

3 ALY CURRENT AFFAIRS

19 September 2024



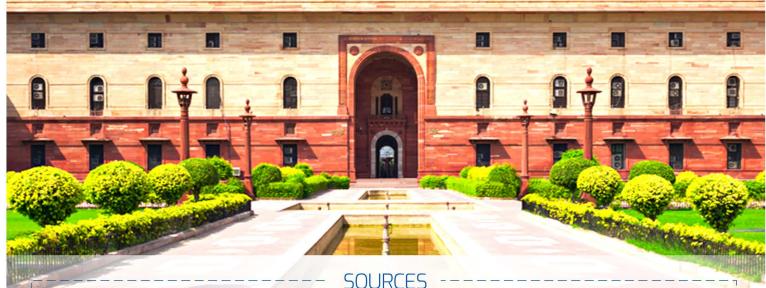




















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1. Why India Wants 'Review & Modification' of Indus Waters Treaty

Source: The Indian Express

Prelims: Geographical Mapping of Indus, International Relations, India-Pakistan Relations, Water

