will act as the **fund manager.**

Focus areas:

- Promoting innovative, technology-driven initiatives in agriculture, enhancing the farm produce value chain, creating new rural ecosystem linkages and infrastructure, generating employment and **supporting Farmers Producer Organisations (FPOs).**
- The fund would **boost entrepreneurship** through IT-based solutions and machinery rental services for farmers, and drive sustainable growth and development in the agricultural sector.

Alternative Investment Fund (AIF)

Definition :

- Alternative investment funds (AIFs) are defined in Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012.
- It refers to any privately pooled investment fund, (whether from Indian or foreign sources), in the form of a trust or a company or a body corporate or a Limited Liability Partnership (LLP).
- Hence, in India, AIFs are private funds which are otherwise not coming under the jurisdiction of any regulatory agency in India.

Categories of Alternative Investment Funds (AIFs)

As per Securities and Exchange Board of India (Alternative Investment Funds) Regulations, 2012 Alternative Investment Funds shall seek registration in one of the three categories

- **Category I:** Mainly **invests in start- ups, SME's or any other sector** which Govt. considers economically and socially viable.
- **Category II:** These include Alternative Investment Funds such as **private equity funds or debt funds** for which no specific incentives or concessions are given by the government or any other Regulator

Q32. Which of the following are the sources of income for the Reserve Bank of India?

I. Buying and selling Government bonds
II. Buying and selling foreign currency
III. Pension fund management
IV. Lending to private companies
V. Printing and distributing currency notes

Select the correct answer using the code given below:

(a) I and II only
(b) II, III and IV
(c) I, III, IV and V
(d) I, II and V

Answer: D

1. **Budget Basics: Key Financial Terms You Need to Know**
   https://www.iasgyan.in/blogs/budget-basics-key-financial-terms-you-need-to-know
2. **Budget and its Terminologies** (covers monetised deficit, RBI's role)
   https://www.iasgyan.in/blogs/budget-and-its-terminologies
3. **RBI and Monetary Policy – Economic Concepts**
   https://www.iasgyan.in/blogs/monetary-policy-committee

IAS_Gazette_September_2023_Final_Copy_compressed.pdf
IAS_Gazette_November_2023_Final_Copy_compressed.pdf

Note: These links **do not list** RBI's income sources as a direct MCQ or a complete list but do provide **background concepts** linked to RBI operations using which aspirants can solve the question easily.

Q33.With reference to the Government of India, consider the following information:

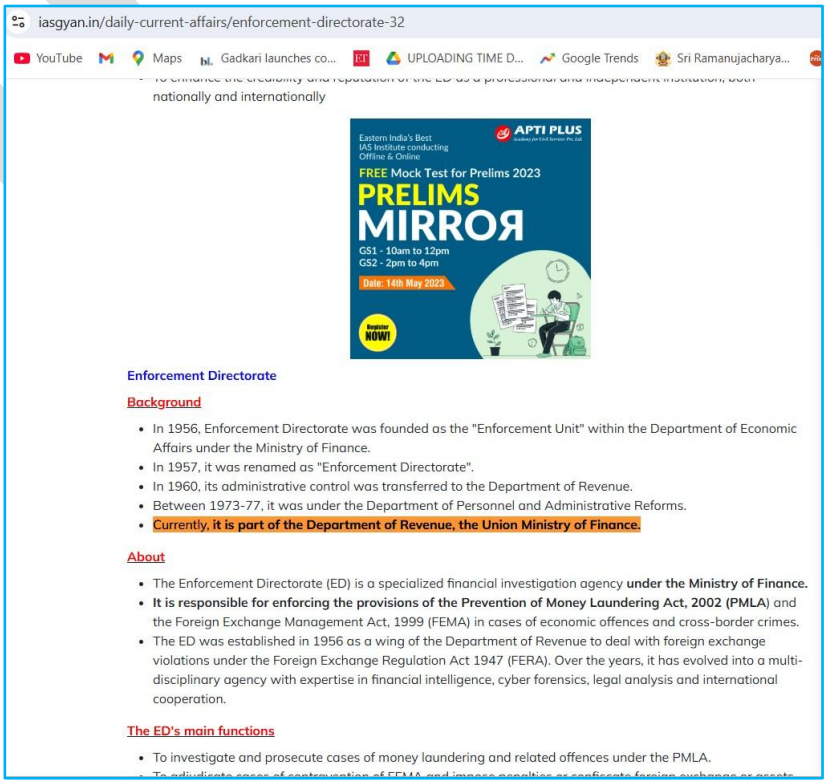
Organization	Some of its functions	It works under
I. Directorate of Enforcement	Enforcement of the Fugitive Economic Offenders Act, 2018	Internal Security Division-I, Ministry of Home Affairs
II. Directorate of Revenue Intelligence	Enforces the provisions of the Customs Act, 1962	Department of Revenue, Ministry of Finance
III. Directorate General of Systems and Data Management	Carrying out big data analytics to assist tax officers for better policy and nabbing tax evaders	Department of Revenue, Ministry of Finance

Which of the above rows are correctly matched?

(a) Only one
(b) Only two
(c) All the three
(d) None

Answer: B

The answers are directly there in our Current Affairs coverage on IASGYAN website:http://iasgyan.in/daily-current-affairs/enforcement-directorate-32
https://www.iasgyan.in/daily-current-affairs/directorate-of-revenue-intelligence-dri-20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nationally and internationally

Enforcement Directorate

Background

- In 1956, Enforcement Directorate was founded as the "Enforcement Unit" within the Department of Economic Affairs under the Ministry of Finance.
- In 1957, it was renamed as "Enforcement Directorate".
- In 1960, its administrative control was transferred to the Department of Revenue.
- Between 1973-77, it was under the Department of Personnel and Administrative Reforms.
- Currently, **it is part of the Department of Revenue, the Union Ministry of Finance.**

About

- The Enforcement Directorate (ED) is a specialized financial investigation agency **under the Ministry of Finance.**
- **It is responsible for enforcing the provisions of the Prevention of Money Laundering Act, 2002 (PMLA)** and the Foreign Exchange Management Act, 1999 (FEMA) in cases of economic offences and cross-border crimes.
- The ED was established in 1956 as a wing of the Department of Revenue to deal with foreign exchange violations under the Foreign Exchange Regulation Act 1947 (FERA). Over the years, it has evolved into a multi-disciplinary agency with expertise in financial intelligence, cyber forensics, legal analysis and international cooperation.

The ED's main functions

- To investigate and prosecute cases of money laundering and related offences under the PMLA.

APTI PLUS

Q34. Consider the following statements:

I. The Reserve Bank of India mandates all the listed companies in India to submit a Business Responsibility and Sustainability Report (BRSR).

II. In India, a company submitting a BRSR makes disclosures in the report that are largely non-financial in nature.

Which of the statements given above is/are correct?

(a) I only
(b) II only
(c) Both I and II
(d) Neither I nor II

Answer: B

This question can be solved using the information given in our Current Affairs Section:
https://www.iasgyan.in/daily-current-affairs/business-responsibility-and-sustainability-reporting-brsr-8

iasgyan.in/daily-current-affairs/business-responsibility-and-sustainability-reporting-brsr-8

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Context: Business Responsibility and Sustainability Reporting (BRSR) is the current framework for listed companies to disclose Sustainability and ESG practices in annual reports.

Details

- Business Responsibility and Sustainability Reporting (BRSR) is a framework through which listed companies in India report on sustainability and ESG (Environment, Social, and Governance) issues in their annual reports.
- The BRSR has evolved from the earlier Business Responsibility Reporting (BRR), which in turn was based on the National Voluntary Guidelines for Responsible Business Conduct.

ESG (Environment, Social, and Governance)

- ESG investing, or environmental, social, and governance investing, **evaluates companies based on their performance in these areas.**
  - Environmental criteria assess a company's impact on the environment, while social criteria look at its relationships with employees and communities.
  - Governance criteria focus on leadership and shareholder rights. ESG investing helps investors avoid companies engaged in risky or unethical practices.
  - Investment firms offer products that follow ESG principles, and robo-advisors are promoting these options to younger investors.
- **ESG investors consider a range of factors, including corporate climate policies, energy use, workplace conditions, diversity in leadership, and transparency in accounting methods**. Investors may be sacrificing returns in exchange for values when following ESG principles, but many are willing to make that tradeoff.
- Financial services companies like JPMorgan Chase, Wells Fargo, and Goldman Sachs are tracking their ESG performance and publishing reports on their approaches. **The ultimate value of ESG investing depends on whether companies are driving real change for the common good.**

Business Responsibility and Sustainability Reporting (BRSR)

36. Consider the following statements:

I. India has joined the Minerals Security Partnership as a member.

II. India is a resource-rich country in all the 30 critical minerals that it has identified.

III. The Parliament in 2023 has amended the Mines and Minerals (Development and Regulation) Act, 1957 empowering the Central Government to exclusively auction mining lease and composite license for certain critical minerals.

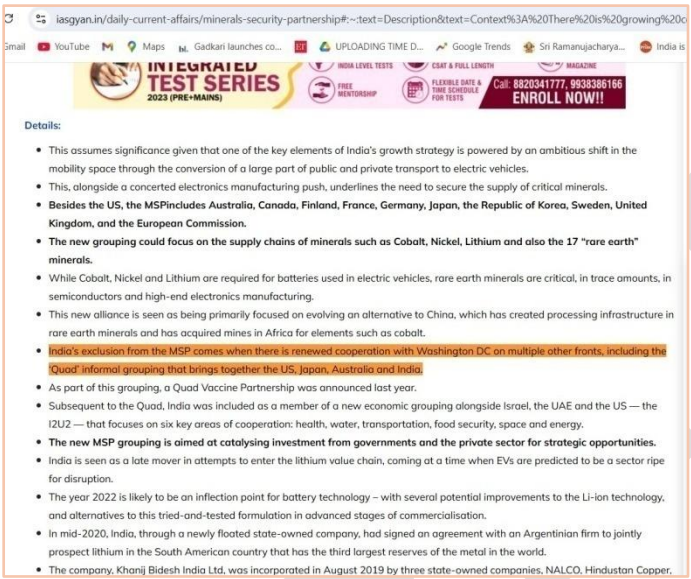
Which of the statements given above are correct?

(a) I and II only
(b) II and III only
(c) I and III only
(d) I, II and III

Answer: C

The statements directly appeared in our Current Affairs on IASGYAN: https://www.iasgyan.in/daily-current-affairs/minerals-security-partnership#:~:text=Description&text=Context%3A%20There%20is%20growing%20concern,at%20reducing%20dependency%20on%20China.
https://www.iasgyan.in/daily-current-affairs/critical-minerals-of-india

https://www.iasgyan.in/daily-current-affairs/indias-mining-policy



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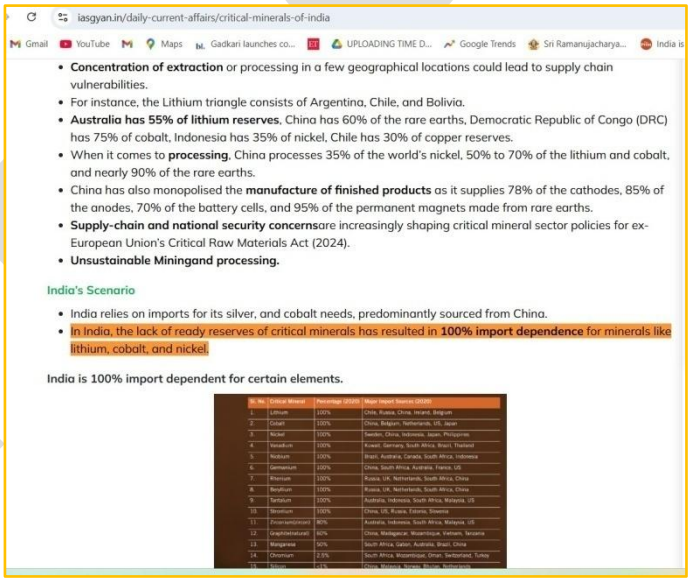
Details:

- This assumes significance given that one of the key elements of India's growth strategy is powered by an ambitious shift in the mobility space through the conversion of a large part of public and private transport to electric vehicles.
- This, alongside a concerted electronics manufacturing push, underlines the need to secure the supply of critical minerals.
- **Besides the US, the MSPincludes Australia, Canada, Finland, France, Germany, Japan, the Republic of Korea, Sweden, United Kingdom, and the European Commission.**
- **The new grouping could focus on the supply chains of minerals such as Cobalt, Nickel, Lithium and also the 17 "rare earth" minerals.**
- While Cobalt, Nickel and Lithium are required for batteries used in electric vehicles, rare earth minerals are critical, in trace amounts, in semiconductors and high-end electronics manufacturing.
- This new alliance is seen as being primarily focused on evolving an alternative to China, which has created processing infrastructure in rare earth minerals and has acquired mines in Africa for elements such as cobalt.
- India's exclusion from the MSP comes when there is renewed cooperation with Washington DC on multiple other fronts, including the 'Quad' informal grouping that brings together the US, Japan, Australia and India.
- As part of this grouping, a Quad Vaccine Partnership was announced last year.
- Subsequent to the Quad, India was included as a member of a new economic grouping alongside Israel, the UAE and the US — the I2U2 — that focuses on six key areas of cooperation: health, water, transportation, food security, space and energy.
- **The new MSP grouping is aimed at catalysing investment from governments and the private sector for strategic opportunities.**
- India is seen as a late mover in attempts to enter the lithium value chain, coming at a time when EVs are predicted to be a sector ripe for disruption.
- The year 2022 is likely to be an inflection point for battery technology – with several potential improvements to the Li-ion technology, and alternatives to this tried-and-tested formulation in advanced stages of commercialisation.
- In mid-2020, India, through a newly floated state-owned company, had signed an agreement with an Argentinian firm to jointly prospect lithium in the South American country that has the third largest reserves of the metal in the world.
- The company, Khanij Bidesh India Ltd, was incorporated in August 2019 by three state-owned companies, NALCO, Hindustan Copper,



iasgyan.in/daily-current-affairs/critical-minerals-of-india

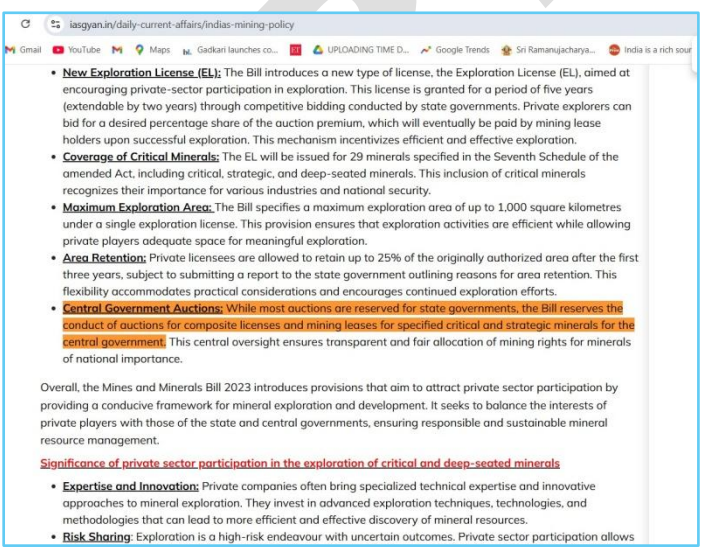
- **Concentration of extraction** or processing in a few geographical locations could lead to supply chain vulnerabilities.
- For instance, the Lithium triangle consists of Argentina, Chile, and Bolivia.
- **Australia has 55% of lithium reserves**, China has 60% of the rare earths, Democratic Republic of Congo (DRC) has 75% of cobalt, Indonesia has 35% of nickel, Chile has 30% of copper reserves.
- When it comes to **processing**, China processes 35% of the world's nickel, 50% to 70% of the lithium and cobalt, and nearly 90% of the rare earths.
- China has also monopolised the **manufacture of finished products** as it supplies 78% of the cathodes, 85% of the anodes, 70% of the battery cells, and 95% of the permanent magnets made from rare earths.
- **Supply-chain and national security concerns**are increasingly shaping critical mineral sector policies for ex-European Union's Critical Raw Materials Act (2024).
- **Unsustainable Miningand processing.**

India's Scenario

- India relies on imports for its silver, and cobalt needs, predominantly sourced from China.
- In India, the lack of ready reserves of critical minerals has resulted in **100% import dependence** for minerals like lithium, cobalt, and nickel.

India is 100% import dependent for certain elements.

Sr. No.	Critical Mineral	Percentage (2020)	Major Import Sources (2020)
1.	Lithium	100%	Chile, Russia, China, Ireland, Belgium
2.	Cobalt	100%	China, Belgium, Netherlands, US, Japan
3.	Nickel	100%	Sweden, China, Indonesia, Japan, Philippines
4.	Vanadium	100%	Kuwait, Germany, South Africa, Brazil, Thailand
5.	Niobium	100%	Brazil, Australia, Canada, South Africa, Indonesia
6.	Germanium	100%	China, South Africa, Australia, France, US
7.	Rhenium	100%	Russia, UK, Netherlands, South Africa, China
8.	Beryllium	100%	Russia, UK, Netherlands, South Africa, China
9.	Tantalum	100%	Australia, Indonesia, South Africa, Malaysia, US
10.	Strontium	100%	China, US, Russia, Estonia, Slovenia
11.	Zirconium(Hafnium)	80%	Australia, Indonesia, South Africa, Malaysia, US
12.	Graphite(Natural)	80%	China, Madagascar, Mozambique, Vietnam, Tanzania
13.	Manganese	60%	South Africa, Gabon, Australia, Brazil, China
14.	Chromium	2.5%	South Africa, Mozambique, Oman, Switzerland, Turkey
15.	Silicon	0.5%	China, Malaysia, Japan, Russia, Switzerland



iasgyan.in/daily-current-affairs/indias-mining-policy

- New Exploration License (EL): The Bill introduces a new type of license, the Exploration License (EL), aimed at encouraging private-sector participation in exploration. This license is granted for a period of five years (extendable by two years) through competitive bidding conducted by state governments. Private explorers can bid for a desired percentage share of the auction premium, which will eventually be paid by mining lease holders upon successful exploration. This mechanism incentivizes efficient and effective exploration.
- Coverage of Critical Minerals: The EL will be issued for 29 minerals specified in the Seventh Schedule of the amended Act, including critical, strategic, and deep-seated minerals. This inclusion of critical minerals recognizes their importance for various industries and national security.
- Maximum Exploration Area: The Bill specifies a maximum exploration area of up to 1,000 square kilometres under a single exploration license. This provision ensures that exploration activities are efficient while allowing private players adequate space for meaningful exploration.
- Area Retention: Private licensees are allowed to retain up to 25% of the originally authorized area after the first three years, subject to submitting a report to the state government outlining reasons for area retention. This flexibility accommodates practical considerations and encourages continued exploration efforts.
- Central Government Auctions: While most auctions are reserved for state governments, the Bill reserves the conduct of auctions for composite licenses and mining leases for specified critical and strategic minerals for the central government. This central oversight ensures transparent and fair allocation of mining rights for minerals of national importance.

Overall, the Mines and Minerals Bill 2023 introduces provisions that aim to attract private sector participation by providing a conducive framework for mineral exploration and development. It seeks to balance the interests of private players with those of the state and central governments, ensuring responsible and sustainable mineral resource management.

Significance of private sector participation in the exploration of critical and deep-seated minerals

- Expertise and Innovation: Private companies often bring specialized technical expertise and innovative approaches to mineral exploration. They invest in advanced exploration techniques, technologies, and methodologies that can lead to more efficient and effective discovery of mineral resources.
- Risk Sharing: Exploration is a high-risk endeavour with uncertain outcomes. Private sector participation allows

Q37. Consider the following statements:

Statement I: As regards returns from an investment in a company, generally, bondholders are considered to be relatively at lower risk than stockholders.

Statement II: Bondholders are lenders to a company whereas stockholders are its owners.

Statement III: For repayment purpose, bondholders are prioritized over stockholders by a company.

Which one of the following is correct in respect of the above statements?

(a) Both Statement II and Statement III are correct and both of them explain Statement I
(b) Both Statement I and Statement II are correct and Statement I explains Statement II
(c) Only one of the Statements II and III is correct and that explains Statement I
(d) Neither Statement II nor Statement III is correct

Answer: A

This question can be solved using information from this detailed article uploaded on IASGYAN:https://www.iasgyan.in/daily-current-affairs/bond-yield-12

Q39. Consider the following statements:

Statement I:

Circular economy reduces the emissions of greenhouse gases.

Statement II:

Circular economy reduces the use of raw materials as inputs.

Statement III:

Circular economy reduces wastage in the production process.

Which one of the following is correct in respect of the above statements?

(a) Both Statement II and Statement III are correct and both of them explain Statement I
(b) Both Statement II and Statement III are correct but only one of them explains Statement I
(c) Only one of the Statements II and III is correct and that explains Statement I
(d) Neither Statement II nor Statement III is correct

Answer: A

Each and every statement has been detailed in this article uploaded on IASGYAN: https://www.iasgyan.in/daily-current-affairs/moving-away-from-take-make-dispose-model

Application of logic will lead to the answer easily.

Q40. Consider the following statements:

I. Capital receipts create a liability or cause a reduction in the assets of the Government.

II. Borrowings and disinvestment are capital receipts.

III. Interest received on loans creates a liability of the Government.

Which of the statements given above are correct?

(a) I and II only
(b) II and III only
(c) I and III only
(d) I, II and III

Answer: A

The entire concept is covered in this IASGYAN Blog explicitly: https://www.iasgyan.in/blogs/budget-basics-key-financial-terms-you-need-to-know

Q41. Consider the following countries:

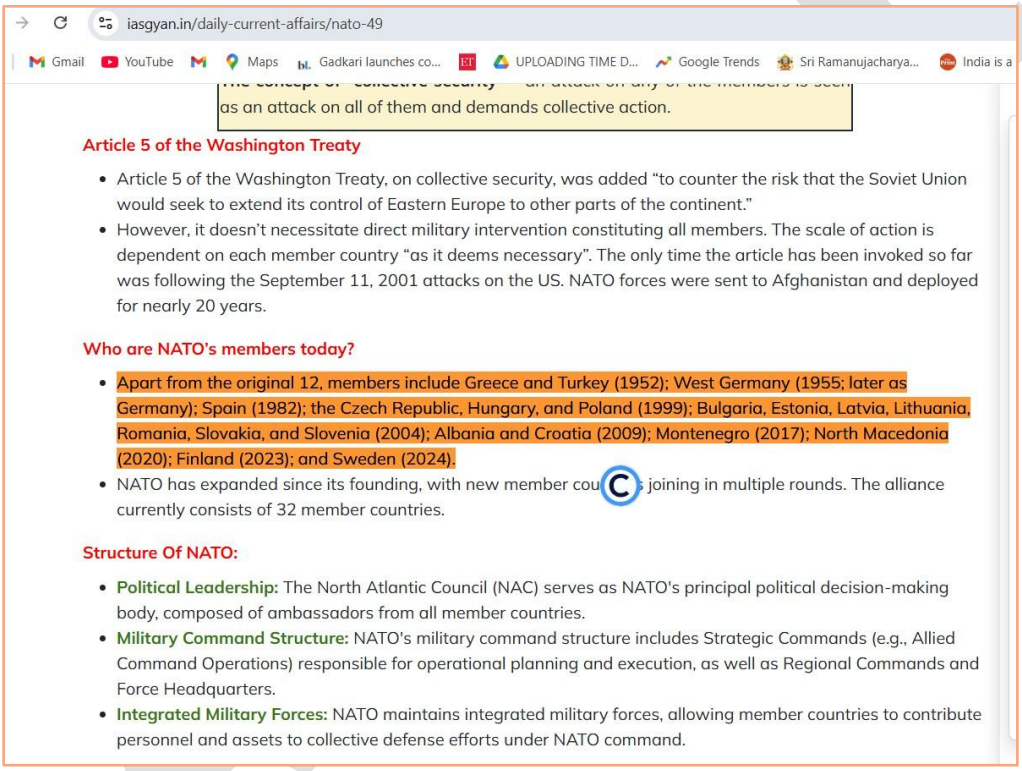
I. Austria
II. Bulgaria
III. Croatia
IV. Serbia
V. Sweden
VI. North Macedonia

How many of the above are members of the North Atlantic Treaty Organization?

(a) Only three
(b) Only four
(c) Only five
(d) All the six

Answer: B

This is a direct question that can be solved using the information uploaded on IASGYAN:https://www.iasgyan.in/daily-current-affairs/nato-49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as an attack on all of them and demands collective action.

Article 5 of the Washington Treaty

- Article 5 of the Washington Treaty, on collective security, was added "to counter the risk that the Soviet Union would seek to extend its control of Eastern Europe to other parts of the continent."
- However, it doesn't necessitate direct military intervention constituting all members. The scale of action is dependent on each member country "as it deems necessary". The only time the article has been invoked so far was following the September 11, 2001 attacks on the US. NATO forces were sent to Afghanistan and deployed for nearly 20 years.

Who are NATO's members today?

- Apart from the original 12, members include Greece and Turkey (1952); West Germany (1955; later as Germany); Spain (1982); the Czech Republic, Hungary, and Poland (1999); Bulgaria, Estonia, Latvia, Lithuania, Romania, Slovakia, and Slovenia (2004); Albania and Croatia (2009); Montenegro (2017); North Macedonia (2020); Finland (2023); and Sweden (2024).
- NATO has expanded since its founding, with new member countries joining in multiple rounds. The alliance currently consists of 32 member countries.

Structure Of NATO:

- **Political Leadership:** The North Atlantic Council (NAC) serves as NATO's principal political decision-making body, composed of ambassadors from all member countries.
- **Military Command Structure:** NATO's military command structure includes Strategic Commands (e.g., Allied Command Operations) responsible for operational planning and execution, as well as Regional Commands and Force Headquarters.
- **Integrated Military Forces:** NATO maintains integrated military forces, allowing member countries to contribute personnel and assets to collective defense efforts under NATO command.

Q44. Consider the following statements about turmeric during the year 2022-23:

I. India is the largest producer and exporter of turmeric in the world.
II. More than 30 varieties of turmeric are grown in India.
III. Maharashtra, Telangana, Karnataka, and Tamil Nadu are major turmeric-producing States in India.

Which of the statements given above are correct?

(a) I and II only
(b) II and III only

(c) I and III only
(d) I, II and III

This question can be solved using the information provided in this article:
https://www.iasgyan.in/daily-current-affairs/national-turmeric-board#:~:text=During%202022%2D23%2C%20India%20exported,the%20world%20trade%20in%20turmeric.

Answer: D

Q50. Consider the following statements about the Rashtriya Gokul Mission:

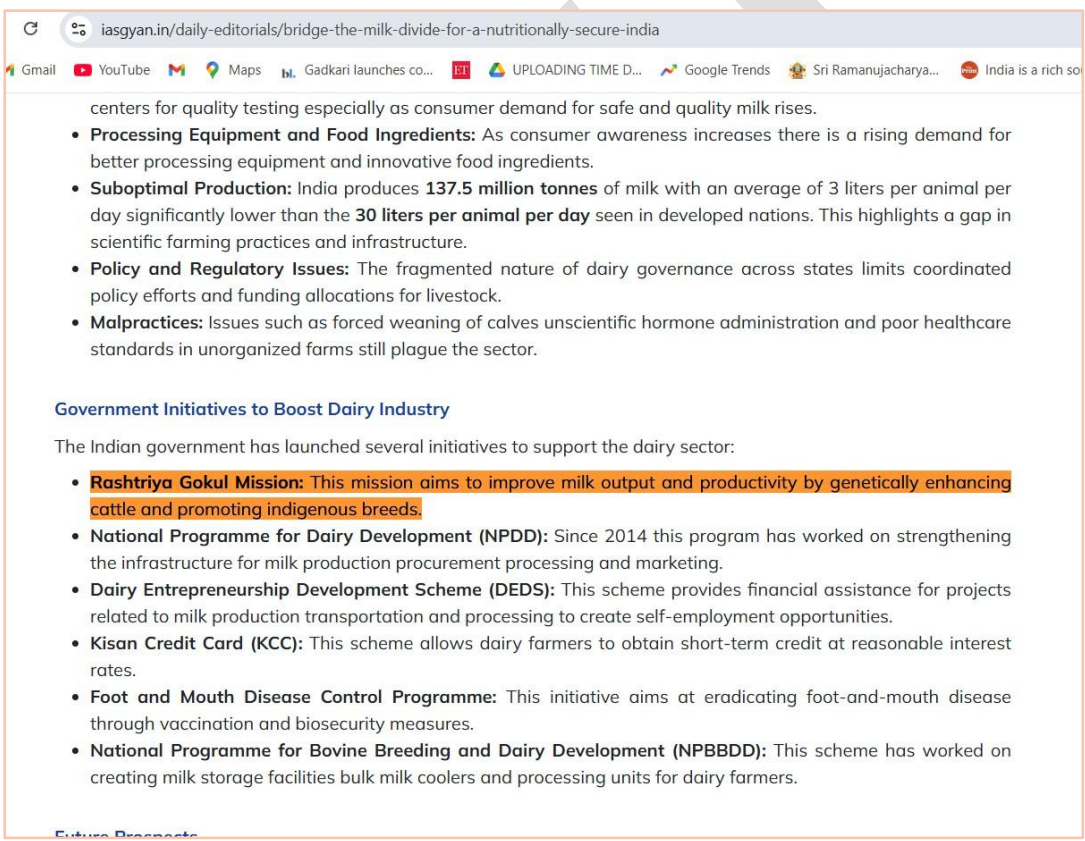
I. It is important for the upliftment of rural poor as majority of low producing indigenous animals are with small and marginal farmers and landless labourers.
II. It was initiated to promote indigenous cattle and buffalo rearing and conservation in a scientific and holistic manner.

Which of the statements given above is/are correct?

(a) I only
(b) II only
(c) Both I and II
(d) Neither I nor II

Answer: C

This question can be solved using the content given in our website: https://www.iasgyan.in/daily-current-affairs/rashtriya-gokul-mission


iasgyan.in/daily-editorials/bridge-the-milk-divide-for-a-nutritionally-secure-india

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centers for quality testing especially as consumer demand for safe and quality milk rises.

- **Processing Equipment and Food Ingredients:** As consumer awareness increases there is a rising demand for better processing equipment and innovative food ingredients.
- **Suboptimal Production:** India produces **137.5 million tonnes** of milk with an average of 3 liters per animal per day significantly lower than the **30 liters per animal per day** seen in developed nations. This highlights a gap in scientific farming practices and infrastructure.
- **Policy and Regulatory Issues:** The fragmented nature of dairy governance across states limits coordinated policy efforts and funding allocations for livestock.
- **Malpractices:** Issues such as forced weaning of calves unscientific hormone administration and poor healthcare standards in unorganized farms still plague the sector.

Government Initiatives to Boost Dairy Industry

The Indian government has launched several initiatives to support the dairy sector:

- **Rashtriya Gokul Mission:** This mission aims to improve milk output and productivity by genetically enhancing cattle and promoting indigenous breeds.
- **National Programme for Dairy Development (NPDD):** Since 2014 this program has worked on strengthening the infrastructure for milk production procurement processing and marketing.
- **Dairy Entrepreneurship Development Scheme (DEDS):** This scheme provides financial assistance for projects related to milk production transportation and processing to create self-employment opportunities.
- **Kisan Credit Card (KCC):** This scheme allows dairy farmers to obtain short-term credit at reasonable interest rates.
- **Foot and Mouth Disease Control Programme:** This initiative aims at eradicating foot-and-mouth disease through vaccination and biosecurity measures.
- **National Programme for Bovine Breeding and Dairy Development (NPBBDD):** This scheme has worked on creating milk storage facilities bulk milk coolers and processing units for dairy farmers.

Q51. Consider the following statements:

I. Panchayats at the intermediate level exist in all States.

II. To be eligible to be a Member of a Panchayat at the intermediate level, a person should attain the age of thirty years.

III. The Chief Minister of a State constitutes a commission to review the financial position of Panchayats at the intermediate levels and to make recommendations regarding the distribution of net proceeds of taxes and duties, leviable by the State, between the State and Panchayats at the intermediate level.

Which of the statements given above are not correct?

a) I and II only
b) II and III only
c) I and III only
d) I, II and III

This question can be solved using insights from the following link along with lateral thinking and logical reasoning:
https://www.iasgyan.in/daily-editorials/the-panchayati-raj-movement-is-in-distress

Q52. Consider the following statements in respect of BIMSTEC:

I. It is a regional organization consisting of seven member States till January 2025.

II. It came into existence with the signing of the Dhaka Declaration, 1999.

III. Bangladesh, India, Sri Lanka, Thailand and Nepal are founding member States of BIMSTEC.

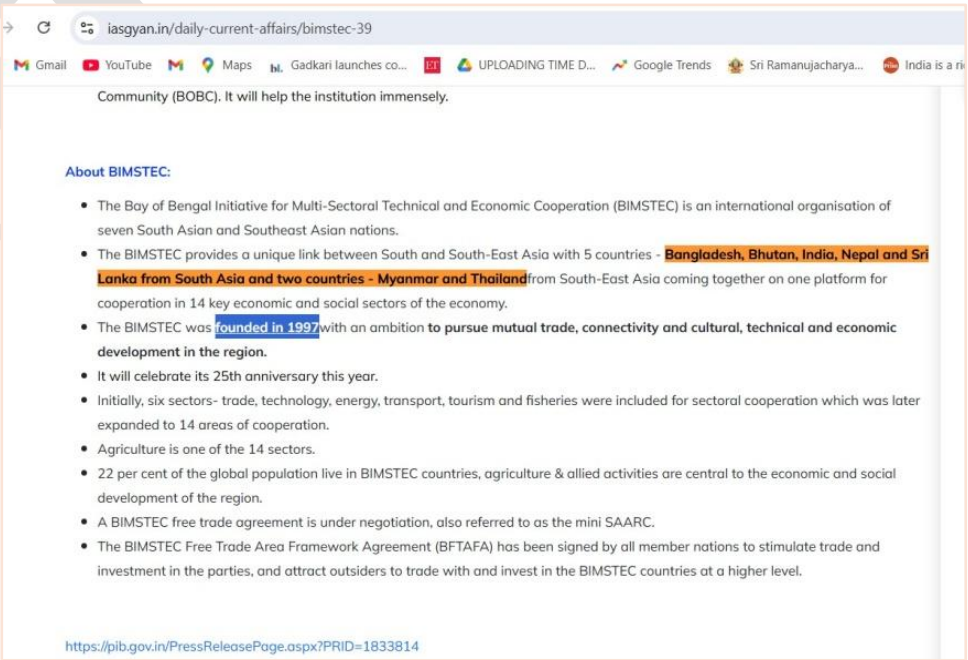
IV. In BIMSTEC, the subsector of 'tourism' is being led by India.

Which of the statements given above is/are correct?

(a) I and II
(b) II and III
(c) I and IV
(d) I only

Answer: d

This question can be easily solved if one reads current affairs on IASGYAN. 1st three statements mentioned with right information. 4th missing which shows that it is incorrect.
https://www.iasgyan.in/daily-current-affairs/bimstec-39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Community (BOBC). It will help the institution immensely.

About BIMSTEC:

- The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is an international organisation of seven South Asian and Southeast Asian nations.
- The BIMSTEC provides a unique link between South and South-East Asia with 5 countries - Bangladesh, Bhutan, India, Nepal and Sri Lanka from South Asia and two countries - Myanmar and Thailandfrom South-East Asia coming together on one platform for cooperation in 14 key economic and social sectors of the economy.
- The BIMSTEC was founded in 1997with an ambition **to pursue mutual trade, connectivity and cultural, technical and economic development in the region.**
- It will celebrate its 25th anniversary this year.
- Initially, six sectors- trade, technology, energy, transport, tourism and fisheries were included for sectoral cooperation which was later expanded to 14 areas of cooperation.
- Agriculture is one of the 14 sectors.
- 22 per cent of the global population live in BIMSTEC countries, agriculture & allied activities are central to the economic and social development of the region.
- A BIMSTEC free trade agreement is under negotiation, also referred to as the mini SAARC.
- The BIMSTEC Free Trade Area Framework Agreement (BFTAFA) has been signed by all member nations to stimulate trade and investment in the parties, and attract outsiders to trade with and invest in the BIMSTEC countries at a higher level.

https://pib.gov.in/PressReleasePage.aspx?PRID=1833814

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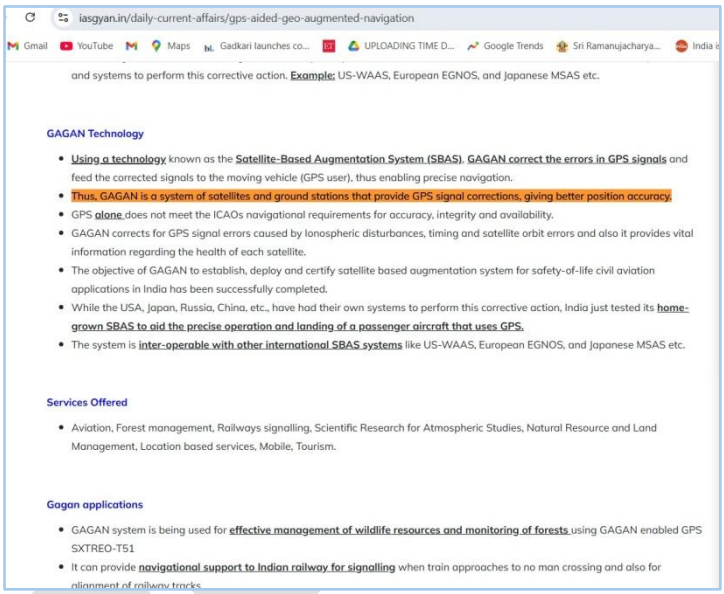
Q54. GPS-Aided Geo Augmented Navigation (GAGAN) uses a system of ground stations to provide necessary augmentation. Which of the following statements is/are correct in respect of GAGAN?

1. It is designed to provide additional accuracy and integrity.
2. It will allow more uniform and high-quality air traffic management.
3. It will provide benefits only in aviation but not in other modes of transportation.

Select the correct answer using the code given below.

(a) I, II and III
(b) I only
(c) II and III only
(d) I and II only


iasgyan.in/daily-current-affairs/gps-aided-geo-augmented-navigation

and systems to perform this corrective action. Example: US-WAAS, European EGNOS, and Japanese MSAS etc.

GAGAN Technology

- Using a technology known as the Satellite-Based Augmentation System (SBAS). GAGAN correct the errors in GPS signals and feed the corrected signals to the moving vehicle (GPS user), thus enabling precise navigation.
- Thus, GAGAN is a system of satellites and ground stations that provide GPS signal corrections, giving better position accuracy.
- GPS alone does not meet the ICAOs navigational requirements for accuracy, integrity and availability.
- GAGAN corrects for GPS signal errors caused by Ionospheric disturbances, timing and satellite orbit errors and also it provides vital information regarding the health of each satellite.
- The objective of GAGAN to establish, deploy and certify satellite based augmentation system for safety-of-life civil aviation applications in India has been successfully completed.
- While the USA, Japan, Russia, China, etc., have had their own systems to perform this corrective action, India just tested its home-grown SBAS to aid the precise operation and landing of a passenger aircraft that uses GPS.
- The system is inter-operable with other international SBAS systems like US-WAAS, European EGNOS, and Japanese MSAS etc.

Services Offered

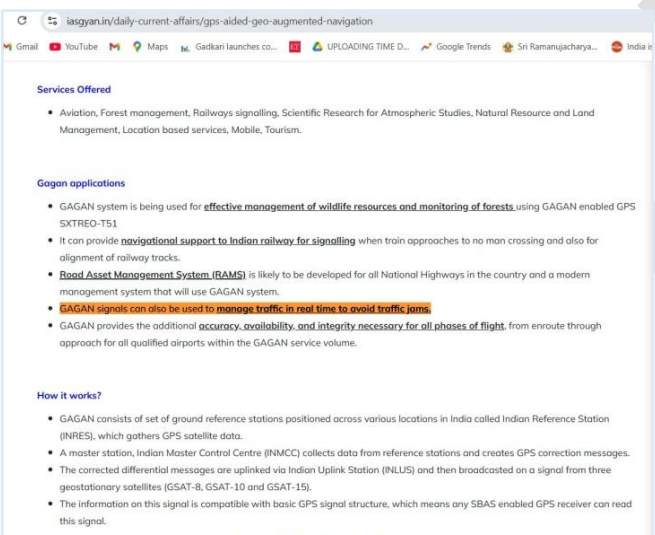
- Aviation, Forest management, Railways signalling, Scientific Research for Atmospheric Studies, Natural Resource and Land Management, Location based services, Mobile, Tourism.

Gagan applications

- GAGAN system is being used for effective management of wildlife resources and monitoring of forests using GAGAN enabled GPS SXTREO-T51
- It can provide navigational support to Indian railway for signalling when train approaches to no man crossing and also for alignment of railway tracks.

Answer: (d)

The statements have been covered directly in our Current Affairs on IASGYAN:
https://www.iasgyan.in/daily-current-affairs/gps-aided-geo-augmented-navigation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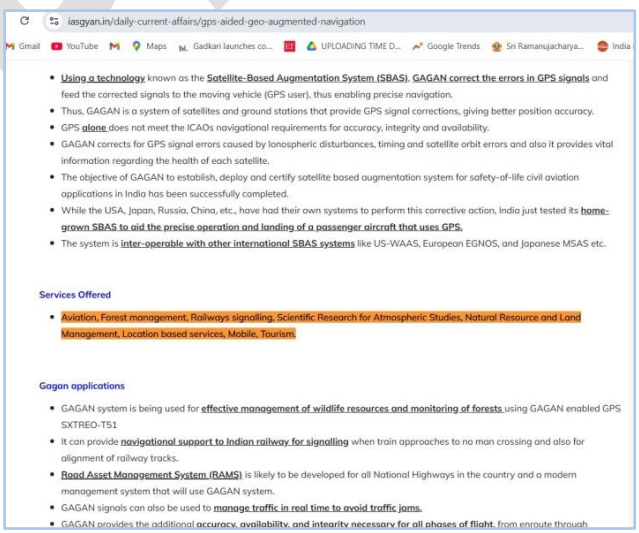
- It can provide navigational support to Indian railway for signalling when train approaches to no man crossing and also for alignment of railway tracks.
- Road Asset Management System (RAMS) is likely to be developed for all National Highways in the country and a modern management system that will use GAGAN system.
- GAGAN signals can also be used to manage traffic in real time to avoid traffic jams.
- GAGAN provides the additional accuracy, availability, and integrity necessary for all phases of flight, from enroute through approach for all qualified airports within the GAGAN service volume.

How it works?

- GAGAN consists of set of ground reference stations positioned across various locations in India called Indian Reference Station (INRES), which gathers GPS satellite data.
- A master station, Indian Master Control Centre (INMCC) collects data from reference stations and creates GPS correction messages.
- The corrected differential messages are uplinked via Indian Uplink Station (INLUS) and then broadcasted on a signal from three geostationary satellites (GSAT-8, GSAT-10 and GSAT-15).
- The information on this signal is compatible with basic GPS signal structure, which means any SBAS enabled GPS receiver can read this signal.


iasgyan.in/daily-current-affairs/gps-aided-geo-augmented-navigation

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- GAGAN provides the additional accuracy, availability, and integrity necessary for all phases of flight, from enroute through

Q55. Consider the following statements regarding AI Action Summit held in Grand Palais, Paris in February 2025:

1. Co-chaired with India, the event builds on the advances made at the Bletchley Park Summit held in 2023 and the Seoul Summit held in 2024.
2. Along with other countries, the US and UK also signed the declaration on inclusive and sustainable AI.

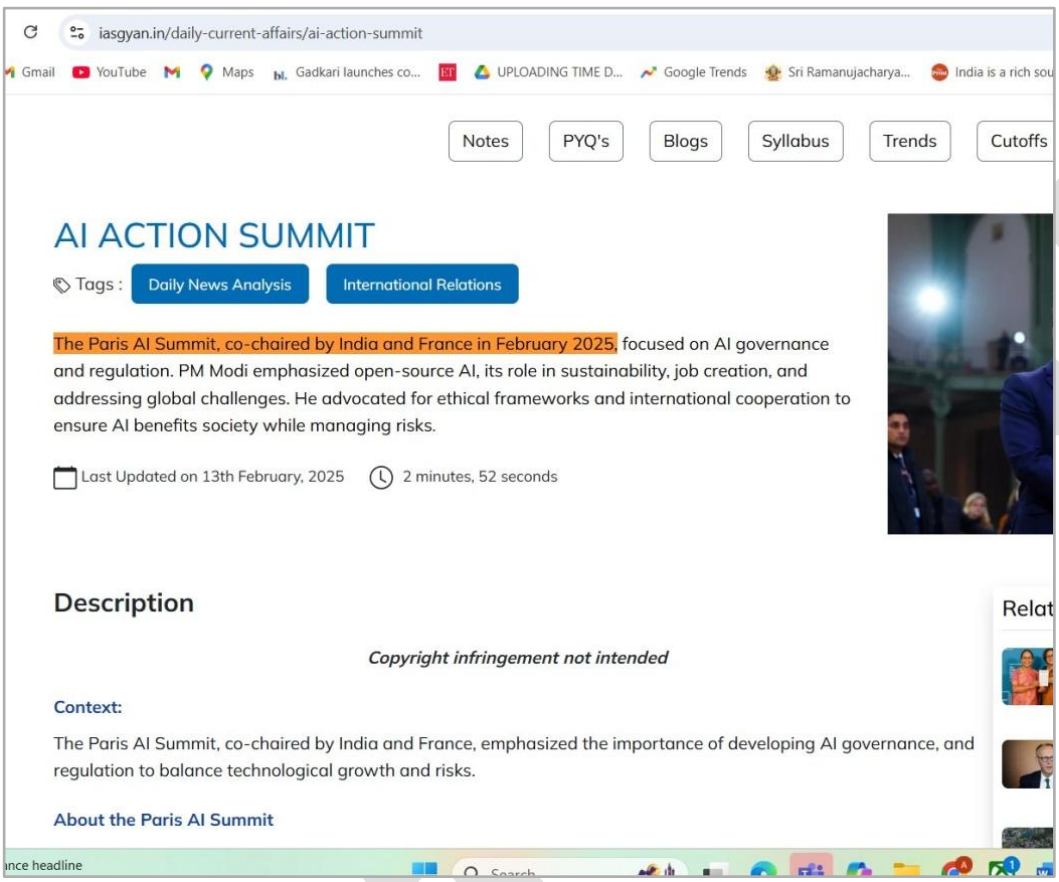
Which of the statements given above is/are correct?

(a) I only
(b) II only
(c) Both I and I
(d) Neither I nor II

Answer: (a)

Statement 1 has been mentioned directly on IASGYAN Current Affairs. Statement 2 information is not mentioned which clearly signals that it is incorrect.

https://www.iasgyan.in/daily-current-affairs/ai-action-summit



Q57. Consider the following statements with regard to BRICS:

3. The 16th BRICS Summit was held under the Chairship of Russia in Kazan.
4. Indonesia has become a full member of BRICS.
5. The theme of the 16th BRICS Summit was Strengthening Multiculturalism for Just Global Development and Security.

Which of the statements given above is/are correct?

(a) I and II
(b) II and III
(c) I and III
(d) I only

Answer: (c)

Statements appeared directly in our content on IASGYAN:https://www.iasgyan.in/daily-editorials/understanding-indias-china-conundrum

iasgyan.in/daily-editorials/understanding-indias-china-conundrum

Earlier, under Deng Xiaoping China followed a practical and cautious approach. But under Xi Jinping, China takes inspiration from its imperial past. It uses the idea of a **"century of humiliation"** to justify its actions and wants to bring back its old glory. China sees itself as a great civilization that must reclaim its place in the world. This belief makes China act more boldly and unilaterally, especially in nearby regions where India is an important player.

China is backing this approach with real power. It is modernizing its military, investing in technology and using its economic strength. For India, this is more than just a dispute between two countries. It is a larger civilizational challenge, shaped by unequal power, different views and uneven levels of preparation.

Border Tensions: From Tactical Incidents to Strategic Messaging

The LAC clashes at Depsang (2013), Demchok (2014), Doklam (2017) and especially Galwan (2020) show a clear pattern of rising tensions and not random incidents. China has kept troops and weapons permanently in eastern Ladakh, showing that it wants to change the current situation.

Although India and China have pulled back in some areas, these steps are small and limited. At the 2024 BRICS Summit in Kazan, both countries discussed a new Border Patrolling Agreement. Some saw it as a step forward. But the agreement was vague and had no strong promises, so it didn't build real trust. China still talks about a "harmonious dance between the Dragon and the Elephant," but this idea doesn't match what is happening on the ground.

Managing Perceptions vs Ground Realities

In early 2025, Prime Minister Modi said that things had started to return to normal after the Kazan talks. But we need to look at the facts before sharing that hope. The People's Liberation Army is still building infrastructure, setting up surveillance systems and expanding road networks—showing that it is preparing for a long-term conflict.

At the same time, the global order is breaking down. The old system based on rules and peace is giving way to one driven by power, where economic ties no longer prevent conflict. Unlike the Soviet Union, China is not cut off from the world. It is deeply connected to global supply chains and uses its industrial and digital power to gain influence. This makes India's strategic planning even more complex.

iasgyan.in/daily-current-affairs/highlights-of-brics-summit

- Promoting a more equitable and inclusive global governance framework, challenging the dominance of traditional Western powers.
- **Addressing climate change through sustainable practices**, technology sharing, and green initiatives.
- Strengthening cultural ties and enhancing people-to-people exchanges, to promote mutual learning and cooperation.

BRICS Expansion

At the 2023 BRICS summit in South Africa, six new members were invited: Argentina, Egypt, Ethiopia, Iran, Saudi Arabia, and the UAE. All accepted except Argentina, whose newly elected President guided the country towards a pro-West stance.

Saudi Arabia accepted but has delayed its official joining without detailed explanation.

Iran, Egypt, Ethiopia, and the United Arab Emirates attended their first summit as member states at the 2024 summit in Russia.

Significance of the expansion

Enhanced Global Influence	With the inclusion of Iran, Ethiopia, Egypt, and the UAE, **BRICS now has 9 members.** This widens the group's representation and influence, making it a more significant entity on the global stage. With the new members, BRICS now represents nearly 30% of the global economy and more than 45% of population, enhancing its ability to influence international economic policies and decisions.
Geopolitical Balance	The expansion is seen as a strategic move to counterbalance the dominance of Western-led institutions like the IMF, World Bank, and G7. It aims to create a more multipolar world order where emerging economies have a stronger voice. By including countries from different regions, BRICS reinforces its commitment to representing the interests of the Global South and promoting multilateralism.
Economic and Trade Opportunities	The **new members bring diverse economic strengths, such as oil production (Iran, UAE), and strategic geographic locations (Egypt, Ethiopia)**. This diversification can lead to enhanced trade and investment opportunities within the group.

Nowhere Indonesia mentioned. So automatically incorrect.

Q58. Consider the following statements about Lokpal:

1. The power of Lokpal applies to public servants of India, but not to the Indian public servants posted outside India.
2. The Chairperson or a Member shall not be a Member of the Parliament or a Member of the legislature of any State or Union Territory and only the Chief Justice of India, whether incumbent or retired, has to be its Chairperson.
3. The Chairperson or a Member shall not be a person of less than forty-five years of age on the date of assuming office as the Chairperson or Member, as the case may be.
4. Lokpal cannot inquire into the allegations of corruption against a sitting Prime Minister of India.

Which of the statements given above is/are correct?

(a) III only
(b) II and III
(c) I and IV
(d) None of the above statements is correct

Answer: (a)

The question can be partially solved using direct information on atleast 2 statements uploaded on IASGYAN content

https://iasgyan.in/ig-uploads/pdf/7759736.pdf
https://www.iasgyan.in/daily-current-affairs/lokpal-and-lokayukta

iasgyan.in/ig-uploads/pdf/7759736.pdf?utm_source=chatgpt.com

1 / 4 100%

- The Lokpal and Lokayuktas Act was passed in 2013 with amendments in parliament, following the Jan Lokpal movement led by Anna Hazare.
- The Lokpal is responsible for enquiring into corruption charges at the national level while the Lokayukta performs the same function at the state level.

Key Features of Lokpal and Lokayukta Act, 2013

- The Lokpal consists of a Chairperson and a maximum of eight members of which 50% shall be judicial members and 50% members of Lokpal shall be from SC/ST/OBCs, minorities and women.
- The Lokpal Chairperson or member shall not be connected with any political party and one member will be an eminent jurist nominated by the President.
- The selection of Chairperson and members of Lokpal shall be through a Selection Committee consisting of:
  - ✓ Prime Minister,
  - ✓ Speaker of Lok Sabha,
  - ✓ Leader of Opposition in the Lok Sabha,
  - ✓ Chief Justice of India or sitting Supreme Court judge nominated by CJI,
  - ✓ Eminent jurist to be nominated by the President of India on the basis of recommendations of the four members of the Selection Committee.

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iasgyan.in/daily-current-affairs/lokpal-and-lokayukta?utm_source=chatgpt.com

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moral pressure on the Government which ultimately led to the passing of the Bill.

Features of Lokpal and Lokayuktas Act 2013:

- It established the institution of the Lokpal at the Center and the Lokayukta at State level.
- **Lokpal is headed by the Chief Justice of India or a retired judge.**
- **The Lokpal Jurisdictions cover the Prime Minister, Ministers, Members of Parliament and Groups A, B, C and D officers and officials of the Central Government.**
- **The Lokpal consists of a Chairperson with a maximum of 8 members of which 50% shall be judicial members.**
  - 50% of the members of the Lokpal shall come from amongst the SCs, the STs, the OBCs, minorities and women.
- The Chairperson and the members of Lokpal shall be selected through a Selection Committee consisting of:
  - The Prime Minister
  - Lok Sabha speaker
  - Opposition leader in the Lok Sabha
  - Chief Justice of India or a sitting Supreme Court Judge nominated by the Chief Justice of India.
  - An eminent jurist to be nominated by the President of India.
- The Lokpal will have the administrative power over any investigating agency, including the CBI, for cases transferred to them by the Lokpal.
- **A Committee chaired by the Prime Minister will recommend the selection of the Director of CBI.**
- **It included the provisions for attachment of property of public servants gained by corrupt means, even while the prosecution is pending.**
- **It lays down clear timelines. For preliminary enquiry, it is three months extendable by three months. For investigation, it is six months which may be extended by six months at a time.**
- It enhances maximum punishment under the Prevention of Corruption Act from seven years to ten years.
- Institutions which are financed fully or partly by Government are under the jurisdiction of Lokpal, but institutions

Q60. Consider the following statements:

1. In the finals of the 45th Chess Olympiad held in 2024, Gukesh Dommaraju became the world's youngest winner after defeating the Russian player Ian Nepomniachtchi.
2. Abhimanyu Mishra, an American chess player, holds the record of becoming world's youngest ever Grandmaster.

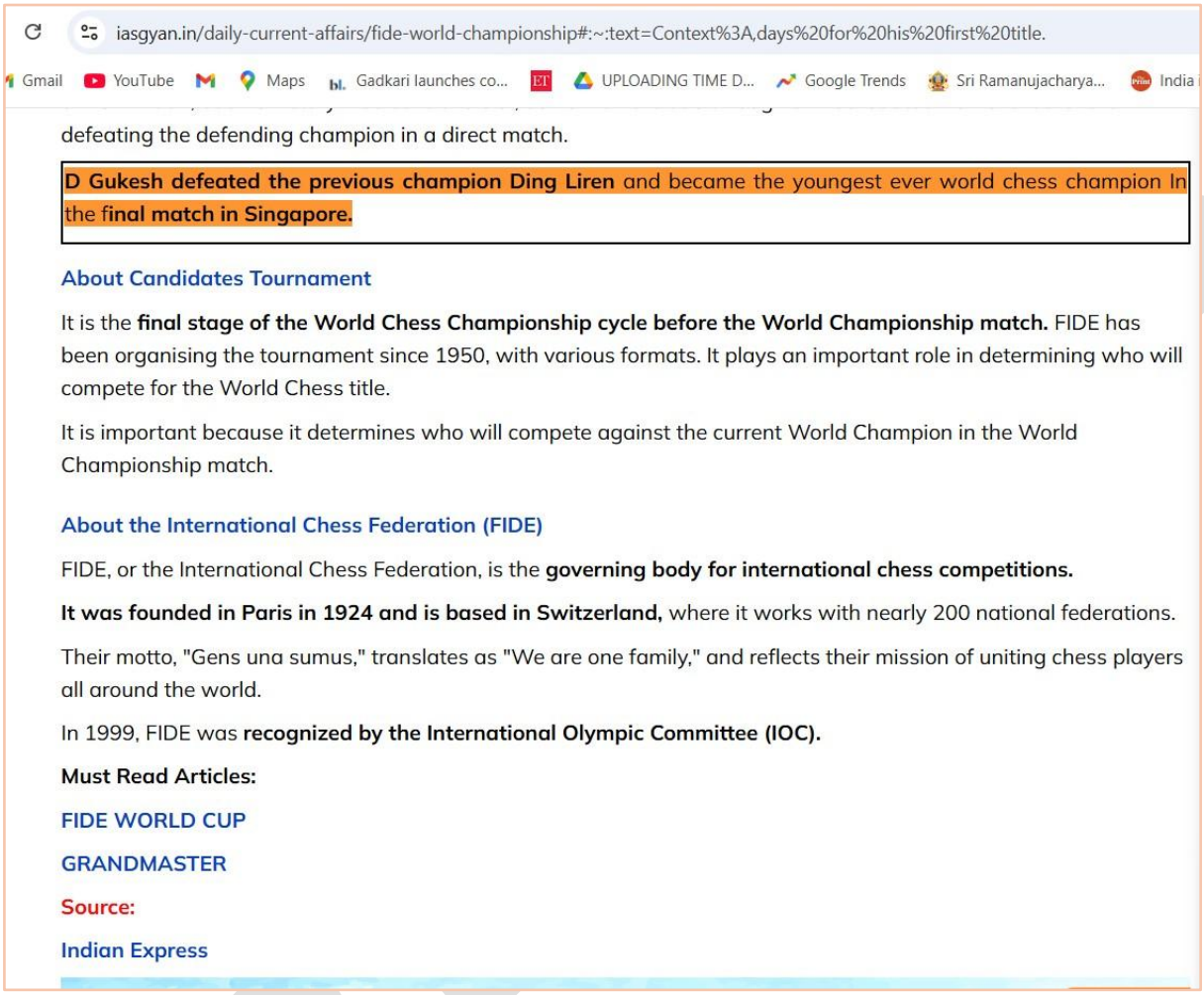
Which of the statements given above is/are correct?

(a) I only
(b) II only
(c) Both I and II
(d) Neither I nor II

Answer: (b)

Can be partially solved using IASGYAN content.

The first statement's correct information is direct from our Website: https://www.iasgyan.in/daily-current-affairs/fide-world-championship#:~:text=Context%3A,days%20for%20his%20first%20title.



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defeating the defending champion in a direct match.

D Gukesh defeated the previous champion Ding Liren and became the youngest ever world chess champion In the **final match in Singapore.**

About Candidates Tournament

It is the **final stage of the World Chess Championship cycle before the World Championship match.** FIDE has been organising the tournament since 1950, with various formats. It plays an important role in determining who will compete for the World Chess title.

It is important because it determines who will compete against the current World Champion in the World Championship match.

About the International Chess Federation (FIDE)

FIDE, or the International Chess Federation, is the **governing body for international chess competitions.**

It was founded in Paris in 1924 and is based in Switzerland, where it works with nearly 200 national federations.

Their motto, "Gens una sumus," translates as "We are one family," and reflects their mission of uniting chess players all around the world.

In 1999, FIDE was **recognized by the International Olympic Committee (IOC).**

Must Read Articles:

FIDE WORLD CUP

GRANDMASTER

Source:

Indian Express

Q61. Consider the following statements:

Statement I: Some rare earth elements are used in the manufacture of flat television screens and computer monitors.

Statement II: Some rare earth elements have phosphorescent properties.

Which one of the following is correct?

(a) Both are correct and II explains I
(b) Both are correct but II does not explain I
(c) Only I is correct
(d) Only II is correct

Answer: A

The statements have been covered directly on our website content: https://www.iasgyan.in/daily-current-affairs/rare-earth-metals-6

Question direct from our website content.

iasgyan.in/daily-current-affairs/rare-earth-metals-6

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68	Erbium	Er
69	Thulium	Tm
70	Ytterbium	Yb
71	Lutetium	Lu

What are Rare Earths used for?

- These elements are important in technologies of consumer electronics, computers and networks, communications, clean energy, advanced transportation, healthcare, environmental mitigation, and national defence, among others.
- Minerals like Cobalt, Nickel, and Lithium are required for batteries used in electric vehicles.
- REEs are an essential — although often tiny — component of more than 200 consumer products, including mobile phones, computer hard drives, electric and hybrid vehicles, semiconductors, flatscreen TVs and monitors, and high-end electronics.
- Scandium is used in televisions and fluorescent lamps, and yttrium is used in drugs to treat rheumatoid arthritis and cancer.
- Rare Earth elements are used in space shuttle components, jet engine turbines, and drones. Cerium, the most abundant Rare Earth element, is essential to NASA's Space Shuttle Programme.

Dependence on China

- Some REEs are available in India — such as Lanthanum, Cerium, Neodymium, Praseodymium and Samarium, etc.
- Others such as Dysprosium, Terbium, and Europium, which are classified as HREEs, are not available in Indian deposits in extractable quantities.
- Hence, there is a dependence on countries such as China for HREEs, which is one of the leading producers of REEs, with an estimated 70 per cent share of the global production.

India's Concern

Q62. Consider the following statements:

1. Indian Railways have prepared a National Rail Plan (NRP) to create a future-ready railway system by 2028.
2. 'Kavach' is an Automatic Train Protection (ATP) system developed in collaboration with Germany.
3. 'Kavach' system consists of RFID tags fitted on tracks in station sections.

Which of the above statements given above are *not* correct?

(a) I and II only
(b) II and III only
(c) I and III only
(d) I, II and III

Answer: A

Information pertaining to each and every statement has been directly covered on our IASGYAN website content:https://www.iasgyan.in/daily-current-affairs/national-rail-plan-2030
https://www.iasgyan.in/daily-current-affairs/kavach-system

iasgyan.in/daily-current-affairs/national-rail-plan-2030

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Context

- Indian Railways have prepared a National Rail Plan (NRP) for India – 2030.
- The Plan is to create a 'future ready' Railway system by 2030.

Aim

- The NRP **is aimed to formulate strategies to increase modal share of the Railways in freight to 45%.**

> **Freight:** Goods or cargo that are transported by train.

Status of Freight Railways in India

Findings of NITI Aayog

- Rail's share in freight transportation in India **has been declining since 1951.**
- In 2020, it **stood at merely 18% as compared to road's share of 71%.** This is due to insufficient rail capacity, especially on certain high-density routes.
- As off 2021 there are **just 8,479 freight trains.**
- **Road-based freight transport**, which is more energy and emission intensive, **has grown at the expense of the Indian Railways.**

Other

- The present **modal share of railways in freight is just 28 percent.**
- India's rail freight quantum as part of its total freight movement – including air, water and road **is only 36 per cent** vis-a-vis China's 47 per cent and the United States' 48 per cent.

iasgyan.in/daily-current-affairs/kavach-system

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in the Balasore district of Odisha has brought into sharp focus the safety mechanisms needed to prevent such tragedies.

What is Kavach?

- The **KAVACH is an indigenously developed Automatic Train Protection (ATP) system** by the Research Design and Standards Organisation (RDSO) in collaboration with the Indian industry.
- The trials were facilitated by the South Central Railway to achieve safety in train operations across Indian Railways.
- It is a **state-of-the-art electronic system with Safety Integrity Level-4 (SIL-4) standards**.
- It is **meant to provide protection by preventing trains to pass the signal at Red (which marks danger) and avoid collision**.
- It **activates the train's braking system automatically if the driver fails to control the train** as per speed restrictions.
- In addition, it **prevents the collision between two locomotives equipped with functional Kavach systems**.
- The system also **relays SoS messages during emergency situations**.
- An added feature is the **centralised live monitoring of train movements through the Network Monitor System**.
- 'Kavach' is **one of the cheapest, SIL-4 certified technologies where the probability of error is 1 in 10,000 years.**

How does Kavach work on Railway Systems?

- The Traffic collision avoidance system (TCAS), with the help of equipment on board the locomotive and transmission towers at stations **connected with Radio Frequency Identification (RFID) tags**, helps in two-way communication between the station master and loco-pilot to convey any emergency message.
- The instrument panel inside the cabin **helps the loco-pilot know about the signal in advance without visual sighting**, and the permissible speeds to be maintained.
- If a red signal is jumped and **two trains come face to face on the same line, the technology automatically takes over and applies sudden brakes.**
- Additionally, **the hooter activates by itself when approaching a level crossing** which serves as a big boon to

Q63. Consider the following space missions:

1. Axiom-4
2. SpaDeX
3. Gaganyaan

How many of the space missions given above encourage and support microgravity research?

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

Answer: C

Information pertaining 1st statement has been directly covered on our IASGYAN website content:https://www.iasgyan.in/daily-current-affairs/axiom-mission-4

The **next 2 points are a natural continuation are obvious.**

iasgyan.in/daily-current-affairs/axiom-mission-4

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Context:

Indian Air Force (IAF) officer and ISRO astronaut has been named the pilot for Axiom Mission 4 (Ax-4).

Details

NASA selected Shubhanshu Shukla (Indian Air Force officer and ISRO astronaut) as the pilot for Axiom Mission 4 (Ax-4), a private spaceflight to the International Space Station (ISS).

He will become the first Indian astronaut to visit the ISS on a private mission.

About the Axiom Mission 4

It is a **private spaceflight mission organized by Axiom Space**. It is targeting a launch to the International Space Station (ISS) no earlier than April 2025. This mission marks the fourth private astronaut mission to the ISS.

It aims to conduct a variety of activities during its 14-day duration, including scientific research, educational outreach, and commercial endeavors, all designed to utilize the microgravity environment of the ISS.

The Ax-4 crew consists of:

- **Commander:** Peggy Whitson (United States) – A former NASA astronaut and Axiom Space's Director of Human Spaceflight.
- **Pilot:** Shubhanshu Shukla (India) – An Indian Air Force officer and ISRO astronaut, making him the first Indian astronaut to visit the ISS on a private mission.
- **Mission Specialist:** Sławosz Uznański-Wiśniewski (Poland) – An ESA project astronaut and the first Polish astronaut to stay aboard the ISS.
- **Mission Specialist:** Tibor Kapu (Hungary) – The first Hungarian astronaut to stay aboard the ISS.

It will be launched from NASA's Kennedy Space Center in Florida aboard a SpaceX Crew Dragon spacecraft, propelled by a Falcon 9 rocket. The Crew Dragon will autonomously dock with the ISS after reaching orbit.

Must Read Articles:

Space Maitri

Q64. With reference to India's defence, consider the following pairs:

Aircraft Type	Description
I. Dornier-228	Maritime patrol aircraft
II. IL-76	Supersonic combat aircraft
III. C-17 Globemaster III	Military transport aircraft

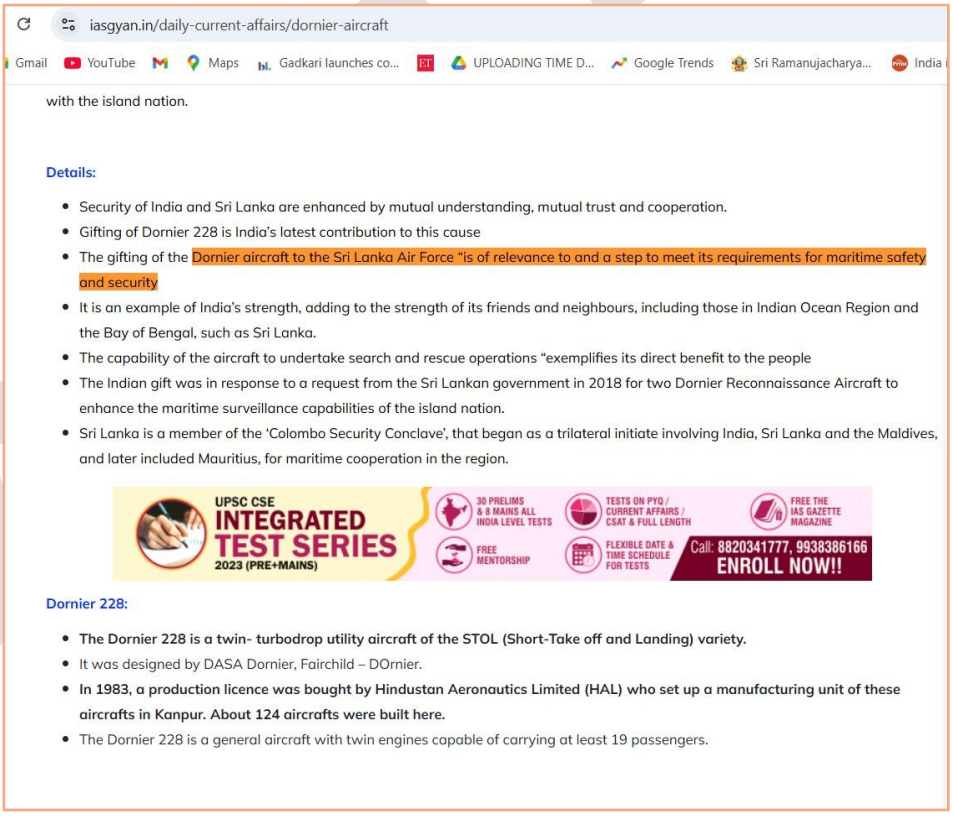
How many of the pairs are correctly matched?

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

Answer: B

1st Point Dornier is directly covered on our website:
https://www.iasgyan.in/daily-current-affairs/dornier-aircraft

3rd points explicitly covered on IASGYAN: https://www.iasgyan.in/daily-current-affairs/ex-hopex
2nd point is logical-Can't be supersonic. There are hardly any.


iasgyan.in/daily-current-affairs/dornier-aircraft

with the island nation.

Details:

- Security of India and Sri Lanka are enhanced by mutual understanding, mutual trust and cooperation.
- Gifting of Dornier 228 is India's latest contribution to this cause
- The gifting of the Dornier aircraft to the Sri Lanka Air Force "is of relevance to and a step to meet its requirements for maritime safety and security
- It is an example of India's strength, adding to the strength of its friends and neighbours, including those in Indian Ocean Region and the Bay of Bengal, such as Sri Lanka.
- The capability of the aircraft to undertake search and rescue operations "exemplifies its direct benefit to the people
- The Indian gift was in response to a request from the Sri Lankan government in 2018 for two Dornier Reconnaissance Aircraft to enhance the maritime surveillance capabilities of the island nation.
- Sri Lanka is a member of the 'Colombo Security Conclave', that began as a trilateral initiate involving India, Sri Lanka and the Maldives, and later included Mauritius, for maritime cooperation in the region.

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Dornier 228:

- The Dornier 228 is a twin- turbodrop utility aircraft of the STOL (Short-Take off and Landing) variety.
- It was designed by DASA Dornier, Fairchild – DOrnier.
- In 1983, a production licence was bought by Hindustan Aeronautics Limited (HAL) who set up a manufacturing unit of these aircrafts in Kanpur. About 124 aircrafts were built here.
- The Dornier 228 is a general aircraft with twin engines capable of carrying at least 19 passengers.

iasgyan.in/daily-current-affairs/ex-hopex

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- This weeklong exercise marks **the fourth joint endeavor** between the IAF and the Egyptian Air Force (EAF)

Details

Ex-HOPEX

Introduction: It is the joint exercise of IAF (Indian Air Force) and EAF (Egyptian Air Force).

Key Participants and Aircraft

- **Rafale Fighter Jets:** Deployed by the IAF for advanced combat and reconnaissance missions.
- **C-17 Globemaster:** Known for its strategic airlift capabilities, supports logistics and troop movements.
- **IL-78 Tankers:** Provide mid-air refueling, enhancing the operational range and endurance of the participating aircraft.

Objectives of Ex-HOPEX

- **Operational Readiness:** To enhance the operational readiness of both air forces.
- **Interoperability:** To improve tactical coordination and mutual understanding through various drills and simulated combat scenarios.
- **Regional Cooperation:** To foster bilateral and regional cooperation, reflecting the long-standing relationship between the two nations.

Historical Context

- **Non-Aligned Movement:** India and Egypt were founding members, indicating a history of cooperation in multilateral fora.
- **75th Anniversary:** In 2022, India and Egypt celebrated 75 years of diplomatic relations, underscoring their enduring partnership.

Q65. Artificial way of causing rainfall to reduce air pollution makes use of

(a) Silver iodide and potassium iodide
(b) Silver nitrate and potassium iodide
(c) Silver iodide and potassium nitrate
(d) Silver nitrate and potassium chloride

iasgyan.in/daily-current-affairs/artificial-rain-cloud-seeding

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on artificial rain through cloud seeding engaging multiple central & scientific agencies to explore feasibility of trial operations.

Key Highlights

Delhi Environment Minister initiated a high level meeting ahead of Delhi winter pollution season to explore **artificial rain through cloud seeding** as a short term solution to air pollution.

The meeting involved multiple key agencies**Central Pollution Control Board (CPCB), Delhi Pollution Control Committee (DPCC), Ministry of Defence, Home Affairs, Environment, Indian Institute of Tropical Meteorology (IITM), IIT-Kanpur (technical experts on cloud seeding), Directorate General of Civil Aviation (DGCA)** & **Airport Authority of India**

During winters **western disturbances** bring rain to Delhi naturally washing away pollutants. Cloud seeding attempts to **mimic this natural phenomenon** using aircraft & salt based mixtures to induce rain & clean air.

Cloud Seeding is a scientific process involving dispersal of substances (typically silver iodide, potassium iodide or sodium chloride) into clouds.

These act as nuclei for water droplets to condense around increasing likelihood of rainfall.

IIT-Kanpur conducted **successful pilot trials** in **2023 during monsoon** with favorable conditions. **Earlier trials in April to May 2018** resulted in **5 out of 6 attempts producing rain** though they covered limited areas.

No cloud seeding trials have been **conducted in Delhi winter months** when clouds are sparse & humidity is low.

Weather dependency is high requires ideal cloud moisture & atmospheric conditions.

A static system for **natural ionisation based artificial rain** was also presented as a potential low-cost, long term alternative to aerial cloud seeding.

Dust Pollution Mitigation (14-point Plan Reviewed)

Dust from construction sites contributes to nearly **30% of Delhi's winter air pollution**.

Action items include Use of **anti-smog guns**, Covering sites with **tarpaulin or green nets**, **Regular cleaning** of

Answer: A

Content of this question is directly from IASGYAN: https://www.iasgyan.in/daily-current-affairs/artificial-rain-cloud-seeding

Q66. Consider the following statements with regard to pardoning power of the President of India:

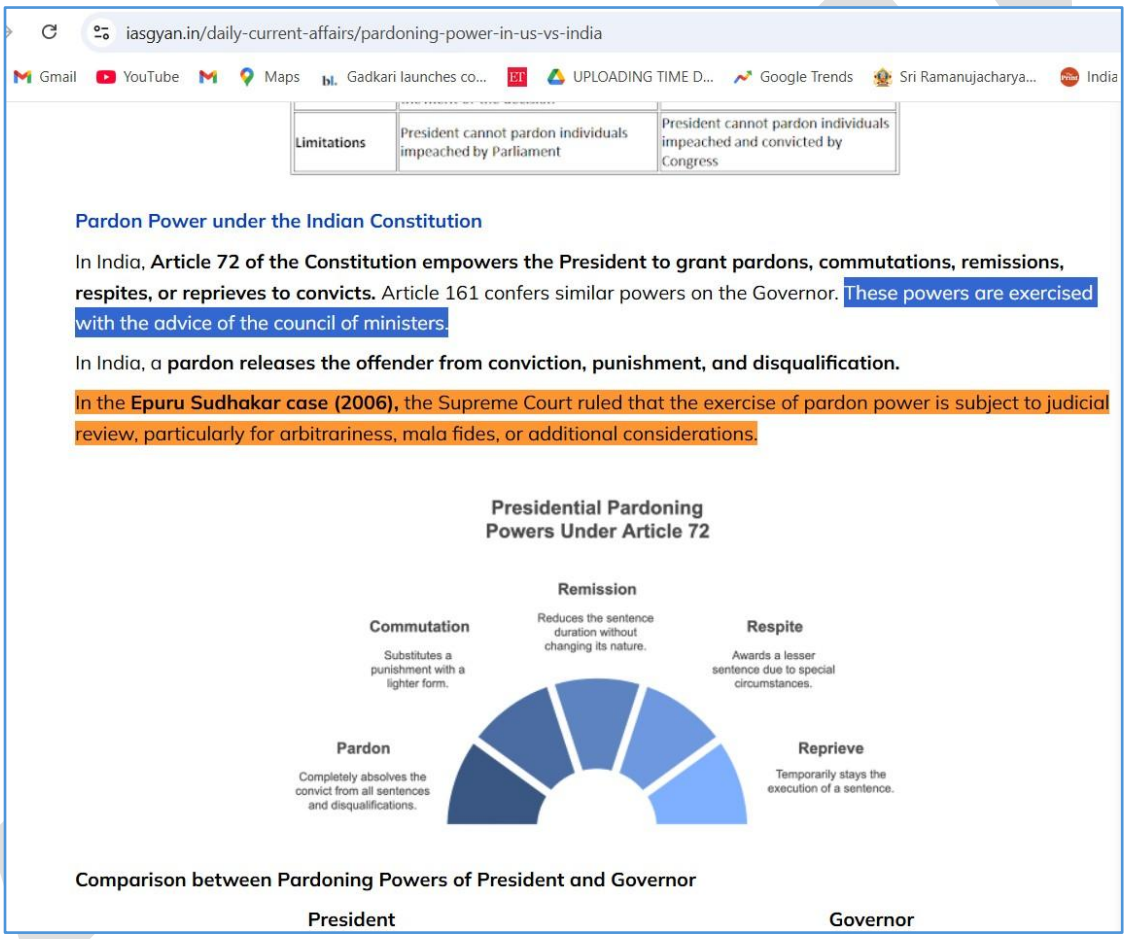
1. The exercise of this power by the President can be subjected to limited judicial review.
2. The President can exercise this power without the advice of the Central Government.

Which of the statements given above is/are correct?

(a) Only I
(b) Only II
(c) Both I and II
(d) Neither I nor II

Answer: A

The statements here are directly there in our Current Affairs coverage. Have a look: https://www.iasgyan.in/daily-current-affairs/pardoning-power-in-us-vs-india


iasgyan.in/daily-current-affairs/pardoning-power-in-us-vs-india

Limitations	President cannot pardon individuals impeached by Parliament	President cannot pardon individuals impeached and convicted by Congress

Pardon Power under the Indian Constitution

In India, **Article 72 of the Constitution empowers the President to grant pardons, commutations, remissions, respites, or reprieves to convicts.** Article 161 confers similar powers on the Governor. These powers are exercised with the advice of the council of ministers.

In India, a **pardon releases the offender from conviction, punishment, and disqualification.**

In the **Epuru Sudhakar case (2006),** the Supreme Court ruled that the exercise of pardon power is subject to judicial review, particularly for arbitrariness, mala fides, or additional considerations.

Comparison between Pardoning Powers of President and Governor

President | Governor

Q68. Consider the following statements:

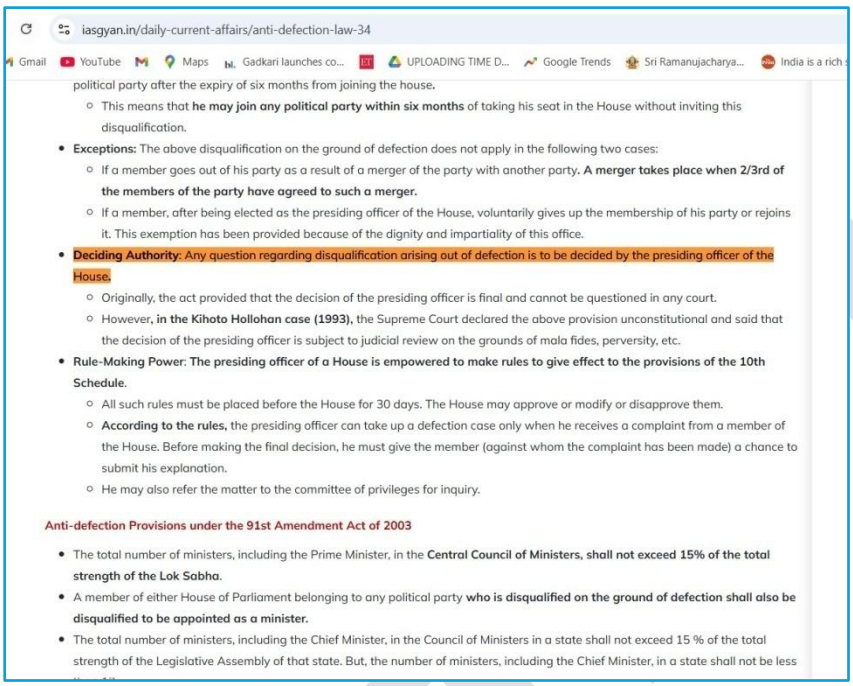
1. If any question arises as to whether a Member of the House of the People has become subject to disqualification under the 10th Schedule, the President's decision in accordance with the opinion of the Council of Union Ministers shall be final.
2. There is no mention of the word 'political party' in the Constitution of India.

Which of the statements given above is/are correct?

(a) I only
(b) II only
(c) Both I and II
(d) Neither I nor II

Answer: D

The statements of this question has been covered explicitly in our Current Affairs topics on IASGYAN. Have a look:
https://www.iasgyan.in/daily-current-affairs/anti-defection-law-31
https://www.iasgyan.in/daily-current-affairs/anti-defection-law-31

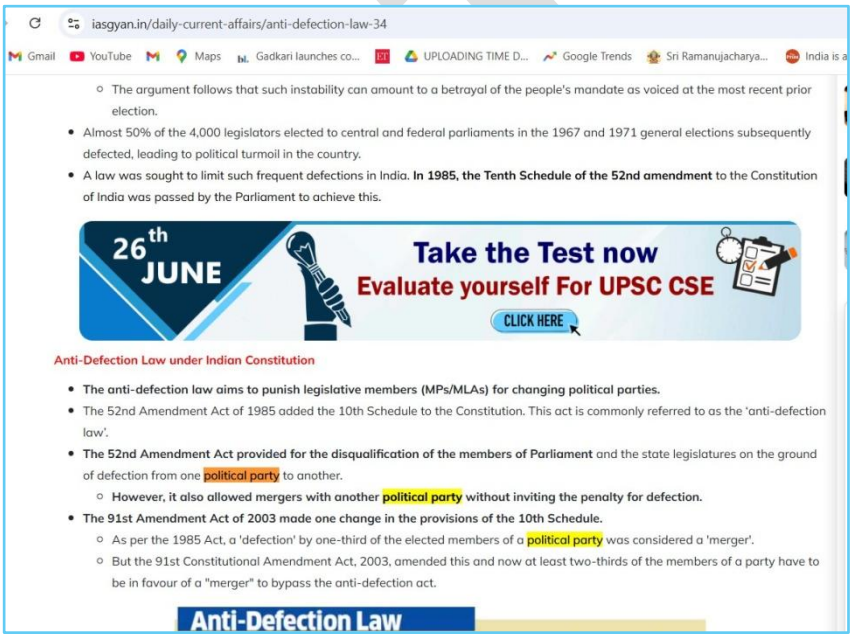

iasgyan.in/daily-current-affairs/anti-defection-law-34

political party after the expiry of six months from joining the house.
- This means that **he may join any political party within six months** of taking his seat in the House without inviting this disqualification.

- **Exceptions:** The above disqualification on the ground of defection does not apply in the following two cases:
  - If a member goes out of his party as a result of a merger of the party with another party. **A merger takes place when 2/3rd of the members of the party have agreed to such a merger.**
  - If a member, after being elected as the presiding officer of the House, voluntarily gives up the membership of his party or rejoins it. This exemption has been provided because of the dignity and impartiality of this office.
- **Deciding Authority**: Any question regarding disqualification arising out of defection is to be decided by the presiding officer of the House.
  - Originally, the act provided that the decision of the presiding officer is final and cannot be questioned in any court.
  - However, **in the Kihoto Hollohan case (1993),** the Supreme Court declared the above provision unconstitutional and said that the decision of the presiding officer is subject to judicial review on the grounds of mala fides, perversity, etc.
- **Rule-Making Power: The presiding officer of a House is empowered to make rules to give effect to the provisions of the 10th Schedule.**
  - All such rules must be placed before the House for 30 days. The House may approve or modify or disapprove them.
  - **According to the rules,** the presiding officer can take up a defection case only when he receives a complaint from a member of the House. Before making the final decision, he must give the member (against whom the complaint has been made) a chance to submit his explanation.
  - He may also refer the matter to the committee of privileges for inquiry.

Anti-defection Provisions under the 91st Amendment Act of 2003

- The total number of ministers, including the Prime Minister, in the **Central Council of Ministers, shall not exceed 15% of the total strength of the Lok Sabha.**
- A member of either House of Parliament belonging to any political party **who is disqualified on the ground of defection shall also be disqualified to be appointed as a minister.**
- The total number of ministers, including the Chief Minister, in the Council of Ministers in a state shall not exceed 15 % of the total strength of the Legislative Assembly of that state. But, the number of ministers, including the Chief Minister, in a state shall not be less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- The argument follows that such instability can amount to a betrayal of the people's mandate as voiced at the most recent prior election.

- Almost 50% of the 4,000 legislators elected to central and federal parliaments in the 1967 and 1971 general elections subsequently defected, leading to political turmoil in the country.
- A law was sought to limit such frequent defections in India. **In 1985, the Tenth Schedule of the 52nd amendment** to the Constitution of India was passed by the Parliament to achieve this.

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Anti-Defection Law under Indian Constitution

- **The anti-defection law aims to punish legislative members (MPs/MLAs) for changing political parties.**
- The 52nd Amendment Act of 1985 added the 10th Schedule to the Constitution. This act is commonly referred to as the 'anti-defection law'.
- **The 52nd Amendment Act provided for the disqualification of the members of Parliament** and the state legislatures on the ground of defection from one political party to another.
  - **However, it also allowed mergers with another political party without inviting the penalty for defection.**
- **The 91st Amendment Act of 2003 made one change in the provisions of the 10th Schedule.**
  - As per the 1985 Act, a 'defection' by one-third of the elected members of a political party was considered a 'merger'.
  - But the 91st Constitutional Amendment Act, 2003, amended this and now at least two-thirds of the members of a party have to be in favour of a "merger" to bypass the anti-defection act.

Anti-Defection Law

Q69.Consider the following statements:

Statement I: In India, State Governments have no power for making rules for grant of concessions in respect of extraction of minor minerals even though such minerals are located in their territories.

Statement II: In India, the Central Government has the power to notify minor minerals under the relevant law.

Which one of the following is correct in respect of the above statements?

(a) Both Statement I and II are correct but statement II explains Statement I
(b) Both Statement I and II are correct and statement II does not explain Statement I
(c) Statement I is correct but Statement II is not correct
(d) Statement I is not correct but Statement II is correct

Answer: D

The direct information pertaining to the statements are there in our website content: Current Affairs –
https://www.iasgyan.in/daily-current-affairs/riverbed-sand-mining
https://www.iasgyan.in/ig-uploads/pdf/3218676.pdf

iasgyan.in/daily-current-affairs/riverbed-sand-mining

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Impacts on	Description
Biodiversity	Impacts on related ecosystems (for example fisheries)
Land losses	Both inland and coastal through erosion
Hydrological function	Change in water flows, flood regulation and marine currents
Water supply	Through lowering of the water table and pollution
Infrastructures	Damage to bridges, river embankments and coastal infrastructures
Climate	Directly through transport emissions, indirectly through cement production
Landscape	Coastal erosion, changes in deltaic structures, quarries, pollution of rivers
Extreme events	Decline of protection against extreme events (flood, drought, storm surge)

Steps to tackle Sand Mining:

- Legal course: **Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act)** empowers state governments to make rules for regulating the grant of mineral concessions in respect of minor minerals and for purposes connected therewith.
- Ministry of Environment, Forest and Climate Change has issued **Sustainable Sand Mining Management Guidelines, 2016.**
- Grant of Environment Clearance for minor minerals, including sand and gravel, for mining lease of area up to 5 hectare will be done by the District Environment Impact Assessment Authority headed by the District Collector / District Magistrate.
- Several states have formed their own rules to regulate sand mining.

https://www.thehindu.com/news/national/other-states/environmental-clearance-paves-way-for-riverbed-sand-mining/article65049699.ece

iasgyan.in/ig-uploads/pdf/3218676.pdf

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APTI PLUS Academy For Civil Services The Best IAS Academy In Eastern India Since 2006 An ISO 9001 : 2008 Certified Institute Creating Civil Servants for the Nation

IAS GYAN Predict the Unpredictable.

1. Anthracite: carries 80 to 95%carbon content.
2. Bituminous: 60 to 80% of the carbon content
3. Lignite carries 40 to 55% carbon content
4. Peat has less than 40% carbon content.

- India has a long history of commercial coal mining covering nearly 220 years starting from 1774.
- Right from the beginning, the commercial coal mining in modern times in India has been dictated by the needs of domestic consumption.
- The nationalization was done in two phases, the first with the coking coal mines in 1971-72 and then with the non-coking coal mines in 1973.
- The government enables the allocation of coal mines through auctions by enacting the Coal Mines (Special Provisions)Act, 2015.
- In February 2018, CCEA permitted entry of private firms in commercial coal mining in the country.

Minerals:

- A mineral is a natural substance of organic or inorganic origin with definite chemical and physical properties
- Major minerals are minerals like agate, asbestos, barytes, bauxite, cadmium, calcite, china clay, coal as specified in the second schedule appended with the MMDR act 1957.
- Minor minerals are building stone, gravel, ordinary clay, ordinary sand and any other mineral which the central government may by notification in the official gazette declare as a minor mineral.
- The state governments grant permission for mining, known as mineral concessions under the provisions of the mines and minerals (development and regulation) act,1957 and mineral concession rules, 1960.
- However, for minerals specified in the first schedule to the mines and minerals (development and regulation) act, 1957, central government approval is necessary before granting the mineral concession.

Q70. Which organization has enacted the Nature Restoration Law (NRL) to tackle climate change and biodiversity loss?

(a) The European Union
(b) The World Bank
(c) The Organisation of Economic Cooperation and Development
(d) FAO

iasgyan.in/daily-current-affairs/eus-nature-restoration-law

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EU's Nature Restoration Law

Tags : Daily News Analysis Environment

Last Updated on 13th July, 2023 2 minutes, 58 seconds

Description

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Context

- On 12 July 2023, **European Parliament voted to pass a key biodiversity bill to protect and preserve land and water habitats** of European Union.
- The nature restoration law was **passed with 336 votes in favour**. 13 were abstained and 300 were against it.

Nature restoration act

- This act is an **initiative of European Commission** to protect nature and **combat climate change and biodiversity loss.**
- It **aims to restore habitats and species covering 20% of land/sea areas by 2030**.
- Some of its **objectives** are
  - To revive and preserve the degraded ecosystems.

Answer: A

This question is directly mentioned in our Website IASGYAN's Current Affairs. Topic: EU's Nature Restoration Law
https://www.iasgyan.in/daily-current-affairs/eus-nature-restoration-law

Q71. Suppose the revenue expenditure is 80,000 crores and the revenue receipts of the Government are 60,000 crores. The Government budget also shows borrowings of 10,000 crores and interest payments of 6,000 crores. Which of the following statements are correct?

1. Revenue deficit is 20,000 crores.
2. Fiscal deficit is 10,000 crores.
3. III. Primary deficit is 4,000 crores.

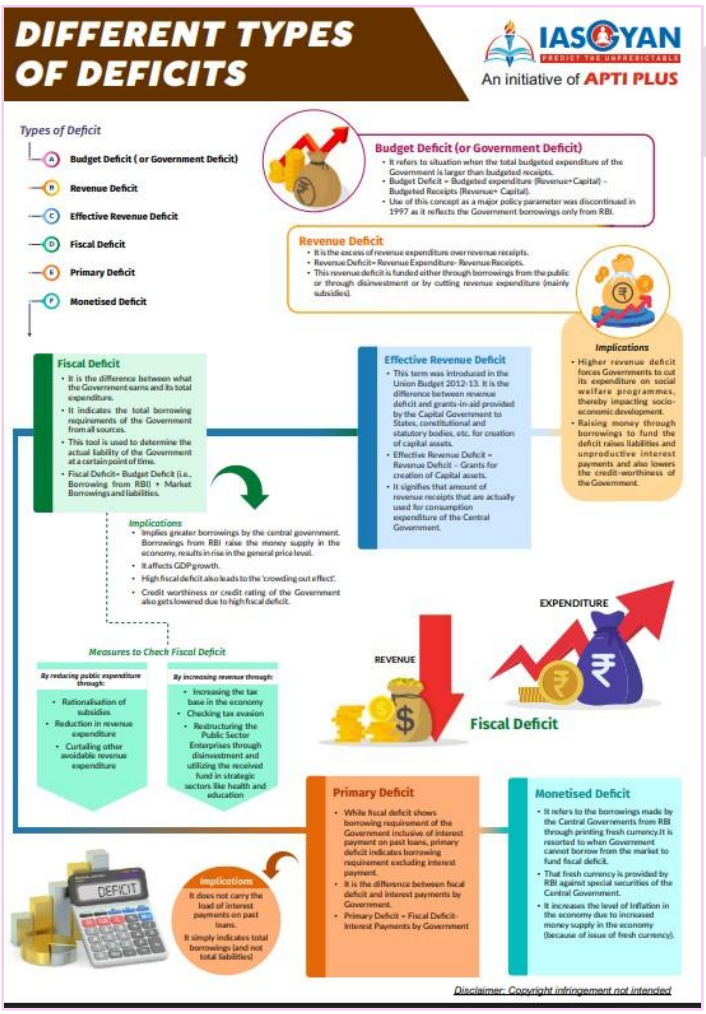
Select the correct answer using the code given below.

(a) I and II only
(b) II and III only
(c) I and III only
(d) I, II and III

Answer: (d)

This is a very easy question that can be solved if you have gone through basic current affairs on IASGYAN and IASGYAN infographics:

https://www.iasgyan.in/daily-current-affairs/types-of-deficits
https://iasgyan.in/ig-uploads/pdf/DIFFERENT_TYPES_OF_DEFICITS_INFOGRAPHICS_compressed.pdf



Q72. India is one of the founding members of the International North-South Transport Corridor (INSTC), a multimodal transportation corridor, which will connect

(a) India to Central Asia to Europe via Iran
(b) India to Central Asia via China
(c) India to South-East Asia through Bangladesh and Myanmar
(d) India to Europe through Azerbaijan

Answer: (a)

This questions can be solved just by reading our Current Affairs topic. Directly covered: https://www.iasgyan.in/daily-current-affairs/instc#:~:text=The%20International%20North%E2%80%93South%20Transport,Russia%2C%20Central%20Asia%20and%20Europe.

iasgyan.in/daily-current-affairs/instc#:~:text=The%20International%20North–South%20Transport,Russia%2C%20Central%20Asia%20a

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Context: Ministry of Ports, Shipping and Waterways, GoI, in association with India Ports Global Ltd, conducted a workshop on the 'Linking Chabahar Port with INSTC' in Mumbai.

Details:

About:

- The International North–South Transport Corridor (INSTC) is a **7,200-km-long multi-mode network of ship, rail, and road routes for** moving freight between **India, Iran, Afghanistan, Azerbaijan, Russia, Central Asia and Europe**.
- The route primarily involves moving **freight from India, Iran, Azerbaijan and Russia via ship, rail and road**.
- The objective of the corridor is to increase **trade connectivity between major cities**.
- The INSTC envisages the movement of goods from Mumbai (India) to Shahid Beheshti Port – Chabahar (Iran) by sea, from Chabahar to Bandar-e- Anzali (an Iranian port on the Caspian Sea) by road, and then from Bandar-e-Anzali to Astrakhan (a Caspian port in the Russian Federation) by ship across the Caspian Sea, and after that from Astrakhan to other regions of the Russian Federation and further into Europe by Russian railways

Importance:

- The strategic location of Chabahar has a great advantage for developing it as a transshipment hub.
- The Port's deep draft of 16 m is suitable for handling large shipment vessels. The Port lies close to some of the busiest trade routes in the world.

Q73. Consider the following statements:

Statement I: Of the two major ethanol producers in the world, i.e., Brazil and the United States of America, the former produces more ethanol than the latter.

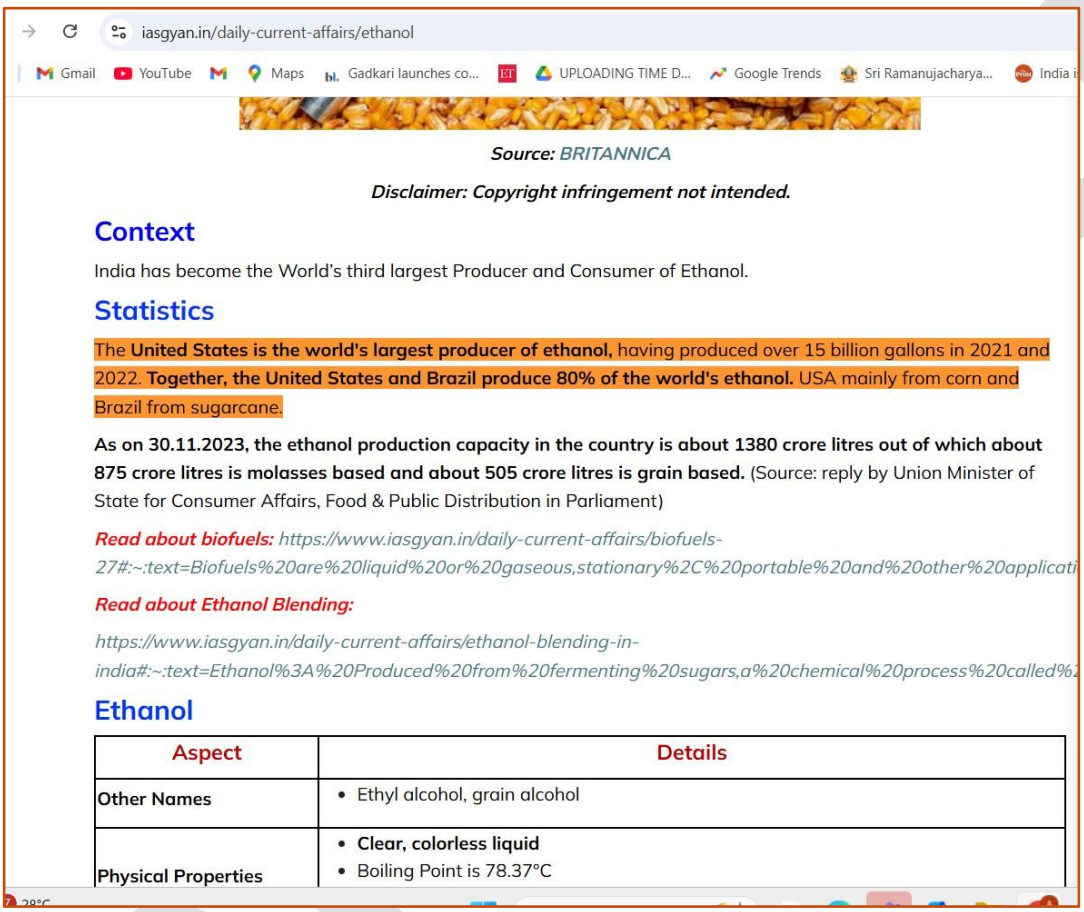
Statement II: Unlike in the United States of America where corn is the principal feedstock for ethanol production, sugarcane is the principal feedstock for ethanol production in Brazil

Which one of the following is correct in respect of the above statements?

(a) Both Statement I and Statement II are correct and Statement II explains Statement I
(b) Both Statement I and Statement II are correct but Statement II does not explain Statement I
(c) Statement I is correct but Statement II is not correct
(d) Statement I is not correct but Statement II is correct

Answer: (d)

This particular question can be solved just by reading our current affairs topic on IASGYAN website. Directly covered. Have a look: https://www.iasgyan.in/daily-current-affairs/ethanol



iasgyan.in/daily-current-affairs/ethanol

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Source: BRITANNICA

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Context

India has become the World's third largest Producer and Consumer of Ethanol.

Statistics

The **United States is the world's largest producer of ethanol,** having produced over 15 billion gallons in 2021 and 2022. **Together, the United States and Brazil produce 80% of the world's ethanol.** USA mainly from corn and Brazil from sugarcane.

As on 30.11.2023, the ethanol production capacity in the country is about 1380 crore litres out of which about 875 crore litres is molasses based and about 505 crore litres is grain based. (Source: reply by Union Minister of State for Consumer Affairs, Food & Public Distribution in Parliament)

Read about biofuels: *https://www.iasgyan.in/daily-current-affairs/biofuels-27#:~:text=Biofuels%20are%20liquid%20or%20gaseous,stationary%2C%20portable%20and%20other%20applicati*

Read about Ethanol Blending:

https://www.iasgyan.in/daily-current-affairs/ethanol-blending-in-india#:~:text=Ethanol%3A%20Produced%20from%20fermenting%20sugars,a%20chemical%20process%20called%2

Ethanol

Aspect	Details
Other Names	• Ethyl alcohol, grain alcohol
Physical Properties	• **Clear, colorless liquid** • Boiling Point is 78.37°C

Q74. The World Bank warned that India could become one of the first places where wet-bulb temperatures routinely exceed 35 °C. Which of the following statements best reflect(s) the implication of the above-said report?

1. Peninsular India will most likely suffer from flooding, tropical cyclones and droughts.
2. The survival of animals including humans will be affected as shedding of their body heat through perspiration becomes difficult.

Select the correct answer using the code given below.

(a) I only
(b) II only
(c) Both I and II
(d) Neither I nor II

Answer: (c)

This question can be solved just by logic after reading this entire article on IASGYAN on The World Bank's Report of Heat Wave and Wet Bulb Reading :

https://www.iasgyan.in/daily-current-affairs/heat-action-plan

iasgyan.in/daily-current-affairs/heat-action-plan

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Heat Wave Projection

- March 2022 was the warmest ever and the third driest in 121 years. The year also saw the country's third-warmest April, eleventh warmest August and eighth warmest September since 1901.
- Studies show **India is one of the most exposed and vulnerable countries to heat**.
- Between 1951 and 2016, three-day concurrent hot day and hot night events have increased significantly, and are projected to increase between two and four-fold by 2050 under the **intermediate and high emission pathways of RCP 4.5 and RCP 8.5.**

*[**Note:** Representative Concentration Pathways (RCPs) capture assumptions about the economic, social and physical changes to the environment that will influence climate change within a set of scenarios. The conditions of each scenario are used to model possible future climate evolution.]*

- Heat waves are also projected to come earlier, stay longer, and become more frequent with urban heat island effects exacerbating heat impacts.
- A **Report by the World Bank cautioned that India could become one of the first places in the world where wet-bulb temperatures could soar past the survivability threshold of 35°C.**

Wet Bulb Reading

Heat stress for humans is a combination of temperature and humidity. India is typically more humid than equivalently hot places, like the Sahara. This means sweating is less efficient, or not efficient at all.

This is why in India a measurement known as the wet-bulb reading — which **combines air temperature and relative humidity — provides a better gauge of heat stress on the human body.**

Heat Wave Implications

- Increased heat is already leading to more **heat-related deaths, heat stress, unbearable working conditions and the wider spread of vector-borne diseases.**
- By 2050, as many as 24 urban centres are projected to breach average summertime highs of at least 35 degrees Celsius, disproportionately **impacting economically weaker sections.**
- The International Labour Organisation estimates that **working hours lost due to heat stress would increase to 5.8 per cent of working hours by 2030, or an equivalent of 34 million jobs.**
- There will be a repeat of last year's record heat wave, which caused **widespread crop damage and triggered hours-long blackouts.** While temperatures as high as 50 degrees Celsius (122 Fahrenheit) are unbearable in any condition, the damage is made **worse for those of India's 1.4 billion population** who are stuck in tightly packed cities and don't have access to well-ventilated housing or air-conditioning.

What's the climate science behind India's more intense heat waves?

- Heat wave temperatures can be separated into two parts —

Q75. A country's fiscal deficit stands at 50,000 crores. It is receiving 10,000 crores through non-debt creating capital receipts. The country's interest liabilities are 1,500 crores. What is the gross primary deficit?

(a) 48,500 crores
(b) 51,500 crores
(c) 58,500 crores
(d) None of the above

Answer: (a)

This is a question that you can solve directkly if you read Current Affairs on IASGYAN. Directly and easily:
https://www.iasgyan.in/daily-current-affairs/types-of-deficits
https://iasgyan.in/ig-uploads/pdf/DIFFERENT_TYPES_OF_DEFICITS_INFOGRAPHICS_compressed.pdf

iasgyan.in/daily-current-affairs/types-of-deficits

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- Alternatively, measures to increase the revenue are also taken in forms of broadening tax base restructuring and sale of shares in public sector units etc.

Primary Deficit:

- Primary Deficit is Fiscal Deficit of the current year minus interest payments on previous borrowings. While Fiscal Deficit represents the government's total borrowing including interest payments, Primary Deficit shows the amount of borrowing excluding interest payments.

What does it mean?

- Primary Deficit shows the amount of government borrowings specifically to meet the expenses by removing the interest payments. Therefore, a zero Primary Deficit means the need for borrowing to meet interest payments.

Remedial measures:

- A higher Primary Deficit reflects the amount of new borrowings in the current year. Since this is the amount on top of already existing borrowings (Fiscal Deficit) similar measures can be taken to reduce the amount of borrowings.

Significance of different measures of deficit

S.No	Deficit Measure	Significance
		Widely used as a summary indicator of the macroeconomic impact of the budget in several industrialized countries. This

Q76. Which of the following statements with regard to recommendations of the 15th Finance Commission of India are correct?

1. It has recommended grants of Rs 4,800 crores from the year 2022-23 to the year 2025-26 for incentivizing States to enhance educational outcomes.
2. II.45 % of the net proceeds of Union taxes are to be shared with States.
3. III. 45,000 crores are to be kept as performance-based incentive for all States for carrying out agricultural reforms.
4. It reintroduced tax effort criteria to reward fiscal performance.

Select the correct answer using the code given below.

(a) I, II and III
(b) I, II and IV
(c) I, III and IV
(d) II, III and IV

Answer: (c)

The above question can be solved easily if you have read this current Affair Topic:https://www.iasgyan.in/daily-current-affairs/fiscal-devolution-among-states

iasgyan.in/daily-current-affairs/fiscal-devolution-among-states

Demographic performance	-	-	-	-	12.5
Tax effort	5	7.5	-	-	2.5
Total	**100**	**100**	**100**	**100**	**100**

The criteria under the 15th FC are explained as follows:

- **"Income distance"** measures a State's income compared to the State with the highest per capita income (Haryana). States with lower per capita income receive a higher share to ensure equity among States.
- **"Population"** is based on the 2011 Census. Previous FCs considered the 1971 Census, but the 15th FC shifted to the 2011 Census.
- **"Forest and ecology"** factor in the share of dense forest in each State compared to the aggregate dense forest of all States.
- The **"Demographic Performance"** criterion rewards States for efforts in controlling their population, with lower fertility ratios scoring higher.
- **"Tax effort"** rewards States with higher tax collection efficiency.

What are the concerns?

- The constitutional framework has historically favoured **a strong central authority in legislative, administrative, and financial matters**. However, federalism is **a fundamental principle**, and States should not feel disadvantaged in resource allocation. While political differences between the Union government and opposition-led States exacerbate this issue, there are genuine concerns that must be addressed.
- Firstly, the Union government's collection of cess and surcharge, **estimated at around 23% of its gross tax receipts for 2024-25, does not form part of the divisible pool and is therefore not shared with the States.**
- For perspective, the Union government's total tax revenue for 2022-23 (actual), 2023-24

Q78. Consider the following statements in respect of RTGS and NEFT:

1. In RTGS, the settlement time is instantaneous while in case of NEFT, it takes some time to settle payments.
2. In RTGS, the customer is charged for inward transactions while that is not the case for NEFT.
3. III. Operating hours for RTGS are restricted on certain days while this is not true for NEFT.

Which of the statements given above is/are correct?

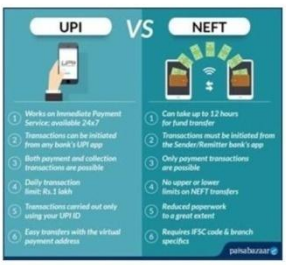
(a) I only
(b) I and II
(b) I and III
(d) III only

Answer: (a)

You can easily solve this question as it has been directly covered in our Current Affairs on IASGYAN:
https://www.iasgyan.in/daily-current-affairs/upi-service

iasgyan.in/daily-current-affairs/upi-service

Some Key Differences



Differences between NEFT, IMPS, and RTGS

Category	NEFT	RTGS	IMPS
Minimum transfer value	Rs.1	Rs.2 lakh	Rs.1
Maximum transfer value	Depends on the customer segment	No upper limit	Rs.2 lakh
Type of settlement	Batches	One-on-one settlement	One-on-one settlement
Speed of settlement	2 hours (subject to cut-off timings and batches)	Immediately	Immediately
Service availability	24/7	Depends on the bank	24/7
Online/Offline	Both	Both	Online

Q79. Consider the following countries:

1. United Arab Emirates
2. France
3. Germany
4. Singapore
5. Bangladesh

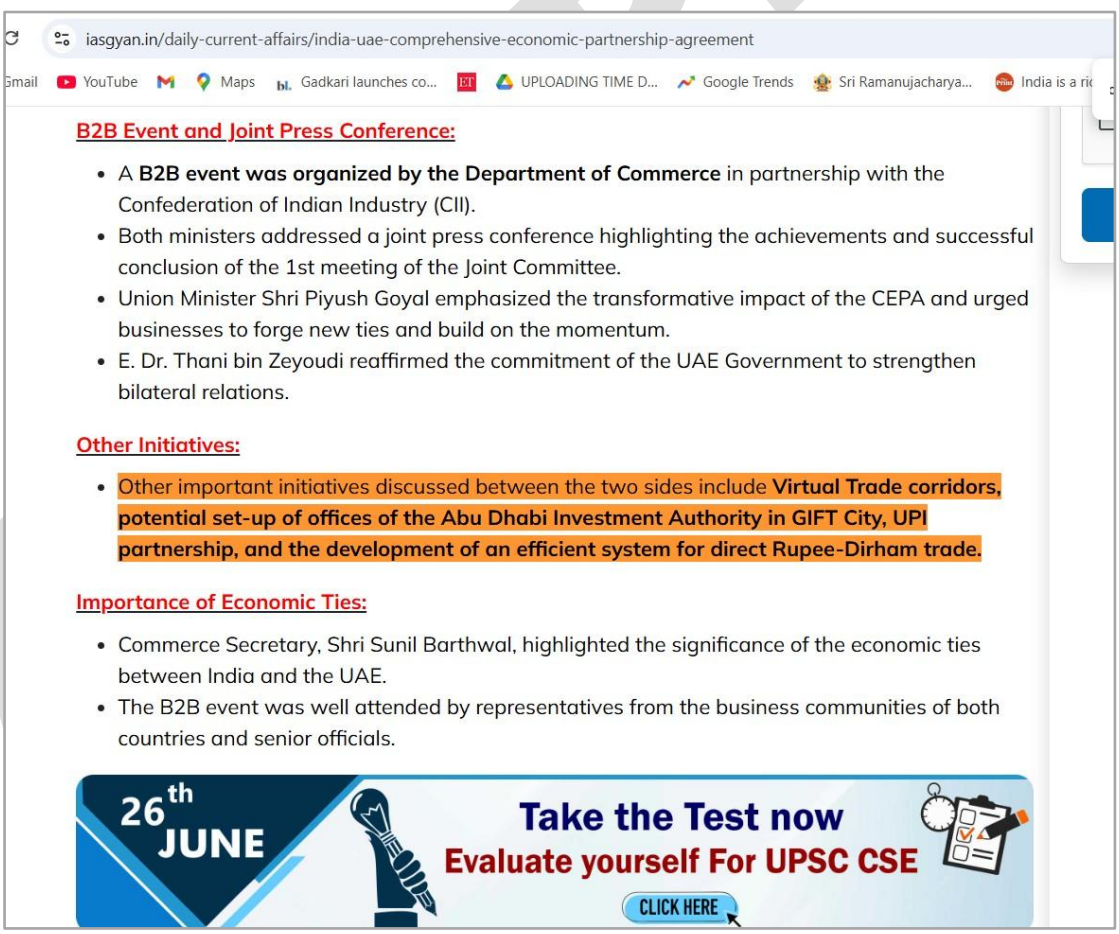
How many countries amongst the above are there other than India where international merchant payments are accepted under UPI?

(a) Only two
(b) Only three
(c) Only four
(d) All the five

Answer: (b)

Each and every country where UPI has been launched was covered in various current affairs article on our IASGYAN Website:

UAE: https://www.iasgyan.in/daily-current-affairs/india-uae-comprehensive-economic-partnership-agreement
France: https://www.iasgyan.in/daily-current-affairs/india-france-bilateral-relations-34
Singapore: https://www.iasgyan.in/daily-current-affairs/upi-paynow-linkage


iasgyan.in/daily-current-affairs/india-uae-comprehensive-economic-partnership-agreement

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B2B Event and Joint Press Conference:

- A **B2B event was organized by the Department of Commerce** in partnership with the Confederation of Indian Industry (CII).
- Both ministers addressed a joint press conference highlighting the achievements and successful conclusion of the 1st meeting of the Joint Committee.
- Union Minister Shri Piyush Goyal emphasized the transformative impact of the CEPA and urged businesses to forge new ties and build on the momentum.
- E. Dr. Thani bin Zeyoudi reaffirmed the commitment of the UAE Government to strengthen bilateral relations.

Other Initiatives:

- Other important initiatives discussed between the two sides include **Virtual Trade corridors, potential set-up of offices of the Abu Dhabi Investment Authority in GIFT City, UPI partnership, and the development of an efficient system for direct Rupee-Dirham trade.**

Importance of Economic Ties:

- Commerce Secretary, Shri Sunil Barthwal, highlighted the significance of the economic ties between India and the UAE.
- The B2B event was well attended by representatives from the business communities of both countries and senior officials.

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iasgyan.in/daily-current-affairs/india-france-bilateral-relations-34

Nuclear Power Project.

- Cooperation in nuclear energy signifies a shared vision for sustainable solutions.

Economic Cooperation:

- France is among the largest investors in India, with substantial FDI inflow.
- Bilateral Joint Working Groups exist in various fields to enhance economic collaboration.
- **FDI inflow from France for FY 2022-23 was $659.77 million,** with a cumulative stock of $10.76 billion.
- Over 70 Indian companies employ over 8,000 employees in France, while over 750 French companies employ over 450,000 people in India.

Digital Cooperation:

- Workshops and events showcase India's achievements in digital infrastructure.
- **Unified Payments Interface (UPI) launched from Eiffel Tower** for secure transactions.
- **'INFRAStructures' workshop** organized in Paris in May 2023 showcased India's digital achievements.
- UPI launch from Eiffel Tower demonstrates joint efforts in digital innovation.

Culture and Tourism Cooperation:

- **'Namaste France 2023' showcased Indian culture**, drawing over 20,000 visitors.
- Agreements on Broadcasting and Museuology signed during PM's July 2023 visit.
- Festival comprised 18 concerts, 16 workshops, and a craft bazaar, reaching around 20,000 attendees.
- Cultural events contribute to enhancing mutual understanding and people-to-people ties.

Maritime Cooperation:

- **India-France Maritime Cooperation Dialogue** and naval exercises strengthen maritime ties

iasgyan.in/daily-current-affairs/upi-paynow-linkage

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Context

- India's Unified Payments Interface — better known as UPI — and Singapore's PayNow have been officially integrated.

Background and Details

- The project to link both the fast payment systems was initiated in September 2021 to facilitate faster, more efficient and transparent cross-border transactions relating to trade, travel and remittances between the two countries.
- They allow for a **"real-time payment linkage".**
- This will enable **faster remittances between the two countries at a competitive rate.**

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Q80. Consider the following statements about PM Surya Ghar Muft Bijli Yojana:

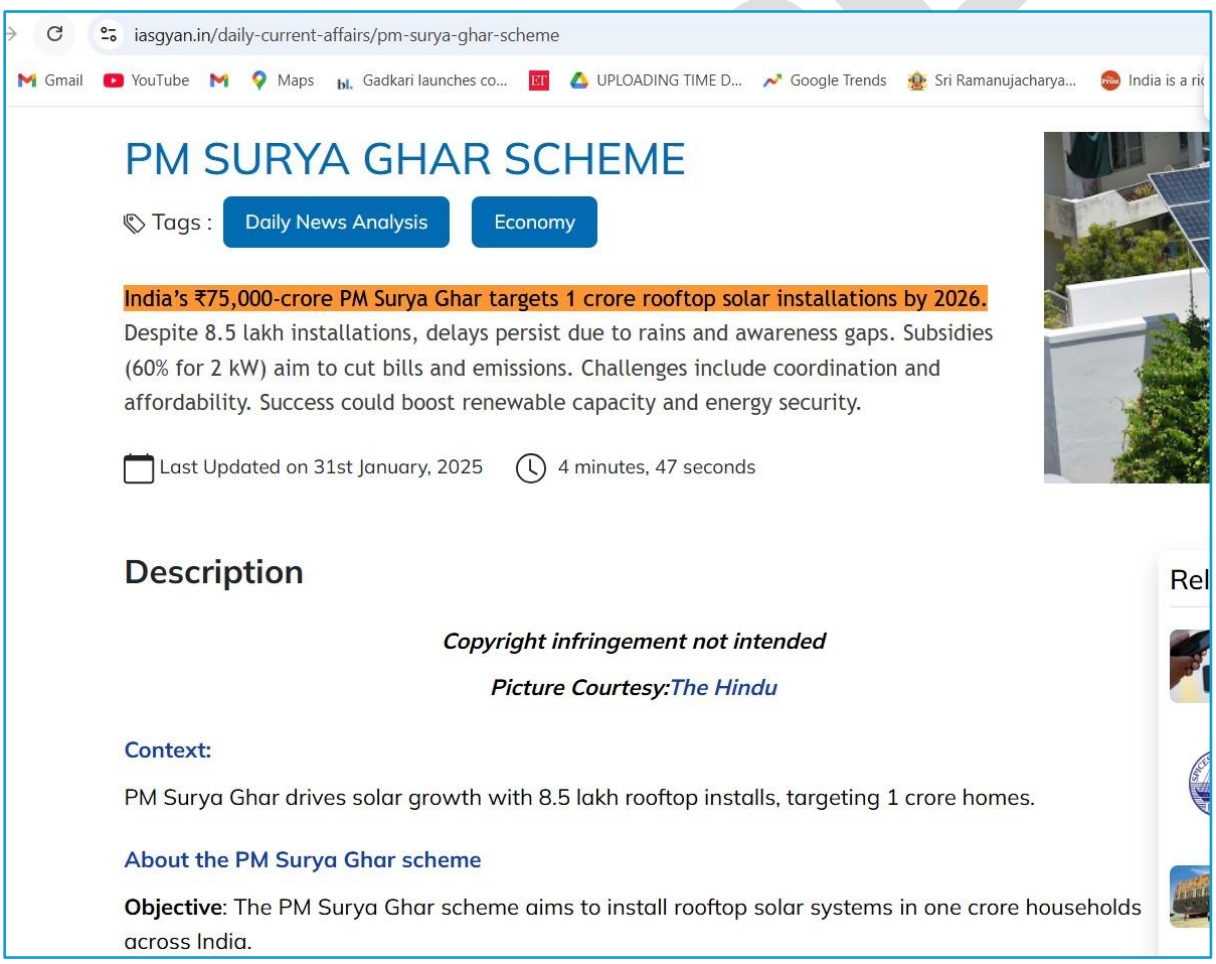
1. It targets installation of one crore solar rooftop panels in the residential sector.
2. The Ministry of New and Renewable Energy aims to impart training on installation, operation, maintenance and repairs of solar_rooftop systems at grassroot levels.
3. III. It aims to create more than three lakhs skilled manpower through fresh skilling, and upskilling, under scheme component of capacity building.

Which of the statements given above are correct?

(a) I and II only
(b) I and III only
(c) II and III only
(d) I, II and III

Answer: (d)

All the statements have been covered in our Current Affairs Articles on IASGYAN
https://www.iasgyan.in/daily-current-affairs/pm-surya-ghar-scheme
https://www.iasgyan.in/daily-current-affairs/pm-surya-ghar-scheme
https://www.iasgyan.in/daily-current-affairs/pm-surya-ghar-muft-bijli-yojana


iasgyan.in/daily-current-affairs/pm-surya-ghar-scheme

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PM SURYA GHAR SCHEME

Tags : Daily News Analysis Economy

India's ₹75,000-crore PM Surya Ghar targets 1 crore rooftop solar installations by 2026. Despite 8.5 lakh installations, delays persist due to rains and awareness gaps. Subsidies (60% for 2 kW) aim to cut bills and emissions. Challenges include coordination and affordability. Success could boost renewable capacity and energy security.

Last Updated on 31st January, 2025 4 minutes, 47 seconds

Description

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Picture Courtesy:The Hindu

Context:

PM Surya Ghar drives solar growth with 8.5 lakh rooftop installs, targeting 1 crore homes.

About the PM Surya Ghar scheme

Objective: The PM Surya Ghar scheme aims to install rooftop solar systems in one crore households across India.

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Current status of the PM Surya Ghar scheme

The **Parliamentary Standing Committee on Energy noted the "slow pace" of installations,** as of October 2024, only five lakh installations were completed out of 20 lakh applications made on the Surya Ghar portal.

The Secretary of the Ministry of New and Renewable Energy told the committee that there were "rain-related delays" but the government was on track to ensure that 12 lakh households were covered in the financial year 2024-2025. He explained that daily **installations have increased from 3,000 to 9,000 per day.**

As of January 2025, 8.5 lakh households have installed rooftop solar connections. The scheme aims to cover one crore households.

Significance of rooftop solar installations

Rooftop solar systems provide decentralized energy solutions, reducing strain on the grid.

Suitable for both urban and rural areas, making it a versatile solution.

Reduces electricity bills and provides long-term financial benefits.

iasgyan.in/daily-current-affairs/pm-surya-ghar-muft-bijli-yojana

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Expected benefits:

- **Savings up to fifteen to eighteen thousand rupees annually** for households from free solar electricity and selling the surplus to the distribution companies;
- Charging of electric vehicles;
- **Entrepreneurship opportunities** for a large number of vendors for supply and installation;
- **Employment opportunities for the youth** with technical skills in manufacturing, installation and maintenance.

PRACTICE QUESTION

Q. How many of the given statements are correct?

1.The initiative aims to provide 300 units of free electricity every month to one crore households across the nation.

2.The project entails an investment of over Rs 2000,000 crore.

3.The central government will ensure that there is no cost burden on the people by providing substantive subsidies directly to their bank accounts.

A) Only one

B) Only two

C) All

D) None

Answer) Only two

This question can be easily solved if one reads these current affairs articles on IASGYAN:
https://www.iasgyan.in/blogs/national-parks-in-india
https://www.iasgyan.in/daily-current-affairs/nagaland-issue
https://www.iasgyan.in/daily-current-affairs/greater-tipraland

Q83. With reference to India, consider the following bodies:

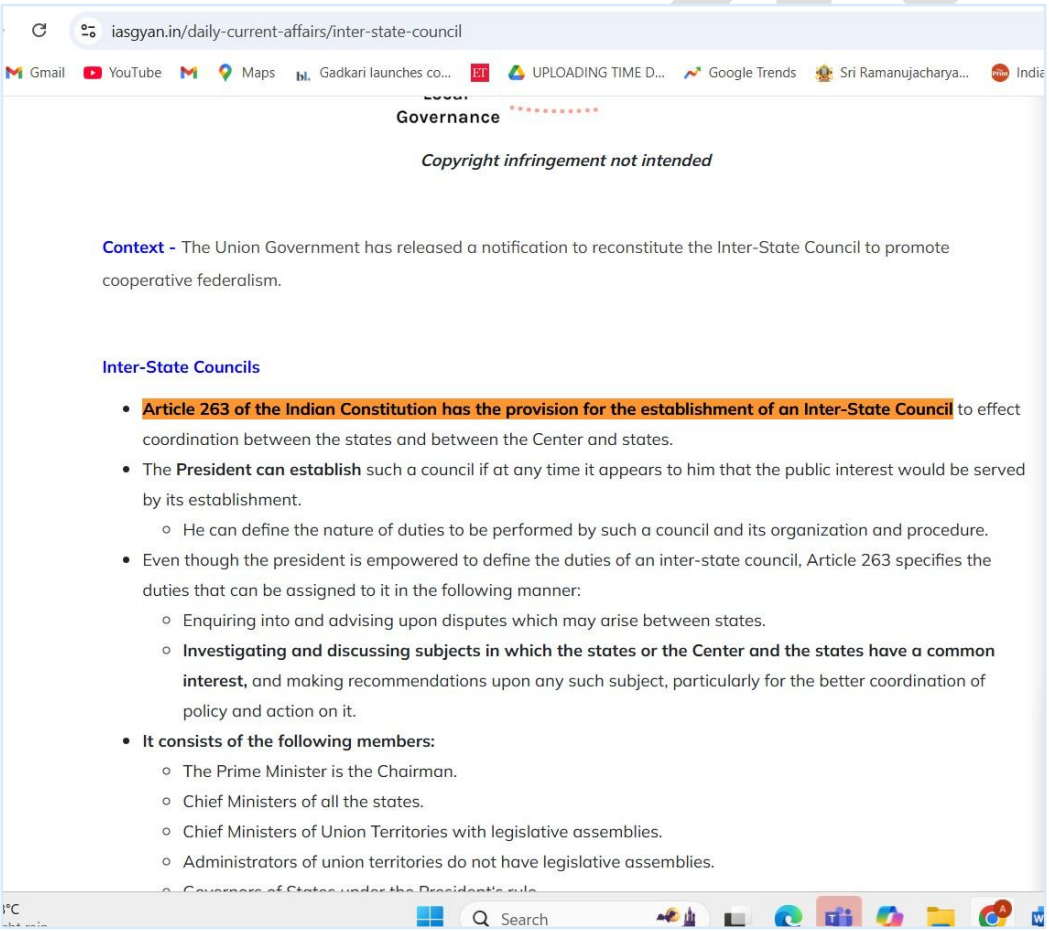
1. The Inter-State Council
2. The National Security Council
3. The Zonal Councils

How many of the above were established as per the provisions of the Constitution of India?

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

Answer: (a)

Two of these points are covered directly on IASGYAN website's Current Affairs:
https://www.iasgyan.in/daily-current-affairs/inter-state-council
https://www.iasgyan.in/daily-current-affairs/zonal-council



iasgyan.in/daily-current-affairs/inter-state-council

Governance

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Context - The Union Government has released a notification to reconstitute the Inter-State Council to promote cooperative federalism.

Inter-State Councils

- **Article 263 of the Indian Constitution has the provision for the establishment of an Inter-State Council** to effect coordination between the states and between the Center and states.
- The **President can establish** such a council if at any time it appears to him that the public interest would be served by its establishment.
  - He can define the nature of duties to be performed by such a council and its organization and procedure.
- Even though the president is empowered to define the duties of an inter-state council, Article 263 specifies the duties that can be assigned to it in the following manner:
  - Enquiring into and advising upon disputes which may arise between states.
  - **Investigating and discussing subjects in which the states or the Center and the states have a common interest,** and making recommendations upon any such subject, particularly for the better coordination of policy and action on it.
- **It consists of the following members:**
  - The Prime Minister is the Chairman.
  - Chief Ministers of all the states.
  - Chief Ministers of Union Territories with legislative assemblies.
  - Administrators of union territories do not have legislative assemblies.

iasgyan.in/daily-current-affairs/zonal-council

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of the member States and senior officers of Central government.

- The council will discuss issues of common interests in areas of security, road, transport, industries, water, power, and economic and social planning.

Zonal Councils

- Zonal Councils aim to promote collaboration and coordination among states, UTs, and the Union.
- They discuss and give recommendations on several topics.
- They are only consultative and deliberative bodies.
- The States Reorganization Act of 1956 established these statutory entities. The country was divided into 5 zones by the Act:
  - Northern Zone
  - Central Zone
  - Eastern Zone
  - Western Zone
  - Southern Zone
- Each zonal council is made up of
  - The Union Home Minister (who acts as a chairman).
  - CM of all States in Zone + 2 other ministers from the states (Each CM acts as a Vice-Chairman by rotation, holding office for 1 year at a time).
  - Administrators of all UTs in the zone.

North-Eastern Council

- A further Act of Parliament, the North-Eastern Council Act of 1971, established a North-Eastern Council in addition

Q84. Consider the following statements regarding constitutional provisions in India:

1. The Constitution of India explicitly mentions situations where the Governor of a State can act in his/her discretion.
2. The President of India can, on his/her own, reserve a Bill passed by a State Legislature for consideration, even without it being forwarded by the Governor of the concerned State.

Which of the above statements is/are correct?

(a) I only
(b) II only
(c) Both I and II
(d) Neither I nor II

Answer: (a)

The statements can be solved by reading current affairs on IASGYAN:
https://www.iasgyan.in/daily-current-affairs/article-356
https://www.iasgyan.in/daily-current-affairs/governor-30

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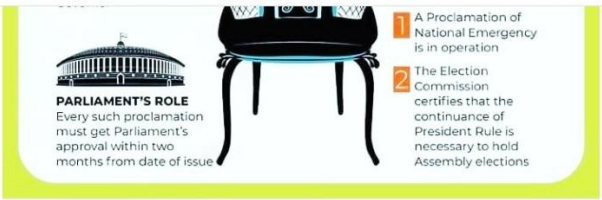

Origins of Article 356

- Article 356 was **inspired by Section 93 of the Government of India Act of 1935.**
  - Section 93 stated that if a Governor of a province was satisfied that a situation had arisen in which the government of the province cannot be carried on per the provisions of the said Act, he could assume to himself all or any of the powers of the government and discharge those functions in his discretion. However, the Governor could not encroach upon the powers of the high court.

Article 356 of the Indian Constitution

- The article says about the **emergency provisions due to the failure of the constitutional machinery in the states, this is popularly known as 'President's Rule'.**
  - It is also known by two other names 'State Emergency' or 'constitutional Emergency'.
    - However, the Constitution does not use the word 'emergency' for this situation.
- The **Article contains provisions for the imposition of "President's Rule" in a state, by removing an elected government.**
  - The Constitution intended Article 356 to be used only under extraordinary circumstances.
  - However, Union governments over the period repeatedly used the provision to settle political scores.

iasgyan.in/daily-current-affairs/governor-30

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- The Governor is **a part of the state legislature** (Art. 168). He undertakes the following legislative tasks in this capc
  - The legislative Assembly is summoned, prorogued, and then dissolved.
  - Right to speak to and send messages to the legislature.
- No Bill can become law unless it receives the Governor's approval.
- He has the option of giving his consent, withholding his assent, or exercising his pocket veto over a state bill.
- He has the power of causing to be laid the legislature, the Annual Financial Statement (Budget) and reports of the
- Without his recommendation, no demand for a grant can be made by the legislature.
- May reserve Bills for the assent of the President made by the Legislature.

Financial Power of Governors

- The annual financial statement is put before the legislature (Art-202).
- **Without the Governor's permission, a money bill cannot be introduced in the State Legislative Assembly.**
- In the name of the Governor, the annual and supplemental budgets are introduced in the Assembly.
- No grant request can be made unless he recommends it.
- The State Contingency Fund is under the jurisdiction of the Governor, and it cannot be used without his approval.

Q85. Consider the following pairs:

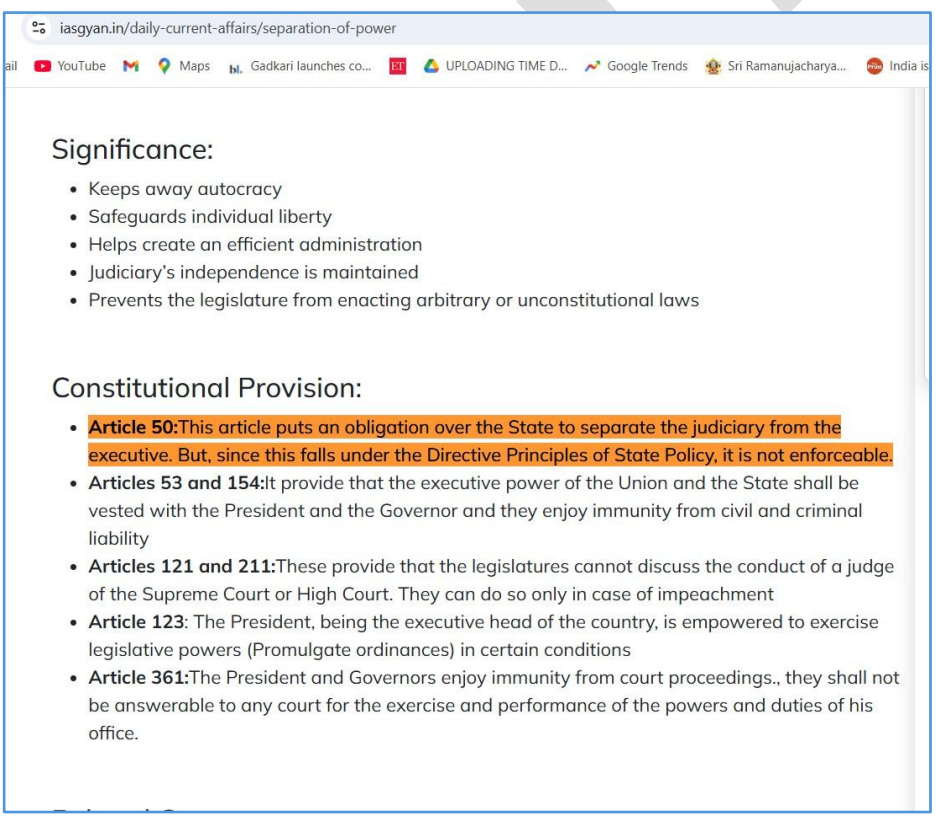
Provision in the Constitution of India	Stated under
1. Separation of Judiciary from the Executive in public services of the State	Directive Principles of state Policy
2. Valuing and preserving the rich heritage of our composite culture	Fundamental Duties
3. Prohibition of employment of children below the age of 14 years in factories	Fundamental Rights

How many of the above pairs are correctly matched?

Only one
Only two
All three
None

Answer: (c)

The pairs can be solved if one went through the current affairs articles on IASGYAN and LAKSMIKANT:
https://www.iasgyan.in/daily-current-affairs/separation-of-power
https://www.iasgyan.in/daily-current-affairs/fundamental-duties-49


iasgyan.in/daily-current-affairs/separation-of-power

Significance:

- Keeps away autocracy
- Safeguards individual liberty
- Helps create an efficient administration
- Judiciary's independence is maintained
- Prevents the legislature from enacting arbitrary or unconstitutional laws

Constitutional Provision:

- **Article 50:**This article puts an obligation over the State to separate the judiciary from the executive. But, since this falls under the Directive Principles of State Policy, it is not enforceable.
- **Articles 53 and 154:**It provide that the executive power of the Union and the State shall be vested with the President and the Governor and they enjoy immunity from civil and criminal liability
- **Articles 121 and 211:**These provide that the legislatures cannot discuss the conduct of a judge of the Supreme Court or High Court. They can do so only in case of impeachment
- **Article 123**: The President, being the executive head of the country, is empowered to exercise legislative powers (Promulgate ordinances) in certain conditions
- **Article 361:**The President and Governors enjoy immunity from court proceedings., they shall not be answerable to any court for the exercise and performance of the powers and duties of his office.

iasgyan.in/daily-current-affairs/fundamental-duties-49

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List of Fundamental Duties

- To abide by the Constitution and Respect its ideals and institutions, the National Flag and the National Anthem.
- To cherish and follow the noble ideals which inspired our national Struggle for freedom.
- **To uphold and protect the sovereignty, unity and integrity of India.**
- To defend the country and render national service when called upon to do so.
- **To promote harmony and a spirit of common brotherhood amongst all people of India transcending religious, linguistic and regional or Sectional diversities; to renounce practices derogatory to the dignity of women.**
- To value and preserve the rich heritage of our composite culture.
- **To protect and improve the natural environment including forests, lakes, rivers, and wildlife and to have compassion for living creatures.**
- **To develop the scientific temper, humanism and the spirit of inquiry and reform.**
- To safeguard public property and to abjure violence.
- To strive towards excellence in all spheres of individual and collective activity, so that the nation constantly rises to higher levels of endeavour and achievement.
- **A parent or guardian, to provide opportunities for education to his child between 6 to 14 years of age. (Added by the 86th Constitutional Amendment Act of 2002).**

Q86. Consider the following statements regarding Scheduled Areas under the Fifth Schedule of the Indian Constitution:

1. If an area in a State is declared as a Scheduled Area under the Fifth Schedule, the State Government loses its executive power, and a local body assumes total administration of such areas.
2. The Union Government can take over total administration of such areas under certain circumstances on the recommendation of the Governor.

Which of the above statements is/are correct?

(a) I only
(b) II only
(c) Both I and II
(d) Neither I nor II

Answer: (d)

The statements are incorrect and one can easily reach the answer if he/she has gone through these articles on IASGYAN:

https://www.iasgyan.in/daily-current-affairs/schedule-v
https://www.iasgyan.in/daily-current-affairs/the-state-of-indias-scheduled-areas

Q87. With reference to India, consider the following pairs:

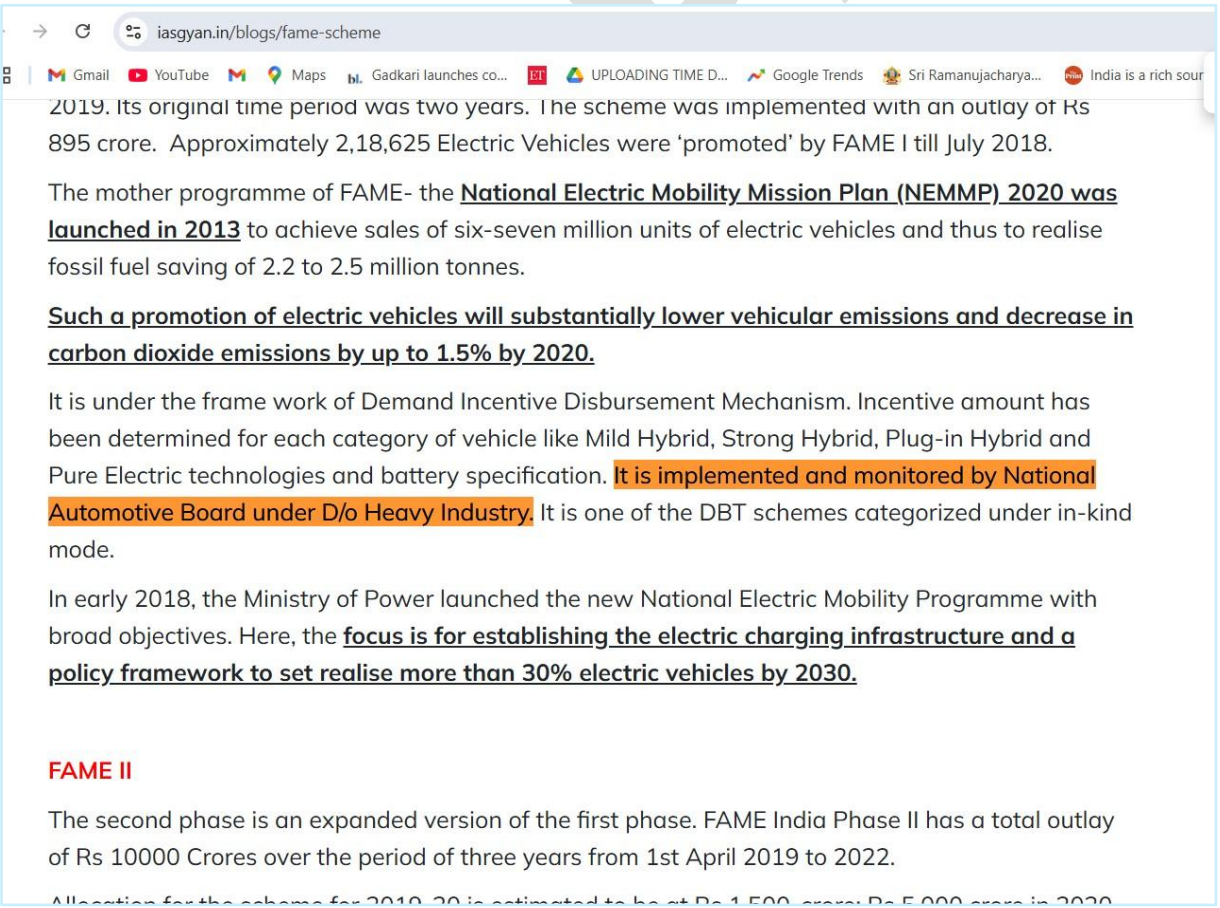
Organization	Union Ministry
I. The National Automotive Board	Ministry of Commerce and Industry
II. The Coir Board	Ministry of Heavy Industries
III. The National Centre for Trade Information	Ministry of Micro, Small and Medium Enterprises(MSME)

How many of the above pairs are correctly matched?

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

Answer: (d)

First two pairs are explicitly covered in our Current Affairs on IASGYAN. Aspirants can solve the question last option with logic that the last pair cannot be domain specific ministry like MSME as it is regarding Trade.
https://www.iasgyan.in/blogs/fame-scheme
https://www.iasgyan.in/daily-current-affairs/coir-industry-of-india#:~:text=The%20Coir%20Board%20is%20a,and%20training%20of%20the%20industry.


iasgyan.in/blogs/fame-scheme

2019. Its original time period was two years. The scheme was implemented with an outlay of Rs 895 crore. Approximately 2,18,625 Electric Vehicles were 'promoted' by FAME I till July 2018.

The mother programme of FAME- the **National Electric Mobility Mission Plan (NEMMP) 2020 was launched in 2013** to achieve sales of six-seven million units of electric vehicles and thus to realise fossil fuel saving of 2.2 to 2.5 million tonnes.

Such a promotion of electric vehicles will substantially lower vehicular emissions and decrease in carbon dioxide emissions by up to 1.5% by 2020.

It is under the frame work of Demand Incentive Disbursement Mechanism. Incentive amount has been determined for each category of vehicle like Mild Hybrid, Strong Hybrid, Plug-in Hybrid and Pure Electric technologies and battery specification. It is implemented and monitored by National Automotive Board under D/o Heavy Industry. It is one of the DBT schemes categorized under in-kind mode.

In early 2018, the Ministry of Power launched the new National Electric Mobility Programme with broad objectives. Here, the **focus is for establishing the electric charging infrastructure and a policy framework to set realise more than 30% electric vehicles by 2030.**

FAME II

The second phase is an expanded version of the first phase. FAME India Phase II has a total outlay of Rs 10000 Crores over the period of three years from 1st April 2019 to 2022.

iasgyan.in/daily-current-affairs/coir-industry-of-india#:~:text=The%20Coir%20Board%20is%20a,and%20training%20of%20the%20indu

Gmail YouTube Maps Gadkari launches co... UPLOADING TIME D... Google Trends Sri Ramanujacharya... India is

- Coir Industry is a traditional, labor intensive, agro-based and export oriented industry.
- The industry converts waste into wealth as the raw material used is throw away waste.
- The coir industry is one of India's traditional industries that is economically as well as environmentally very important.

Coir Board

- The Coir Board is **a statutory body established by the Government of India under the Coir Industry Act 1953** for the promotion and development of the coir (coconut fibre) industry in India.
- It is based in Kochi and Alappuzha. The board works for the promotion, research, education, and training of the industry.
- The board functions **under the Ministry of Micro, Small and Medium Enterprises.**

https://www.pib.gov.in/PressReleasePage.aspx?PRID=1758649

Q88. Consider the following subjects under the Constitution of India:

I. List I – Union List, in the Seventh Schedule
II. Extent of the executive power of a State
III. Conditions of the Governor's office

For a constitutional amendment with respect to which of the above, ratification by the legislatures of not less than one-half of the States is required before the Bill is presented to the President for assent?

(a) I and II only
(b) II and III only
(c) I and III only
(d) I, II and III

Answer: (a)

You can easily solve this question with the information uploaded on our Infographics:https://www.iasgyan.in/ig-uploads/pdf/info_type_of_amendment_in_constitution.pdf

Q89. With reference to the Indian polity, consider the following statements:

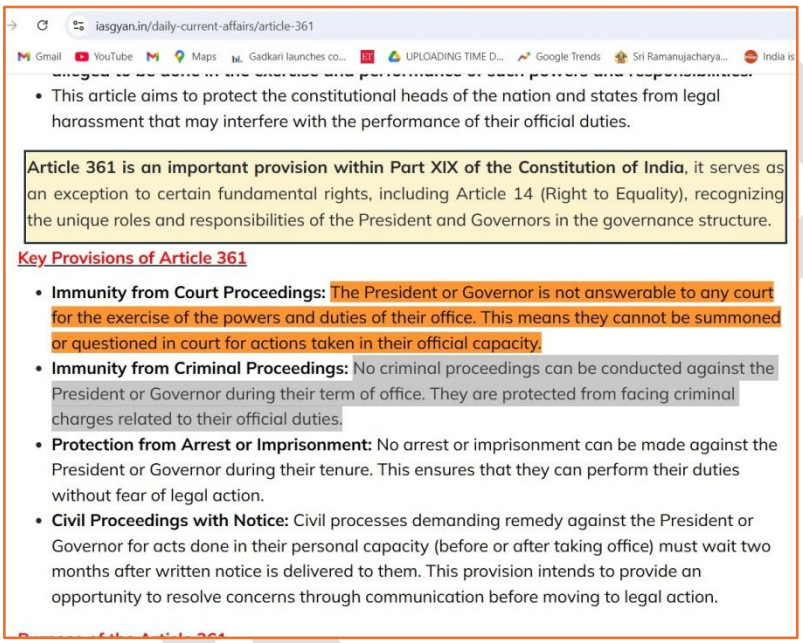
I. The Governor is not answerable to any court for the exercise and performance of the powers and duties of his/her office.
II. No criminal proceedings shall be instituted or continued against the Governor during his/her term of office.
III. Members of a State Legislature are not liable to any proceedings in any court in respect of anything said or any vote given in the legislature or its committees.

Which of the statements given above are correct?

(a) I and II only
(b) II and III only
(c) I and III only
(d) I, II and III

Answer: (d)

You can reach the answer directly if you read these articles on IASGYAN website: Current Affairs:
https://www.iasgyan.in/daily-current-affairs/article-361
https://www.iasgyan.in/daily-current-affairs/immunity-of-legislators-from-bribery-charges



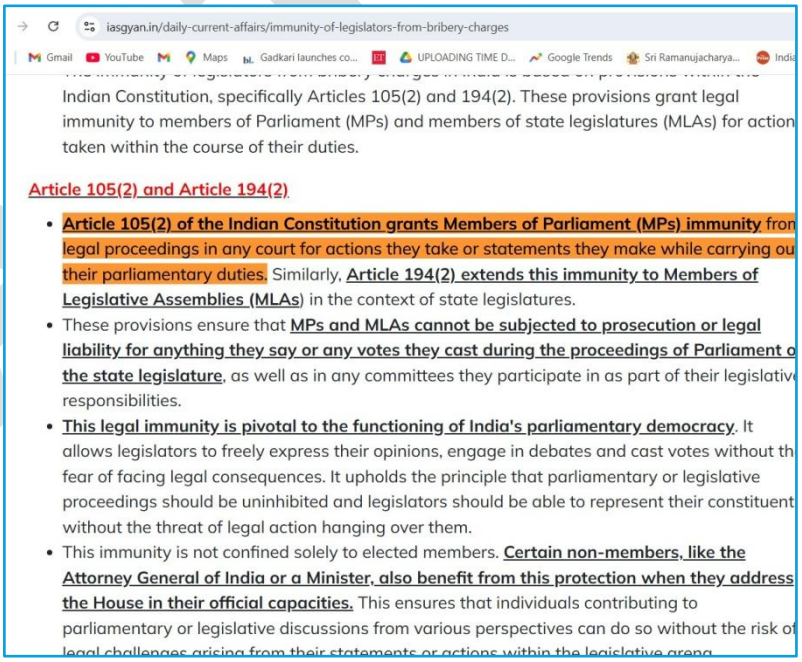
iasgyan.in/daily-current-affairs/article-361

- This article aims to protect the constitutional heads of the nation and states from legal harassment that may interfere with the performance of their official duties.

Article 361 is an important provision within Part XIX of the Constitution of India, it serves as an exception to certain fundamental rights, including Article 14 (Right to Equality), recognizing the unique roles and responsibilities of the President and Governors in the governance structure.

Key Provisions of Article 361

- **Immunity from Court Proceedings:** The President or Governor is not answerable to any court for the exercise of the powers and duties of their office. This means they cannot be summoned or questioned in court for actions taken in their official capacity.
- **Immunity from Criminal Proceedings:** No criminal proceedings can be conducted against the President or Governor during their term of office. They are protected from facing criminal charges related to their official duties.
- **Protection from Arrest or Imprisonment:** No arrest or imprisonment can be made against the President or Governor during their tenure. This ensures that they can perform their duties without fear of legal action.
- **Civil Proceedings with Notice:** Civil processes demanding remedy against the President or Governor for acts done in their personal capacity (before or after taking office) must wait two months after written notice is delivered to them. This provision intends to provide an opportunity to resolve concerns through communication before moving to legal action.



iasgyan.in/daily-current-affairs/immunity-of-legislators-from-bribery-charges

Indian Constitution, specifically Articles 105(2) and 194(2). These provisions grant legal immunity to members of Parliament (MPs) and members of state legislatures (MLAs) for action taken within the course of their duties.

Article 105(2) and Article 194(2)

- **Article 105(2) of the Indian Constitution grants Members of Parliament (MPs) immunity** from legal proceedings in any court for actions they take or statements they make while carrying ou their parliamentary duties. Similarly, **Article 194(2) extends this immunity to Members of Legislative Assemblies (MLAs)** in the context of state legislatures.
- These provisions ensure that **MPs and MLAs cannot be subjected to prosecution or legal liability for anything they say or any votes they cast during the proceedings of Parliament o the state legislature**, as well as in any committees they participate in as part of their legislativ responsibilities.
- **This legal immunity is pivotal to the functioning of India's parliamentary democracy**. It allows legislators to freely express their opinions, engage in debates and cast votes without th fear of facing legal consequences. It upholds the principle that parliamentary or legislative proceedings should be uninhibited and legislators should be able to represent their constituent without the threat of legal action hanging over them.
- This immunity is not confined solely to elected members. **Certain non-members, like the Attorney General of India or a Minister, also benefit from this protection when they address the House in their official capacities.** This ensures that individuals contributing to parliamentary or legislative discussions from various perspectives can do so without the risk of legal challenges arising from their statements or actions within the legislative arena.

Q90. Consider the following activities:

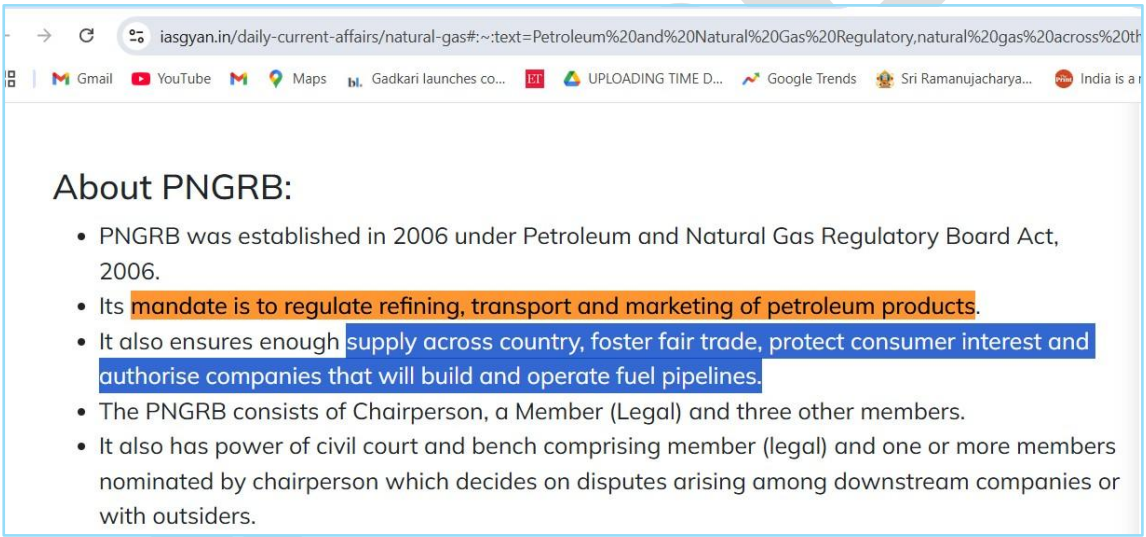
1. Production of crude oil
2. Refining, storage, and distribution of petroleum
3. Marketing and sale of petroleum products
4. Production of natural gas

How many of the above activities are regulated by the Petroleum and Natural Gas Regulatory Board (PNGRB) in India?

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

Answer: (b)

Functions of PNGRB has been explicitly covered in this article on IASGYAN current Affairs: https://www.iasgyan.in/daily-current-affairs/natural-gas#:~:text=Petroleum%20and%20Natural%20Gas%20Regulatory,natural%20gas%20across%20the%20country. One can easily solve the question if she has gone through it.



Q92. The famous female figurine known as 'Dancing Girl', found at Mohenjo-daro, is made of

(a) carnelian
(b) clay
(c) bronze
(d) gold

Answer: (c)

This has been directly covered on IASGYAN Website with the topic--MOHENJO-DARO: https://www.iasgyan.in/daily-current-affairs/mohenjo-daro

iasgyan.in/daily-current-affairs/mohenjo-daro

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- At Mohenjo-Daro **the most unicorn seals** have been found.
- The Mohenjo-Daro also has **two mounds**. The western mound is lower which was a citadel with 200 m X 400 m and eastern is a bigger which was having the relics of a buried city of size 400×800 meters.
- Mohenjo-Daro was the **largest city of the Indus valley civilization. Both Harappa and Mohenjo-Daro can be called the capital cities of the civilization.**
- A **granary has been found** which the largest building of the Mohenjo-Daro is.
- A **square pillared hall** is another important building found at Mohenjo-Daro. The scholars agree that this pillared hall was a site for social gatherings.
- All houses have a courtyard , kitchen and a well. All houses at Mohenjo-Daro have proper arrangements of light air and drainage.
- Mohenjo-Daro has shown an **extensive usage of bricks.**
- A **piece of woven cotton** along with spindle whorls and needles has been found.
- **A bronze figurine of a dancing girl** has been found.
- Mohenjo-Daro has also given evidence of violence leading to death.
- A **seal representing the Mother Goddess a plant growing from her womb** has been found.
- A **figurine of a bearded man** has been found at Mohenjo-Daro
- **A seal with a picture suggesting Pashupati Mahadev** has been found at Mohenjo-Daro.
- A seal which shows a woman to be sacrificed by a man with a knife in hand has been found at Mohenjo-Daro.
- **Known to be a model planned city of the ancient civilisation, the houses here had bathrooms, toilets and drainage system.**
- The sheer size of the city, and its provision of public buildings and facilities, suggests a high level of social organisation.
- Though in ruins, the walls and brick pavements in the streets are still in a preserved condition.

Q98. Who among the following was the founder of the 'Self-Respect Movement'?

(a) Periyar E. V. Ramaswamy Naicker
(b) Dr. B. R. Ambedkar
(c) Bhaskarrao Jadhav
(d) Dinkarrao Javalkar

Answer: (a)

This question can be been solved by reading this article. Directly from our practice question: https://www.iasgyan.in/daily-current-affairs/periyar-ev-ramaswamy

iasgyan.in/daily-current-affairs/periyar-ev-ramaswamy

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Sources:

IndianExpress

PRACTICE QUESTION

Q:Consider the following pairs: Movement/Organization Leader:

1. All India Anti-Untouchability League Mahatma Gandhi
2. All India Kisan Sabha Swami Sahajanand Saraswati
3. Self-Respect Movement Naicker E.V. Ramaswami

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

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

Answer: d

Explanation:

1st pair is correct: This organization was founded by Mahatma Gandhi in 1932 to combat untouchability and promote the social integration of the Dalits (then called Harijans). Gandhi was deeply committed to eradicating untouchability, and this league was part of his broader efforts to uplift marginalized communities in India.

2nd pair is correct: The All India Kisan Sabha was established in 1936 to represent the interests of the farmers and peasants. Swami Sahajanand Saraswati, a prominent socialist leader and freedom fighter, was one of its leading figures. He played a key role in organizing peasants and advocating for their rights against landlords.

3nd pair is correct: The Self-Respect Movement was started by E.V. Ramaswami Naicker, popularly known as Periyar, in Tamil Nadu in 1925. The movement aimed to eliminate the caste system and promote rationalism, self-respect, and equality, especially focusing on the rights of the lower castes and women.

Q99. Consider the following pairs:

Country	Resource-rich in
I. Botswana	Diamond
II. Chile	Lithium
III. Indonesia	Nickel

In how many of the above rows is the given information correctly matched?

(a) Only one
(b) Only two
(c) All the three
(d) None

Answer: (c)

The pairs have been directly covered on our current affairs topics:
Pair 1: https://www.iasgyan.in/daily-current-affairs/jwaneng-diamond-mine
Pair 2: https://www.iasgyan.in/daily-current-affairs/lithium-triangle
Pair 3: https://www.iasgyan.in/daily-current-affairs/critical-minerals

iasgyan.in/daily-current-affairs/jwaneng-diamond-mine

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Social Responsibility	Investment in **education**, **healthcare**, **housing** & **wildlife conservation** in Botswana.
Global Status	Known as **Prince of Mines** due to its high economic & ethical standards.

World's Richest Diamond Mines (by Value & Production)

Diamond Mine	Country	Estimated Value / Annual Production	Operator	Key Features
Jwaneng	Botswana	~13.3 million carats (2023); ~$1 billion+ value	Debswana (De Beers + Govt. of Botswana)	Richest mine by value; sits on kimberlite pipe; ISO 14001 certified
Orapa	Botswana	~12 million carats/year	Debswana	One of largest by area; open-pit
Udachny	Russia	~5 million carats/year	ALROSA	Deep open-pit mine; transitioning to underground
Mir (Mirny)	Russia	~2 million carats/year (before closure)	ALROSA	World's second-largest excavated hole
Catoca	Angola	~6–7 million carats/year	Endiama + Alrosa + LLI	4th largest globally by volume
Venetia	South Africa	~4.5 million carats/year	De Beers	Largest diamond producer in South Africa
Argyle (Closed 2020)	Australia	~14 million carats/year (peak)	Rio Tinto	Known for pink & red diamonds
Letšeng	Lesotho	Smaller volume but highest average value/carat	Gem Diamonds	Famous for large high-value diamonds

iasgyan.in/daily-current-affairs/lithium-triangle

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- lithium metal has the highest specific heat of any solid element and so heat transfer applications
- various nuclear applications
- lithium is sometimes used as battery anode material (high electrochemical potential) and lithium compounds are used in dry cells and storage batteries
- lithium is used in the manufacture of special high strength glasses and ceramics sometimes, lithium-based compounds such as lithium carbonate (Li2CO3) are used as drugs to treat manic-depressive disorders.

Lithium Reserves

- Chile has the largest lithium reserves worldwide by a large margin.
- Chile is followed by Australia and Argentina.

-

Lithium and India

- India does not have enough lithium reserves for manufacturing lithium-ion batteries, with lithium also having other uses such as in mobile phone batteries, solar panels, aerospace and thermonuclear fusion.
- Almost all-electric vehicles in the country run on imported batteries, mostly from China.
- Recently though,1,600 tonnes of lithium resources were found in the igneous rocks of the Marlagalla-Allapatna region of Karnataka's Mandya district.

India's efforts in making India self-reliant in Lithium products

- India plans to buy Lithium to ensure supplies that could potentially last decades and make India self-reliant.
- The country has started a massive effort to make India a world leader in Lithium batteries.
- The strategy to acquire Lithium has three steps.
- First, secure supplies from the largest reserves in the world

iasgyan.in/daily-current-affairs/critical-minerals

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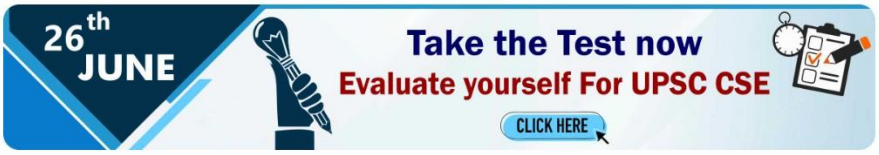
- Domestic factors include unrest and civil wars, environmental factors, mining disasters and political conflicts within the producing countries. Risks also arise from trade wars.



Is there any instance of supply shortfall of Critical Minerals?

- In 2010, China suspended exports of REEs to Japan for 59 days over a territorial dispute.
- The impact was such that the prices of rare earth oxides increased in the range of 60 per cent to 350 per cent and returned to the pre-dispute levels after a year.
- In the case of nickel, there has been a track record of delays and cost overruns in new mines.
- **Indonesia, the largest producer of nickel**, has banned its exports.
- Similarly, tightening of labour and environment standards in Congo might impact cobalt production and downstream supply chains.

Country-wise List of Critical Minerals

- Based on their individual needs and strategic considerations, different countries create their own lists.

Example: The case of U.S.

- The critical minerals list is revised every three years by the US Geological Survey. The most recent final list is that of 2022.
- These minerals are deemed critical minerals by the US government in light of their role in national security or economic development.
- There must be a clear supply chain strategy as they are mostly imported and are, under the US definition, prone to supply chain disruption.
- Under the 2022 list, there are 50 minerals that are deemed critical.

Q100. Consider the following pairs:

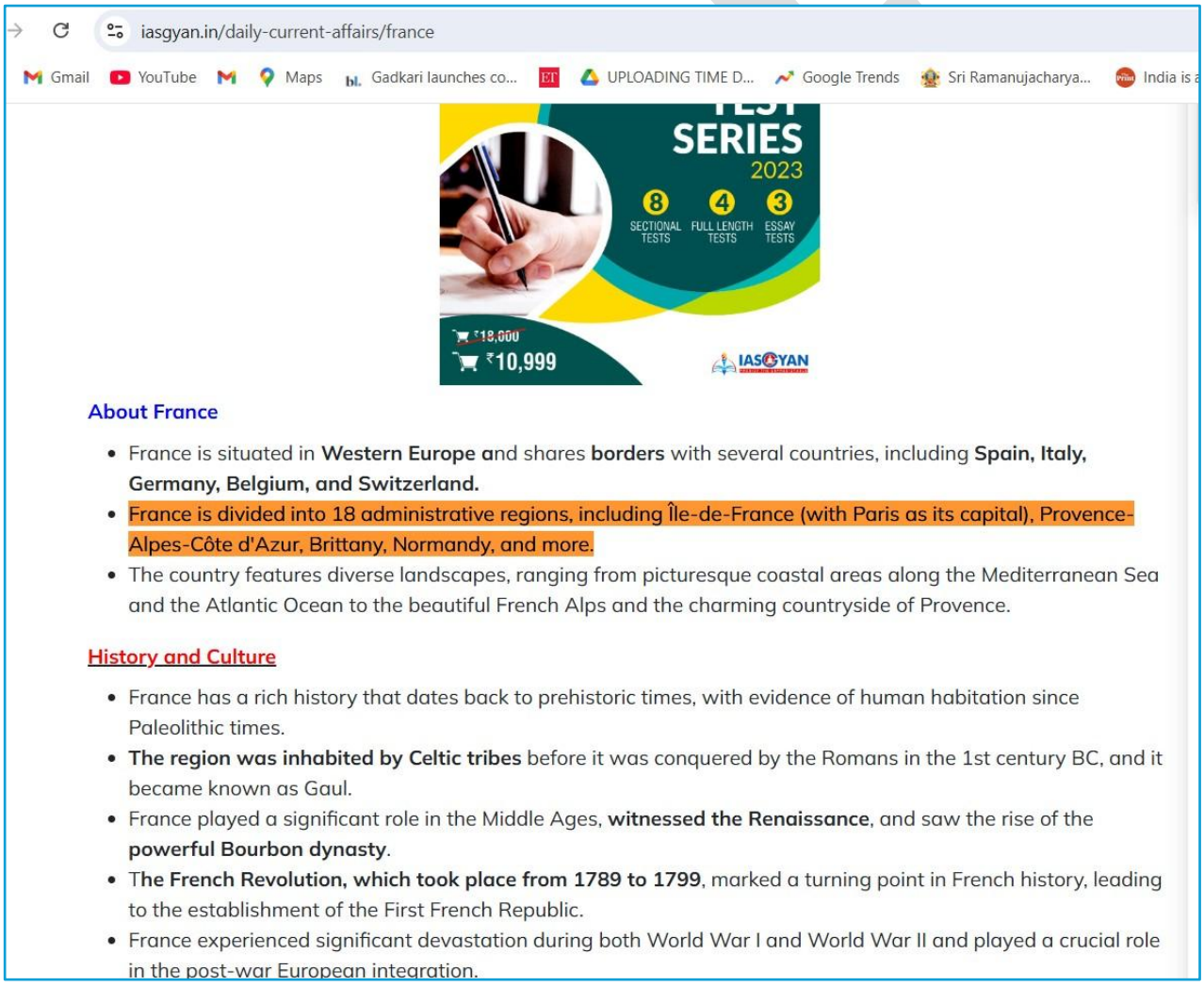
Region	Country
I. Mallorca	Italy
II. Normandy	Spain
III. Sardinia	France

In how many of the above rows is the given information correctly matched?

(a) Only one
(b) Only two
(c) All the three
(d) None

Answer: (d)

Two out of 3 pairs have been covered directly on IASGYAN Website:
https://www.iasgyan.in/daily-current-affairs/france
https://www.iasgyan.in/daily-current-affairs/campi-flegrei-17



iasgyan.in/daily-current-affairs/campi-flegrei-17

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Category	Details
Location	Near **Naples, Italy**
Type	**Volcanic system** (not a single volcano)
Key Difference	Unlike Mount Vesuvius, it is a **widespread caldera system**
Caldera Size	Approximately **12–15 km** in diameter
Formation	Formed by a **massive eruption ~39,000 years ago**
Historical Impact	The eruption may have had a **climatic impact** leading to the **decline of Neanderthals**

Physical Characteristics:

- One-third of **Campi Flegrei** is under the **Tyrrhenian Sea**, which is situated between the mainland of Italy and the island of Sardinia.
- Compared to **Mount Vesuvius**, it is both the biggest and most active volcanic caldera in Europe.
- After a nearly 3000 years of interval, the last reported eruption formed Monte Nuovo in **1538**.
- A large-scale eruption of **Campi Flegrei**, which is classified as a supervolcano, could have worldwide implications, including alteration of the climate.

Practice Questions:

Q. What are supervolcanoes? Highlight the geological importance of Campi Flegrei and the potential global risks associated with its eruption. (150 words)

OVERLAPPING THEMES WITH NISCHAY 2025 TEST SERIES AND CURRENT AFFAIRS QUESTIONS

Q6. What is the common characteristic of the chemical substances generally known as CL-20, HMX and LLM-105, which are sometimes talked about in media?

(a) These are alternatives to hydro-fluorocarbon refrigerants
(b) These are explosives in military weapons
(c) These are high-energy fuels for cruise missiles
(d) These are fuels for rocket propulsion

Answer: b

NISCHAY TEST 32 निश्चय All India Prelims Test Series Program For UPSC CSE

Q. 63.

Explanation:

SEBEX 2 *: SEBEX 2 is a highly potent non-nuclear explosive, certified by the Indian Navy. It is based on High-Melting Explosives (HMX) and is more lethal than TNT, making it a highly potent explosive used in military applications.*

Q7. Consider the following statements :

I. It is expected that Majorana 1 chip will enable quantum computing.

II. Majorana 1 chip has been introduced by Amazon Web Services (AWS).
III. Deep learning is a subset of machine learning.

Which of the statements given above are correct?

(a) I and II only
(b) II and III only
(c) I and III only
(d) I, II and III

Answer: C

NISCHAY TEST 24

Q. 89. Researchers have recently announced a significant breakthrough in the creation of "Majorana Zero Modes", a type of particle which can potentially revolutionize:

(a) Quantum computing
(b) Pharmaceutical sector
(c) Cancer Treatment
(d) Coral reef revival and restoration

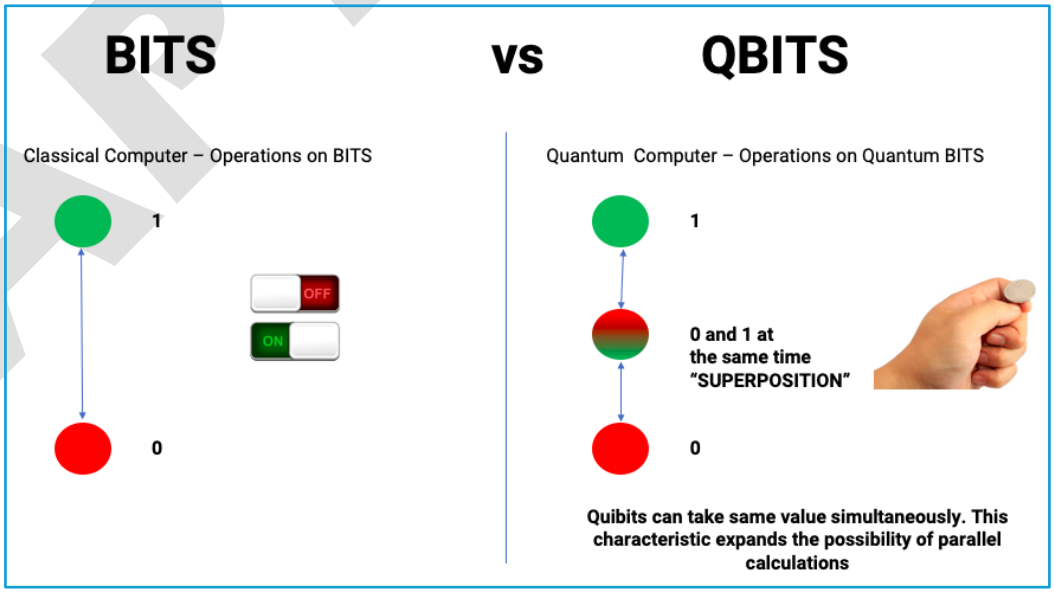
Answer: a

Explanation:

*Microsoft researchers have made a significant breakthrough in creating **Majorana zero modes**, unique particles that could revolutionize quantum computing. These Majorana zero modes were theoretically introduced in a spin **chain model by Kitaev 2001.***

***Majorana fermions are spin-1/2 neutral particles** that are their own antiparticles; they were initially predicted by Ettore Majorana in particle physics but their observation still remains elusive. The concept of Majorana fermions has been borrowed by condensed matter physics, where, unlike particle physics, Majorana fermions emerge as zero-energy quasiparticles that can **be engineered by combining** electrons and holes and have therefore been called Majorana zero modes.*

*These particles were engineered using a combination of aluminum superconductor and indium arsenide semiconductor. **Rigorous testing and simulations confirmed the presence of Majorana zero modes, which offer promising advantages for quantum computing:***



- ***Increased robustness***: *Unlike fragile electron-based qubits, Majorana zero modes, composed of an electronhole pair, provide more stable qubits.*
- ***Protection against decoherence***: *Even if one part of the Majorana zero mode is disturbed, the qubit remains intact, safeguarding the encoded information.*
- ***Topological degeneracy***: *Majorana zero modes allow for storing and retrieving information from different topological properties without losing the encoded data. These unique properties of Majorana zero modes could lead to more robust and computationally superior quantum computers.*

Q8. With reference to monoclonal antibodies, often mentioned in news, consider the following statements:

4. They are man-made proteins.
5. They stimulate immunological function due to their ability to bind to specific antigens.
6. They are used in treating viral infections like that of Nipah virus.

Which of the statements given above are correct?

(a) I and II only
(b) II and III only
(c) I and III only
(d) I, II and III

Answer: D

NISCHAY TEST 33 निश्चय All India Prelims Test Series Program For UPSC CSE

Q51. Consider the following statements:

1. *Recombinant Proteins are artificially engineered using recombinant DNA (rDNA) technology.*
2. *Monoclonal antibodies (mAbs) a type of Recombinant Protein is produced only in bacterial cells.*
3. *mAbs mimic natural antibodies and have applications in medicine and research.*

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

Answer: C) 1 and 3 only

Explanation:

Statement 1 is correct: *Recombinant Proteins (RPs) are artificially engineered using* ***recombinant DNA (rDNA) technology****, which allows the combination of DNA from different sources to create proteins with desired functions.*

Statement 2 is incorrect: *While* ***monoclonal antibodies (mAbs)*** *are a type of Recombinant Protein, they are* ***not produced only in bacterial cells****. They can also be produced in* ***viral or mammalian cells****, depending on the required modifications and functionalities.*

Statement 3 is correct: *Monoclonal antibodies* ***mimic natural antibodies*** *and play a crucial role in* ***medical and research applications****, including disease diagnostics, targeted therapies (e.g., cancer treatment) and immunological studies.*

Q.9 Consider the following statements:

I. No virus can survive in ocean waters.
II. No virus can infect bacteria.
III. No virus can change the cellular transcriptional activity in host cells.

How many of the statements given above are correct?

(a) Only one
(b) Only two
(c) All the three
(d) None

Answer: D

NISCHAY TEST 9

Q69. Consider the following statements:

1. RNA viruses can have either single-stranded or double-stranded genomes.
2. The HIV targets and destroys T-helper cells in the immune system.
3. Bacteriophages are viruses that infect bacteria.

How many of the above statements are correct?

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

Answer: C

Explanation:

Statement 1 is correct:

RNA viruses can have either single-stranded or double-stranded genomes.

- ***Single-stranded RNA viruses****: These viruses have RNA as their genetic material in a single strand. They can be further classified into positive-sense (where the RNA can directly serve as mRNA for protein synthesis) or negative-sense (where the RNA must first be converted into positive-sense RNA by an RNA-dependent RNA polymerase). Examples include influenza viruses and coronaviruses.*
- ***Double-stranded RNA viruses****: These viruses have RNA in the form of double strands, similar to DNA. The double-stranded RNA is used as a template to produce mRNA, which then guides protein synthesis. Examples include rotaviruses.*

Statement 2 is correct:

HIV (Human Immunodeficiency Virus) *specifically targets CD4+ T-helper cells, which are crucial for coordinating the immune response. The destruction of these cells leads to a weakened immune system, making individuals more susceptible to opportunistic infections and certain cancers. This progressive damage to the immune system is characteristic of AIDS (Acquired Immunodeficiency Syndrome), the advanced stage of HIV infection.*

Statement 3 is correct:

Bacteriophages (phages) *are viruses that specifically infect bacteria. They attach to bacterial cells, inject their genetic material, and hijack the bacterial machinery to produce new phage particles. This often destroys the bacterial cell. Bacteriophages are used in various applications, including phage therapy as an alternative to antibiotics and as tools in molecular biology research.*

More Information

- *Viruses are parasitic entities that lack cells, making them unclassifiable in any specific kingdom. They are sub-microscopic infectious agents that can only replicate inside host cells of living organisms. Ranging from 20 to 400 nm, viruses can infect all life forms, including humans, animals, plants, and bacteria, and are found in almost every ecosystem on Earth. While not classified as living organisms, viruses exhibit biological properties when inside a host cell.*

APTI PLUS

- *Viruses are non-cellular entities with genetic material enclosed in a protein coat called a capsid. Outside the host, viruses remain inert, but once inside host cells, they utilise the cell machinery to make copies of themselves, often destroying the host cell.*
- *The concept of a disease-causing entity smaller than bacteria was first hypothesised in the 1890s. Dmitri Ivanovsky discovered mosaic disease in tobacco plants in 1892, while Martinus Beijerinck introduced the term "virus" in 1898 to describe the newly identified soluble and filterable infectious agent. Wendell Stanley further confirmed the particulate nature of viruses by crystallising the tobacco mosaic virus.*
- *Viruses can be classified based on the type of genetic material, capsid structure, and enveloped structure. They can infect animal cells, plant cells, and bacteria, with various types such as helical, icosahedral, enveloped, and complex viruses. The genetic material of viruses encodes proteins and enzymes vital for viral replication inside host cells.*
- *Viruses depend on host cell machinery for replication and can follow either a lytic or lysogenic cycle. The lytic cycle involves viral replication and destruction of the host cell, while the lysogenic cycle incorporates the viral genome into the host DNA, leading to latent infections or reactivation.*
- *Viruses play a significant role in ecology, evolution, and human disease. Research in virology focuses on emerging viral threats, and developing new vaccines, and antiviral drugs to enhance public health outcomes. Virology remains a critical field in addressing the challenges posed by the vast diversity and mutability of viruses as they continue to evolve and impact global health.*

Q25. Fa-hien (Faxian), the Chinese pilgrim, travelled to India during the reign of

(a) Samudragupta
(b) Chandragupta II
(c) Kumaragupta I
(d) Skandagupta

Answer: B

NISCHAY HISTORY PYQ TEST निश्चय All India Prelims Test Series Program For UPSC CSE

Q.31) Which of the following statements is/are true?

1. *Faxian's Gaoseng Faxian Zhuan was the earliest first-hand Chinese account of Buddhist sites and practices in India*
2. *Faxian was only 25 years old at the time of writing the text*
3. *Faxian's main aim in coming to India was to obtain and take back texts containing monastic rules*

Select the correct answer using the code given below:

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

Answer- c

Explanation:

Fa-Hien, Fa-hsien and Sehi, was a Chinese Buddhist monk and translator who travelled by foot from China to India to acquire Buddhist texts. Faxian/Fa-Hien was a Buddhist monk whose pilgrimage to India (during the reign of Chandragupta II), he initiated Sino-Indian relations and whose writings give important information about early Buddhism.
Faxian described his journey through Central Asia to India and back to China by the maritime route via South-East Asia. Hence option 1 is correct.
Starting his arduous journey about age 60, he visited sacred Buddhist sites in Central, South, and Southeast Asia between 399 and 412 CE, of which 10 years were spent in India . Hence statement 2 is in correct.

He visited many Buddhist sites in the Indian subcontinent and Central Asia to acquire Buddhist texts.
Faxian's main aim in coming to India was to obtain and take back texts containing monastic rules.
Hence option 3 is correct.

Q27. With reference to ancient India (600–322 BC), consider the following pairs:

Territorial Region	River Flowing in the Region
I. Asmaka	Godavari
II. Kamboja	Vipas
III. Avanti	Mahanadi
IV. Kosala	Sarayu

How many of the pairs given above are correctly matched?

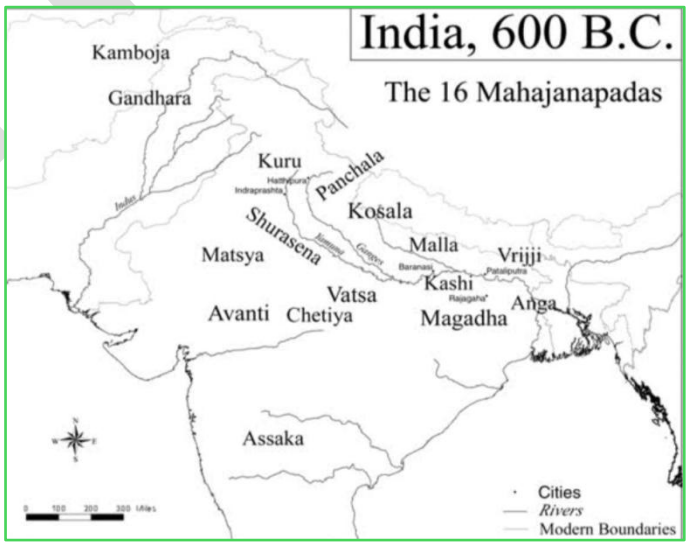
(a) Only one
(b) Only two
(c) Only three
(d) All the four

Answer: B

NISCHAY TEST 19

Q42. Which of the following Mahajanapada was situated to the south of the Vindhya Range?

(a) Assaka
(b) Chetiya
(c) Vatsa
(d) Kamboja



Answer: a

Explanation

Ashavaka/Assaka was the only Mahajanapada situated to the south of the Vindhya Range, and was in Dakshinapatha.
Assaka was located on the banks of the Godavari River, between the rivers Godavari and Manjira.
Its capital was Potali which is in modern Bodhan, district Nizamabad, and parts of Adilabad in Telangana.

Angutara Nikaya, a Buddhist scripture mentions 16 great kingdoms or Mahajanapadas at the beginning of the 6th century BCE in India.

Mahajanapadas Name	*Mahajanapadas Capital*	*Current day location*	*Important Facts*
Anga	*Champa*	*Bhagalpur and Munger*	*Located in present-day West Bengal and Bihar, with the capital Champa situated at the junction of the Champa and the Ganga river*
Asmaka/Asaka	*Potali/Podana*	*Banks of Godavari*	*Located on the banks of the Godavari River, the only Mahajanapadas south of the Vindhya range in*

			Dakshinapatha
Avanti	*Ujjaini or Mahismati*	*Madhya Pradesh and Malwa*	*Located around present-day Madhya Pradesh and Malwa, significant during the rise of Buddhism*
Chedi	*Sothivati*	*Bundelkhand region*	*Shishupala was the king of Chedi in Rigveda. Lord Krishna assassinated Shishupala during the Rajasuya sacrifice of Yudhishthira*
Gandhara	*Taxila*	*Rawalpindi*	*Cited in the Atharva Veda, Gandhara citizens were highly trained in war, crucial for global commercial activities*
Kamboja	*Poonch*	*Rajouri and Hajra (Kashmir), NWFP (Pakistan)*	*Kamboja Mahajanapadas was a republic according to literary sources, situated in present-day Kashmir and Hindukush with extraordinary horse breeds*
Kasi/Kashi	*Kasi*	*Banaras*	*Situated in Varanasi, named after Varuna and Asi rivers, captured by Kosala*
Kosala	*Shravasti (northern), Kushavati (southern)*	*Eastern Uttar Pradesh*	*Located in modern-day Awadh, includes Ayodhya, the birthplace of Gautam Buddha*
Kuru	*Indraprastha*	*Meerut and Southeastern Haryana*	*Situated around Kurukshetra, epic Mahabharata tells the story of Kuru clan's conflict*
Magadha	*Girivraja/Rajagriha*	*Gaya and Patna*	*Epicenter of Jainism, cited in Atharva Veda, site of the first Buddhist council*
Malla	*Kusinara*	*Deoria and Uttar Pradesh*	*Republic Mahajanapadas, referenced in Jain and Buddhist texts and Mahabharata, significant in Buddhism history*
Matsya	*Viratanagara*	*Jaipur*	*Located west of Panchalas and south of the Kurus, named after founder Virata*
Panchala	*Ahichchatra and Kampilya*	*Western Uttar Pradesh*	*Incorporates Kannauj, followed monarchical form of governance*
Shurasena	*Mathura*	*Western Uttar Pradesh*	*Major Krishna worship hub during Megasthenes times, supremacy of Buddha followers*
Vajji	*Vaishali*	*Bihar*	*Included eight powerful clans, Mahavira belonged to the Jnatrikas clan*
Vatsa	*Kausambi*	*Allahabad*	*Known as Vamsa, followed monarchical form of governance, center for economic activities in the 6th century*

Q31. With reference to investments, consider the following:

I. Bonds
II. Hedge Funds
III. Stocks
IV. Venture Capital

How many of the above are treated as Alternative Investment Funds (AIFs)?

(a) Only one
(b) Only two
(c) Only three
(d) All the four

APTI PLUS

Answer: B

NISCHAY TEST 35

Q83. Under the SEBI (Alternative Investment Funds) Regulations, 2012, which of the following categories of Alternative Investment Funds (AIFs) are permitted to invest in start-ups and early-stage ventures?

1. *Category I AIFs*
2. *Category II AIFs*
3. *Category III AIFs*

Select the correct answer using the code given below:

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

Answer: A

Explanation:

Category I AIFs are those that invest in start-ups, early-stage ventures, social ventures, SMEs, infrastructure, or other sectors which the government or regulators consider socially or economically desirable.
Alternative Investment Fund or AIF means any fund established or incorporated in India which is a privately pooled investment vehicle which collects funds from sophisticated investors, whether Indian or foreign, for investing it in accordance with a defined investment policy for the benefit of its investors.
AIF does not include funds covered under the SEBI (Mutual Funds) Regulations, 1996, SEBI (Collective Investment Schemes) Regulations, 1999 or any other regulations of the Board to regulate fund management activities.
Further, certain exemptions from registration are provided under the AIF Regulations to family trusts set up for the benefit of 'relatives' as defined under Companies Act, 1956, employee welfare trusts or gratuity trusts set up for the benefit of employees, 'holding companies' within the meaning of Section 4 of the Companies Act, 1956 etc.

What are Category I AIFs?

AIFs which invest in start-up or early stage ventures or social ventures or SMEs or infrastructure or other sectors or areas which the government or regulators consider as socially or economically desirable and shall include venture capital funds, SME Funds, social venture funds, infrastructure funds
and such other Alternative Investment Funds as may be specified.

What are Category II AIFs?

AIFs which do not fall in Category I and III and which do not undertake leverage or borrowing other than to meet day-to-day operational requirements and as permitted in the SEBI (Alternative Investment Funds) Regulations, 2012.
Various types of funds such as real estate funds, private equity funds (PE funds), funds for distressed assets, etc. are registered as Category II AIFs.

What are Category III AIFs?

AIFs which employ diverse or complex trading strategies and may employ leverage including through investment in listed or unlisted derivatives.
Various types of funds such as hedge funds, PIPE Funds, etc. are registered as Category III AIFs.

Q32. Which of the following are the sources of income for the Reserve Bank of India?

I. Buying and selling Government bonds

II. Buying and selling foreign currency
III. Pension fund management
IV. Lending to private companies
V. Printing and distributing currency notes

Select the correct answer using the code given below:

(a) I and II only
(b) II, III and IV
(c) I, III, IV and V
(d) I, II and V

Answer: D

Current Affairs MCQ ID 113320

Q. The term 'Seigniorage' is often seen in the news. What does it refer to?

Seigniorage refers to the profit earned by a government from issuing currency, calculated as the difference between the value of money and the cost of producing it*. It serves as a revenue source for governments, as the face value of printed currency typically exceeds production costs. When the cost of producing money remains lower than its value, the government gains a financial advantage. However, if production costs surpass the currency's value, it results in a loss. Seigniorage plays a crucial role in a country's monetary policy and fiscal management, influencing inflation and overall economic stability.*

Q33. With reference to the Government of India, consider the following information:

Organization	Some of its functions	It works under
I. Directorate of Enforcement	Enforcement of the Fugitive Economic Offenders Act, 2018	Internal Security Division-I, Ministry of Home Affairs
II. Directorate of Revenue Intelligence	Enforces the provisions of the Customs Act, 1962	Department of Revenue, Ministry of Finance
III. Directorate General of Systems and Data Management	Carrying out big data analytics to assist tax officers for better policy and nabbing tax evaders	Department of Revenue, Ministry of Finance

Which of the above rows are correctly matched?

(a) Only one
(b) Only two
(c) All the three
(d) None

Answer: B

Current Affairs MCQ ID 83920

With reference to the Directorate of Revenue Intelligence (DRI), consider the following statements:

1. *It is the exclusive intelligence and enforcement agency.*
2. *It came into existence in the year of Independence.*
3. *It has been carrying out its mandate of preventing and detecting cases of smuggling.*

Which of the above statements is/are correct?

Explanation:

Statement 1 is correct: DRI is the exclusive intelligence and enforcement agency on anti-smuggling matters under the aegis of the

Central Board of Indirect taxes and Customs (CBIC).
Statement 2 is incorrect: It came into existence in 1957. DRI Headquarters at New Delhi.
It has 12 Zonal Units, 35 regional Units, and 15 Sub-regional units, with a working strength of about 800 officials.
Statement 3 is correct: DRI has been carrying out its mandate of preventing and detecting cases of smuggling of narcotic drugs and psychotropic substances, gold, diamonds, precious metals, wildlife items, cigarettes, arms, ammunition & explosives, counterfeit currency notes, foreign currency, hazardous & environmentally sensitive materials, antiques, etc.

Current Affairs MCQ ID 61851 निश्चय All India Prelims Test Series Program For UPSC CSE

Consider the following statements about the Directorate of Enforcement (ED):
1. *It is a specialized financial investigation agency under the Department of Revenue.*
2. *The appointment of the director at the ED is governed by Prevention of Corruption Act.*
3. *It enforces the Foreign Exchange Management Act,1999 and Prevention of Money Laundering Act, 2002.*

***Statement 1** is correct: The Directorate of Enforcement (ED) is a law enforcement agency and economic intelligence agency responsible for enforcing economic laws and fighting economic crime in India.*
It is part of the Department of Revenue, Ministry of Finance, Government Of India.
It is composed of officers from the Indian Revenue Service, Indian Corporate Law Service, Indian Police Service and the Indian Administrative Service as well as promoted officers from its own cadre.
***Statement 2** is incorrect: The appointment of the director at the ED is governed by Section 25 of Central Vigilance Commission Act, 2003 (CVC Act). As per the law, no person below the rank of Additional Secretary to the government is eligible for appointment as the director.*
***Statement 3** is correct: ED enforces the following laws: - Foreign Exchange Management Act,1999 (FEMA) - A Civil Law, with officers empowered to conduct investigations into suspected contraventions of the Foreign Exchange Laws and Regulations, adjudicate contraventions, and impose penalties on those adjudged to have contravened the law.*
Prevention of Money Laundering Act, 2002 (PMLA) - A Criminal Law, with the officers empowered to conduct investigations to trace assets derived out of the proceeds of crime, to provisionally attach/ confiscate the same, and to arrest and prosecute the offenders found to be involved in Money Laundering.

Q34. Consider the following statements:

I. The Reserve Bank of India mandates all the listed companies in India to submit a Business Responsibility and Sustainability Report (BRSR).
II. In India, a company submitting a BRSR makes disclosures in the report that are largely non-financial in nature.

Which of the statements given above is/are correct?

(a) I only
(b) II only
(c) Both I and II
(d) Neither I nor II

Answer: B

Current Affairs MCQ ID 111826 निश्चय All India Prelims Test Series Program For UPSC CSE

Business Responsibility and Sustainability Report (BRSR)
Published by: Securities and Exchange Board of India (SEBI)
Purpose: Requires listed companies in India to disclose their sustainability practices and business responsibility, improving transparency.

Match the following:

Column A	Column B
1. Task Force on Climate-related Financial Disclosures (TCFD)	A. Published by Financial Stability Board (FSB)
2. Business Responsibility and Sustainability Report (BRSR)	B. Published by Securities and Exchange Board of India (SEBI)
3. Emissions Gap Report	C. Published by United Nations Environment Programme (UNEP)

Options:

Q37. Consider the following statements:

I. India has joined the Minerals Security Partnership as a member.
II. India is a resource-rich country in all the 30 critical minerals that it has identified.
III. The Parliament in 2023 has amended the Mines and Minerals (Development and Regulation) Act, 1957 empowering the Central Government to exclusively auction mining lease and composite license for certain critical minerals.

Which of the statements given above are correct?

(a) I and II only
(b) II and III only
(c) I and III only
(d) I, II and III

Answer: C

Current Affairs MCQ ID 87419

निश्चय All India Prelims Test Series Program For UPSC CSE

With respect to Minerals Security Partnership (MSP) sometimes seen in the news, consider the following statement:

1. *It is the outcome of the G7 Summit.*
2. *It aims to secure supply chains of critical minerals.*
3. *India is the founding member of the Minerals Security Partnership.*

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

Statement 3 is incorrect: India has become 14th member of the Mineral Security Partnership (MSP) in June 2023. The other member countries are United States, Australia, Canada, Finland, France, Germany, Italy, Japan, Norway, the Republic of Korea, Sweden, the United Kingdom and the European Commission. MSP seeks to bolster critical minerals supply chains to support economic prosperity and climate objectives. It seeks to ensure that critical minerals are produced, processed and recycled by catalyzing investments from governments and private sector across the full value chain.

Q39. Consider the following statements:

Statement I:

Circular economy reduces the emissions of greenhouse gases.

Statement II:

Circular economy reduces the use of raw materials as inputs.

Statement III:

Circular economy reduces wastage in the production process.

Which one of the following is correct in respect of the above statements?

(a) Both Statement II and Statement III are correct and both of them explain Statement I
(b) Both Statement II and Statement III are correct but only one of them explains Statement I
(c) Only one of the Statements II and III is correct and that explains Statement I
(d) Neither Statement II nor Statement III is correct

Answer: A

Each and every statement has been detailed in this article uploaded on IASGYAN: https://www.iasgyan.in/daily-current-affairs/moving-away-from-take-make-dispose-model

Application of logic will lead to the answer easily.

Current Affairs MCQ ID 107249 निश्चय All India Prelims Test Series Program For UPSC CSE

Q. Consider the following statements in the context of the circular economy:

1. *It promotes the continual use of resources while retaining their value in the economy for as long as possible.*
2. *It applies to manufacturing businesses and has no impact on service-based industries.*
3. *It prioritises environmental sustainability while dismissing economic benefits.*
4. *It includes creating items with removable parts that are easily changed or improved.*

How many of the above statements are correct?

Statement 1 *is correct:*

The circular economy is designed to extend the lifecycle of products and materials by promoting practices that keep resources in use. It focuses on reducing waste and improving resource efficiency through strategies such as reusing, repairing, refurbishing, and recycling. The goal is to maintain the value of resources within the economy and minimise environmental impact by closing the loop of product lifecycles.

Statement 2 *is incorrect:*

The circular economy model is relevant to both manufacturing and service-based industries. While it originated in the context of manufacturing, its principles can be applied to various sectors. For instance, service-based industries can implement circular economy practices through business models such as product-as-a-service (where customers pay for the service rather than the product), leasing, sharing platforms, and offering maintenance and repair services. These practices contribute to resource efficiency and waste reduction across different industry sectors.

Statement 3 *is incorrect:*

The circular economy integrates both environmental sustainability and economic benefits. While its primary focus is on reducing environmental impact by minimising waste and conserving resources, it also provides economic advantages. By adopting circular practices, businesses can reduce costs associated with raw materials and waste disposal, create new revenue streams, and promote innovation. The circular economy model aims to balance environmental and economic goals to create a more sustainable and resilient economy.

Statement 4 *is correct:*

Designing products with modular components is a key strategy in the circular economy. Modular design allows for easier repair, upgrading, and recycling of products, thereby extending their lifespan and reducing waste. By enabling components to be replaced

or upgraded individually, products can be kept in use longer, and the overall material consumption can be reduced.

More Information

A circular economy is a systemic approach that aims to design out waste and pollution, keep products and materials in use, and regenerate natural systems. Unlike the traditional linear economy, which follows a "take-make-dispose" model, the circular economy seeks to create a closed-loop system where resources are continuously cycled, reducing the need for new materials and minimizing environmental impact.

Q41. Consider the following countries:

I. Austria
II. Bulgaria
III. Croatia
IV. Serbia
V. Sweden
VI. North Macedonia

How many of the above are members of the North Atlantic Treaty Organization?

(a) Only three
(b) Only four
(c) Only five
(d) All the six

Answer: B

Current Affairs MCQ ID 97422

निश्चय All India Prelims Test Series Program For UPSC CSE

Consider the following countries:

1. *Australia*
2. *Japan*
3. *Israel*
4. *New Zealand*

How many of the above countries are part of "North Atlantic Treaty Organization (NATO) Plus"?

Explanation:

It is a grouping of the North Atlantic Treaty Organization (NATO) and five countries, including Australia, New Zealand, Japan, Israel, and South Korea.

NATO Plus:

It is a grouping of the North Atlantic Treaty Organization (NATO) and five countries, including Australia, New Zealand, Japan, Israel, and South Korea.

The group works toward boosting global defence cooperation.

Advantages for India of becoming a member of NATO Plus:

India would gain access to seamless intelligence sharing between these countries.

India would get access to the latest military technology without much of a time lag.

It would further strengthen India's defence partnership with the United States.

NATO

The North Atlantic Treaty Organization (NATO) is an intergovernmental military alliance formed in 1949. It was established with the primary goal of providing collective defence against potential aggression, particularly from the Soviet Union during the Cold War era. Over the years, NATO has evolved to address a range of security challenges beyond its original mandate.

Formation: NATO was established on April 4, 1949, with the signing of the North Atlantic Treaty in Washington, D.C. by 12 founding member countries from Europe and North America.

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Cold War Era: During the Cold War, NATO served as a deterrent against Soviet expansionism, with the US providing significant military support to its European allies.
Post-Cold War: After the collapse of the Soviet Union, NATO expanded its focus to include crisis management, conflict prevention, and cooperative security efforts.
Membership:
Original Members: The original 12 founding members of NATO were Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, the United Kingdom, and the United States.
Expansion: NATO has expanded since its founding, with new member countries joining in multiple rounds. The alliance currently consists of 32 member countries.
Mission and Objectives:
Collective Defence: NATO's primary mission is collective defence, as outlined in Article 5 of the North Atlantic Treaty. This article stipulates that an attack on one member country will be considered an attack on all, and the members will respond collectively.
Crisis Management: In addition to collective defence, NATO engages in crisis management activities, including conflict prevention, peacekeeping, and stabilisation efforts in various regions around the world.

Structure:
Political Leadership: The North Atlantic Council (NAC) serves as NATO's principal political decision-making body, composed of ambassadors from all member countries.
Military Command Structure: NATO's military command structure includes Strategic Commands (e.g., Allied Command Operations) responsible for operational planning and execution, as well as Regional Commands and Force Headquarters.
Integrated Military Forces: NATO maintains integrated military forces, allowing member countries to contribute personnel and assets to collective defence efforts under NATO command.

Q44. Consider the following statements about turmeric during the year 2022-23:

I. India is the largest producer and exporter of turmeric in the world.
II. More than 30 varieties of turmeric are grown in India.
III. Maharashtra, Telangana, Karnataka, and Tamil Nadu are major turmeric-producing States in India.

Which of the statements given above are correct?

(a) I and II only
(b) II and III only
(c) I and III only
(d) I, II and III

Answer: D

Current Affairs MCQ ID 109152

निश्चय All India Prelims Test Series Program For UPSC CSE

Consider the following with respect to Turmeric.

1. *India is the largest producer and consumer of turmeric in the world.*
2. *India contributes more than 60% of the world trade in turmeric.*
3. *The National Turmeric Board (NTB) works under the aegis of the Ministry of Agriculture.*
4. *It is one of the major agricultural commodities covered under the MSP Regime.*

How many of the statements given above is/are correct?
Statement 1 is correct: India is the largest producer, consumer and exporter of turmeric in the world. In the year 2022-23, an area of 3.24 lakh ha was under turmeric cultivation in India with a production of 11.61 lakh tonnes (over 75% of global turmeric

production). More than 30 varieties of Turmeric are grown in India and it is grown in over 20 states in the country. The largest producing states of Turmeric are Maharashtra, Telangana, Karnataka and Tamil Nadu.
Statement 2 is correct: India has more than 62% share of world trade in turmeric. During 2022-23, 1.534 lakh tonnes of turmeric and turmeric products valued at 207.45 million USD was exported by more than 380 exporters The leading export markets for Indian Turmeric are Bangladesh, UAE, USA and Malaysia.
India dominates the world production scenario contributing 80% followed by China (8%), Myanmar (4%), Nigeria (3%) and Bangladesh (3%). In 2023-24 (Apr-Oct), India had exported 1.02 lakh tonnes of turmeric compared to 1.70 lakh tonnes in the previous year.
Statement 3 is incorrect: The Ministry of Commerce will be the nodal department providing funds and infrastructure for the NTB, which will look into increased demand, usage, production, research, market linkage, exports and so on.
Statement 4 is incorrect: Turmeric is not covered under the MSP regime.

Q45. Which of the following are the evidences of the phenomenon of continental drift?

I. The belt of ancient rocks from Brazil coast matches with those from Western Africa.
II. The gold deposits of Ghana are derived from the Brazil plateau when the two continents lay side by side.
III. The Gondwana system of sediments from India is known to have its counterparts in six different landmasses of the Southern Hemisphere.

Select the correct answer using the code given below:

(a) I and III only
(b) I and II only
(c) I, II and III
(d) II and III only

Answer: c

Current Affairs MCQ ID 103205

Which of the following can be considered as evidence(s) to support the theory of ' Continental Drift'?

1. *The shorelines of continents of Africa and South America have a jig-sawfit.*
2. *The earliest marine deposits along the coastline of South America and Africa are of the Jurassic age.*
3. *The glacial Tillite in India resembles the tillite found in Africa, Antarctica and Australia.*

Select the correct answer using the code given below:

Q50. Consider the following statements about the Rashtriya Gokul Mission:

I. It is important for the upliftment of rural poor as majority of low producing indigenous animals are with small and marginal farmers and landless labourers.
II. It was initiated to promote indigenous cattle and buffalo rearing and conservation in a scientific and holistic manner.

Which of the statements given above is/are correct?

(a) I only
(b) II only
(c) Both I and II
(d) Neither I nor II

Answer: C

Current Affairs MCQ ID 97582

Which of the following statements about the RashtriyaGokul Mission is/is not correct?

1. *The mission for the development and conservation of indigenous bovine breeds has been in place since December 2014.*
2. *The plan is extended from 2021 to 2026 under the Rashtriya Pashudhan Vikas Yojna, with a budget of Rs. 2400 crore.*
3. *The Ministry of Agriculture and Farmers Welfare is the main ministry in charge of the Rashtriya Gokul Mission.*
4. *One of the mission's goals is to limit the use of high-geneticquality bulls for breeding.*

Select the correct answer using the codes given below:

Rashtriya Gokul Mission About:

It has been implemented for the development and conservation of indigenous bovine breeds since December 2014. ***Statement 1*** *is correct.*

The scheme will also continue under the umbrella scheme Rashtriya Pashudhan Vikas Yojna from 2021 to 2026 with a budget outlay of Rs.2400 crore. Statement 2 is correct.

Nodal Ministry: Ministry of Fisheries, Animal Husbandry and Dairying. Statement 3 is not correct.

Objectives:

To enhance the productivity of bovines and increase milk production in a sustainable manner using advanced technologies.

To propagate the use of high genetic merit bulls for breeding purposes. Statement 4 is not correct.

To enhance Artificial insemination coverage through strengthening the breeding network and delivery of Artificial insemination services at farmers' doorstep.

To promote indigenous cattle & buffalo rearing and conservation in a scientific and holistic manner.

Q52. Consider the following statements in respect of BIMSTEC :

I. It is a regional organization consisting of seven member States till January 2025.
II. It came into existence with the signing of the Dhaka Declaration, 1999.
III. Bangladesh, India, Sri Lanka, Thailand and Nepal are founding member States of BIMSTEC.
IV. In BIMSTEC, the subsector of 'tourism' is being led by India.

Which of the statements given above is/are correct?

(a) I and II
(b) II and III
(c) I and IV
(d) I only

Answer: D

NISCHAY TEST 26

निश्चय All India Prelims Test Series Program For UPSC CSE

Q85. Consider the following statements concerning the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC):

1. *All its member states share their border with the Bay of Bengal.*
2. *All its member states have signed the Free Trade Agreement (FTA).*
3. *All its member states have endorsed the BIMSTEC Charter.*

How many of the above statements are correct?

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

Answer: a

Explanation:

Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is an economic bloc that came into being in June 1997 through the Bangkok Declaration. Bangladesh, India, Myanmar, Sri Lanka, Thailand, Nepal and Bhutan are its members. Bhutan and Nepal are landlocked countries and do not share their borders with the Bay of Bengal. ***Hence, statement 1 is not correct.***

- *Member countries of the BIMSTEC had in 2004 agreed to establish the free trade area framework agreement in order to stimulate trade and investment but some components of it are still under negotiations and incomplete.* ***Hence, statement 2 is not correct.***
- *BIMSTEC Secretariat has finalised the BIMSTEC charter after 23 years of its inception. In absence of a dedicated charter, BIMSTEC was running with the spirit of the Bangkok Declaration of 1997.*
  - *Recently, Nepal has endorsed the BIMSTEC Charter. Apart from Nepal, other six member countries of BIMSTEC have got the BIMSTEC Charter endorsed by their respective Parliaments. It may forge regional collaboration for economic prosperity.* ***Hence, statement 3 is correct.***

Q53. Who amongst the following are members of the Jury to select the recipient of 'Gandhi Peace Prize'?

I. The President of India
II. The Prime Minister of India
III. The Chief Justice of India
IV. The Leader of Opposition in the Lok Sabha

Select the correct answer using the code given below.

(a) II and IV only
(b) I, II and III
(c) II, III and IV
(d) I and III only

Answer: C

CURRENT AFFAIRS MCQ ID 106520

निश्चय All India Prelims Test Series Program For UPSC CSE

With reference to the Gandhi Peace Prize, consider the following statements:

1. *The award shall be given for social, economic, and political transformation through non- violence and Gandhian methods.*
2. *The award cannot be divided or can be jointly given to more than one person.*
3. *The Gandhi Peace Prize for the year 2023 is awarded to Sheikh Mujibur Rahman.*
4. *There shall be one award each year, and it carries a cash amount and a citation.*

How many of the above statement(s) is/are correct?

Music conductor Daniel Barenboim and peace activist Ali Abu Awwad were jointly awarded the Indira Gandhi Prize for Peace, Disarmament and Development 2023 for promoting amity among the Israeli and Palestinian people. So, statement 3 is not correct.

The award shall be given for social, economic and political transformation through non-violence and Gandhian methods. So, statement 1 is correct.

There shall be one award each year and it shall carry an amount of Rupees One Crore and a citation. So, statement 4 is correct.

A jury consisting of the Prime Minister of India, the Leader of the Opposition in the Lok Sabha, the Chief Justice of India, Speaker of the Lok Sabha and two other eminent person appointed every 3 years eligible for reappointment decides the awardee each year. The award may be divided between two persons who are considered by the jury to be equally deserving of recognition in a given year. So, statement 2 is not correct.

Q54. GPS-Aided Geo Augmented Navigation (GAGAN) uses a system of ground stations to provide necessary augmentation. Which of the following statements is/are correct in respect of GAGAN?

I. It is designed to provide additional accuracy and integrity.
II. It will allow more uniform and high quality air traffic management.
III. It will provide benefits only in aviation but not in other modes of transportation.

Select the correct answer using the code given below.

(a) I, II and III
(b) II and III only
(c) I only
(d) I and II only

Answer: D

CURRENT AFFAIRS MCQ ID 104636

Consider the following statements with reference to the GPS-aided GEO augmented navigation (GAGAN):

1. *GAGAN is a collaborative initiative between the Indian Space Research Organization (ISRO) and the Airports Authority of India (AAI).*
2. *GAGAN is interoperable with other international systems and covers the area from Africa to Australia.*

Which of the statements given above is/are correct?

Explanation:

Statement 1 *is correct:*

GAGAN is a joint project between the Indian Space Research Organization (ISRO) and the Airports Authority of India (AAI). This collaboration combines ISRO's expertise in satellite technology with AAI's experience in air traffic management to develop an advanced navigation system.

Statement 2 *is correct: GAGAN is the first Satellite-Based Augmentation System in the world that has been certified for an approach with vertical guidance operating in the equatorial ionospheric region. The GAGAN's goal is to provide a navigation system to assist aircraft in accurate landing over the Indian airspace and the adjoining area and applicable to safety-to-life civil operations. GAGAN is interoperable with other international SBAS systems. GAGAN covers the area from Africa to Australia and has expansion capability for seamless navigation services across the region.*

Q57. Consider the following statements with regard to BRICS:

I. 16th BRICS Summit was held under the Chairship of Russia in Kazan.
II. Indonesia has become a full member of BRICS.
III. The theme of the 16th BRICS Summit was Strengthening Multiculturalism for Just Global Development and Security.

Which of the statements given above is/are correct?

(a) I and II
(b) II and III
(c) I and III
(d) I only

Answer: A

NISCHAY TEST 29

Q55: Which of the following countries are part of BRICS?

1. *Iran*
2. *Ethiopia*
3. *South Africa*
4. *Egypt*
5. *Indonesia*

Select the correct answer using the code below:

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

The acronym BRICS is derived from the names of the original member countries. The organization's goal is to improve economic, political, and cultural cooperation among its members.

How did BRICS form?

- *The term BRICS was originally used by British economist Jim O'Neill to describe a group of emerging markets.*
- *The first BRICS summit was held in 2009 between the leaders of Brazil, Russia, India, and China.*
- *South Africa joined the organization in 2010.*
- *In 2024, Egypt, Ethiopia, Iran, and the United Arab Emirates joined BRICS.*
- *Indonesia joined BRICS in early 2025.*
- ***BRICS goals***
- *BRICS is sometimes seen as a geopolitical bloc that could counter the influence of Western-dominated institutions like the World Bank and the International Monetary Fund.*
- *However, there are differences between the political systems, economies, and geopolitical positions of the member countries.*

Background on the Partner Country Category:

- ***The New Partner Country*** *category was introduced at the* ***16th BRICS Summit*** *in* ***October 2024*** *in* ***Kazan, Russia****.*
- *This was a* ***historic change for the group*** *as it created a structure* ***where non-member countries (Partner Countrycategory) could engage with BRICS but without the right to vote or use veto power,*** *which* ***remains reserved for full BRICS members.***
- ***Countries Invited****: Initially,* ***13 countries*** *were invited to become* ***BRICS Partner Countries****. These were:*
  a. ***Algeria***
  b. ***Belarus***
  c. ***Bolivia***
  d. ***Cuba***
  e. ***Indonesia***
  f. ***Kazakhstan***
  g. ***Malaysia***
  h. ***Nigeria***
  i. ***Thailand***
  j. ***Turkey***
  k. ***Uganda***
  l. ***Uzbekistan***
  m. ***Vietnam***
- *By* ***January 2025****,* ***9 countries*** *had officially accepted the invitation and were confirmed as partner countries:* ***Belarus, Bolivia, Cuba, Kazakhstan, Malaysia, Thailand, Uganda, Uzbekistan, and Nigeria****.*
- ***Algeria****,* ***Turkey****, and* ***Vietnam*** *have not yet confirmed their participation as partner countries.*

- ***Moreover, Indonesia was*** *Initially listed among the 13 partner countries, But* ***Indonesia*** *made a significant change in* ***January 2025****,* ***transitioning from a partner country to a full BRICS member****.*

NISCHAY TEST 34

Q98. How many of the following statements about BRICS are correct?

1. *BRICS was initially formed as a military alliance to counter NATO's influence in the Indo-Pacific.*
2. *Egypt, Saudi Arabia, and Qatar were the first countries to join BRICS after its formation.*
3. *BRICS operates under a single currency system to facilitate trade among member countries.*
4. *Nigeria has been admitted as a full member of BRICS with voting rights in the New Development Bank (NDB).*

(a) *Only one*
(b) *Only two*
(c) *Only three*
(d) *None*

Q58. CURRENT AFFAIRS MCQ ID 114915

Which of the following statements about the Lokpal in India is/are correct?

1. *The Lokpal cannot initiate an inquiry suo-motu against any public servant in India.*
2. *Any aggrieved citizen can write a complaint to Lokpal without disclosing his/her name.*

Select the correct answer using the code given below:

Q60. Consider the following statements :

I. In the finals of the 45th Chess Olympiad held in 2024, Gukesh Dommaraju became the world's youngest winner after defeating the Russian player Jan Nepomniachtchi
II. Abhimanyu Mishra, an American chess player, holds the record of becoming world's youngest ever Grandmaster.

Which of the statements given above is/are correct?

(a) I only
(b) II only
(c) Both I and II
(d) Neither I nor II

Answer: B

CURRENT AFFAIRS MCQ ID 112499

Consider the following statements regarding the youngest universally recognized chess world champion:

1. *Gukesh Dommaraju holds the record for being the youngest universally recognized champion.*
2. *Garry Kasparov previously held the record for the youngest champion.*

Which of the statements given above is/are correct?

Q62. Consider the following statements:

I. Indian Railways have prepared a National Rail Plan (NRP) to create a future ready railway system by 2028.
II. 'Kavach' an Automatic Train Protection system developed in collaboration with Germany.
III. 'Kavach' system consists of RFID tags fitted on track in station section.

Which of the statements given above are not correct?

(a) I and II only
(b) II and III only

(c) I and III only
(d) 1, II and III

Answer: A

CURRENT AFFAIRS MCQ ID 111000

Consider the following statements with reference to Kavach Anti-Collision System:

1. *It applies brakes in case of signal passed at danger (SPAD) or potential collision.*
2. *It operates independently of visual obstructions or adverse weather.*
3. *Drivers are not required to obey trackside signals when activated.*

Which of the above statements is/are correct?

Statement 1 is correct: KAVACH is an indigenously developed Automatic Train Protection (ATP) system by the Research Design and Standards Organisation (RDSO). The Kavach Anti-Collision System alerts the driver and applies brakes if a signal is passed at danger (SPAD) or if there is a potential collision.

***Statement 2** is correct: The system continuously monitors train movement and can transmit signals ahead to locomotives, independent of visual obstructions or adverse weather conditions.*

***Statement 3** is correct: Drivers must still obey trackside signals even when the Kavach system is activated, as it is an additional safety mechanism and not a replacement for manual compliance with signals.*

Q63. Consider the following space missions :

I. Axiom-4
II. SpaDeX
III. Gaganyaan

How many of the space missions given above encourage and support micro-gravity research?

(a) Only one
(b) Only two
(c) All the three
(d) None

Answer: C

NISCHAY TEST 34

Q5. How many of the following statements about India's Space Docking Experiment (SpaDeX) are correct?

1. *India became the fourth country to successfully perform a space docking maneuver.*
2. *The SpaDeX mission used two small spacecraft, SDX01 (Chaser) and SDX02 (Target), to demonstrate rendezvous and autonomous docking.*
3. *The primary objective of the mission is to test crewed docking capabilities for India's Gaganyaan mission.*
4. *SpaDeX was launched via PSLV-C60 from Sriharikota in December 2015.*

Options:

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

Q79. Consider the following statements regarding Axiom Mission 4 (Ax-4):

1. It is the fourth private astronaut mission to the International Space Station (ISS), launched aboard a SpaceX Falcon 9 rocket.

2. The Axiom Mission series is entirely conducted by NASA without any involvement from private companies.

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

Q66. Consider the following statements with regard to pardoning power of the President of India :

I. The exercise of this power by the President can be subjected to limited judicial review.
II. The President can exercise this power without the advice of the Central Government.

Which of the statements given above is/are correct?

(a) I only
(b) II only
(c) Both I and II
(d) Neither I nor II

Answer: A

CURRENT AFFAIRS MCQ ID 114859

निश्चय All India Prelims Test Series Program For UPSC CSE

Which of the following statements is correct regarding the President of India's pardoning powers under Article 72 of the Constitution?

1. *The President can grant pardons for offences against laws to which the Union's executive power extends, including cases involving death sentences and court-martial convictions, and exercises this power based on the advice of the Council of Ministers.*
2. *The President can grant pardons only for offences tried by the Supreme Court and High Courts.*
3. *The President exercises pardoning power independently without any advice from the Council of Ministers.*
4. *The President's pardoning power is limited to offences under Union laws but does not include death sentence cases*

The President of India under Article 72 of Indian Constitution has the authority to grant pardons, reprieves, respites, or commutations for offenses against any law relating to a matter to which the executive power of the Union extends.
The President's pardoning power includes the ability to pardon persons sentenced to death by a state High Court.
The President's pardoning power extends to offenses tried by a Court Martial.
The President's power to grant pardons is exercised based on the advice of the Prime Minister and the Council of Ministers.

Q69. Consider the following statements:

Statement I:
In India, State Governments have no power for making rules for grant of concessions in respect of extraction of minor minerals even though such minerals are located in their territories.

Statement II:
In India, the Central Government has the power to notify minor minerals under the relevant law.

Which one of the following is correct in respect of the above statements?

(a) Both Statement I and Statement II are correct and Statement II explains Statement I
(b) Both Statement I and Statement II are correct but Statement II does not explain Statement I
(c) Statement I is correct but Statement II is not correct
(d) Statement I is not correct but Statement II is correct

Answer: D

CURRENT AFFAIRS MCQ ID 113096

Consider the following statements:

Statement–I: *The State Government has the power to notify minor minerals under the Mines and Minerals (Development and Regulation) Act, 1957.*

Statement–II*: The regulatory and administrative jurisdiction of minor minerals falls under the purview of the State Government.*

Which one of the following is correct in respect of the above statements?

Statement 1 *is not correct: In India, the minerals are classified as minor minerals and major minerals. "Minor Minerals" means building stones, gravel, ordinary clay, ordinary sand other than sand used for prescribed purposes and any other mineral that the Central Government may, by notification in the Official Gazette [According to the Mines and Minerals (Development and Regulation) Act, 1957] . The Central Government (and not State Government) has the power to notify "minor minerals" under the MMDR Act, 1957.*

Statement 2 is correct: The regulatory and administrative jurisdiction of minor minerals falls under the purview of State Governments. These include the powers to frame rules, prescribe rates of royalty, contribution to the District Mineral Foundation, the procedure for grant of mineral concessions, regulation of their mining, control of illegal mining, etc.

Q72. India is one of the founding members of the International North-South Transport Corridor (INSTC), a multimodal a transportation corridor, which will connect

(a) India to Central Asia to Europe via Iran
(b) India to Central Asia via China
(c) India to South-East Asia through Bangladesh and Myanmar
(d) India to Europe through Azerbaijan

Answer: A

CURRENT AFFAIRS MCQ ID 115498

Match the following pairs:

Corridors----------Objectives

1. *India-Myanmar-Thailand Trilateral Highway (IMTT)------ Enhances India's Act East policy and boosts connectivity with Southeast Asia*
2. *International North-South Transport Corridor (INSTC)----- Establishes direct connectivity between India and Europe through the Middle East*
3. *India-Middle East-Europe Economic Corridor (IMEEC)--- Reduces shipping time and costs between India, Russia, and Europe via Iran*

Select the correct answer using the code given below:

Q77. Consider the following statements in respect of the International Bank for Reconstruction and Development (IBRD) :

I. It provides loans and guarantees to middle income countries.
II. It works single-handedly to help developing countries to reduce poverty.
III. It was established to help Europe rebuild after the World War II.

Which of the statements given above are correct?

(a) I and II only
(b) II and III only
(c) I and III only

(d) I, II and III

Answer: C

NISCHAY TEST 25

Q1. Consider the following statements

1. *To become a member of the World Bank, a country must first join the International Monetary Fund.*
2. *India is a member of three of the five constituents of the World Bank Group.*
3. *India is not a member of International Centre for Settlement of Investment Disputes.*

Which of the above statement(s) is/are correct?

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

Answer: C) 1 and 3 only

Explanation

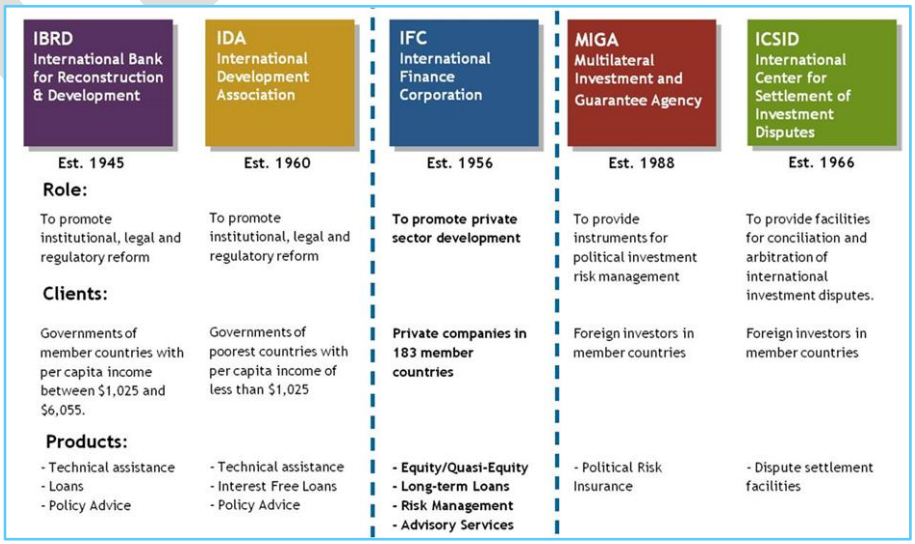
Statement 1 is correct:*To become a member of the World Bank, under the IBRD Articles of Agreement, a country must first join the International Monetary Fund (IMF).*

Statement 2 is not correct*: India is a member of four of the five constituents of the World Bank Group, International Bank for Reconstruction and Development (IBRD), International Development Association (IDA), International Finance Corporation (IFC) and Multilateral Investment Guarantee Agency (MIGA).*

Statement 3 is correct*: India is not a member of ICSID (International Centre for Settlement of Investment Disputes). India has been accessing funds from the World Bank (mainly through IBRD and IDA) for various development projects. India is one of the founder members of IBRD, IDA and IFC.*

ADDITIONAL INFORMATION

*The **World Bank**, established in 1944 as the **International Bank for Reconstruction and Development (IBRD)**, aimed to rebuild Europe and Japan post-WWII. It began operations in 1946 with 38 members and now includes most countries worldwide. Evolving into the **World Bank Group**, it consists of five cooperative organizations. Members are shareholders, with share distribution reflecting economic size. The **United States** holds the largest share, followed by **Japan**, **Germany**, the **UK**, and **France**, with the remainder divided among other nations.*



Q81. Which reference to the Indian polity, consider the following statements :

I. An Ordinance can amend any Central Act.
II. An Ordinance can abridge a Fundamental Right.

III. An Ordinance can come into effect from a back date.

Which of the statements given above are correct?

(a) I and II only
(b) II and III only
(c) I and III only
(d) I, II and III

Answer: C

NISCHAY TEST 28 निश्चय All India Prelims Test Series Program For UPSC CSE

Q67. Which of the following is/are correct with reference to the ordinance making power of the President?

1. *The ordinance-making is not a discretionary power of the President and it can be invoked only on the advice of the council of ministers.*
2. *The President cannot promulgate an ordinance when either of the two Houses of Parliament is in session.*
3. *If an ordinance is allowed to lapse without being placed before Parliament, then the acts done under it, before it ceases to operate, remain fully valid.*
4. *An ordinance like any other legislation, can be retrospective in nature.*

Select the correct answer using the code given below.

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

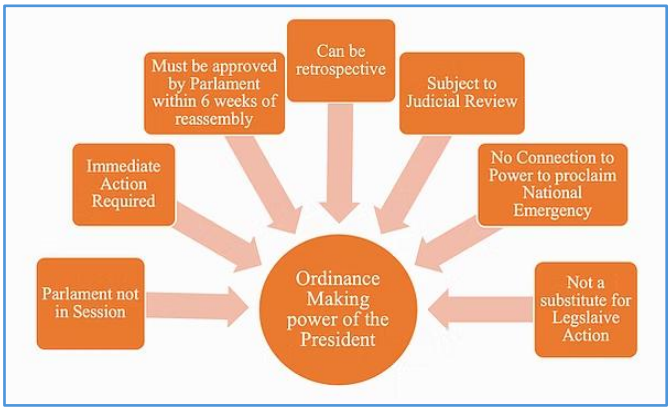
Answer: (c) 1, 3 and 4 only

Explanation:

- ***Statement 1 is correct:*** *The President's ordinance-making power is not discretionary; it is exercised on the advice of the Council of Ministers.*
- ***Statement 2 is incorrect:*** *The President cannot promulgate an ordinance when both Houses of Parliament are in session. An ordinance can be issued when only one house is in session.*
- ***Statement 3 is correct:*** *Actions taken under an ordinance before it lapses remain valid.*
- ***Statement 4 is correct:*** *Like regular legislation, an ordinance can have retrospective effect.*

Additional Information:

1. ***Article 123*** *of the Indian Constitution grants the President the power to promulgate ordinances, emphasizing its temporary nature to address urgent matters during parliamentary recess.*
2. ***Limitations on Power:*** *The President's ordinance-making power is subject to judicial review, ensuring it's not used to bypass the legislature. The Supreme Court has, in cases like D.C. Wadhwa v. State of Bihar, scrutinized the repeated re-promulgation of ordinances.*
3. ***Laying before Parliament:*** *Every ordinance must be laid before both Houses of Parliament when they reassemble, allowing for parliamentary scrutiny and potential disapproval.*



4. ***Maximum Duration:*** *The maximum lifespan of an ordinance is six months and six weeks, reflecting the constitutional provision that there cannot be a gap of more than six months between two sessions of Parliament, plus the six weeks allowed for parliamentary action.*
5. ***Subject Matter:****The ordinance-making power is coextensive with the legislative powers of Parliament, meaning ordinances can only be issued on subjects Parliament can legislate on.*
6. ***Fundamental Rights:****An ordinance cannot violate fundamental rights, ensuring that executive actions during a recess are still subject to constitutional safeguards.*
   1. ***Withdrawal:*** *The President can withdraw an ordinance at any time, even before its six-week period expires, demonstrating the executive's control over this temporary legislative power.*
   2. ***Purpose:*** *The original intent was to address urgent matters when parliament was not in session, however, the misuse of this power has been a matter of concern.*
   3. ***Retrospective Effect Restrictions:*** *While ordinances can be retrospective, they cannot have retrospective effect that violates fundamental rights.*
   4. ***State level Ordinance Power:*** *Article 213 of the constitution grants similar ordinance making powers to the governor of a state.*

   Source: *Indian Polity and Constitutional Law; Supreme Court Judgments on Ordinance-Making Power.*

Q86. Consider the following statements:

With reference to the Constitution of India, if an area in a State in declared as Scheduled Area under the Fifth Schedule

I. the State Government loses its executive power in such areas and a local body assumes total administration
II. the Union Government can take over the total administration of such areas under certain circumstances on the recommendations of the Governor

Which of the statements given above is/are correct?

(a) I only
(b) II only
(c) Both I and II
(d) Neither I nor II

Answer: D

NISCHAY TEST 35

Q26. With reference to the declaration of Scheduled Areas under the Fifth Schedule of the Indian Constitution, consider the following statements:

1. *The criteria for declaring an area as a Scheduled Area are explicitly mentioned in the Constitution.*
2. *The President can alter the boundaries of a Scheduled Area or declare a new area as Scheduled only after consulting the Governor of the concerned State.*

Which of the statements given above is/are correct?

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

Answer: B

Explanation:

Statement 1 is incorrect

*The **criteria** for declaring an area as a Scheduled Area – such as preponderance of tribal population, economic backwardness, compactness of area, etc. – are **not mentioned in the Constitution**.*
*They have **evolved through administrative practice** and are followed by convention, not by constitutional mandate.*
Statement 2 is correct
*As per **Paragraph 6(2)** of the **Fifth Schedule**, the **President** may **increase, decrease, or redefine** Scheduled Areas, but **only after consultation with the Governor** of the concerned State.*
This ensures federal consultation before altering administrative classifications.

Q95. Consider the following fruits:

I. Papaya
II. Pineapple
III. Guava

How many of the above were introduced in India by the Portuguese in the sixteenth and seventeenth centuries?

(a) Only one
(b) Only two
(c) All the three
(d) None

Answer: C

NISCHAY TEST 35

Q70. Consider the following fruits:

1. *Mango*
2. *Guava*
3. *Pineapple*

How many of the above are actually native to India?

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

Answer: A

Explanation:

Mango – Native to India

- ***Scientific name:*** *Mangifera indica*
- *Indigenous to **South Asia**, especially **India, Myanmar, and Bangladesh**.*
- *Cultivated in India for over 4,000 years.*

Guava – Not native to India

- ***Scientific name:*** *Psidium guajava*
- ***Origin: Central America and northern South America***
- *Introduced to India during the **Portuguese colonial period**.*

Pineapple – Not native to India

- ***Scientific name:*** *Ananas comosus*
- ***Origin: South America (Brazil, Paraguay)***
- *Brought to India by the **Portuguese** in the 16th century.*

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Q96. Consider the following countries :

I. United Kingdom
II. Denmark
III. New Zealand
IV. Australia
V. Brazil

How many of the above countries have more than four time zones?

(a) All the five
(b) Only four
(c) Only three
(d) Only two

Answer: B

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Which of the following countries experiences the greatest number of official time zones (including overseas territories)?

1. *Russia*
2. *France*
3. *US*
4. *China*

Russia spans 11 time zones, all contiguous across its vast landmass, making it the country with the most time zones in a single continuous territory.

France has 12 official time zones due to its numerous overseas territories like Réunion (Indian Ocean), New Caledonia (Pacific), Guadeloupe (Caribbean), and French Guiana (South America). These spread across the globe and make it the country with the highest number of official time zones recognized legally.

The U.S. has 11 time zones including territories like Guam, Puerto Rico, and American Samoa – close, but not more than France.

Despite spanning over 5 natural time zones, China officially follows only one time zone (UTC+8, Beijing Time).

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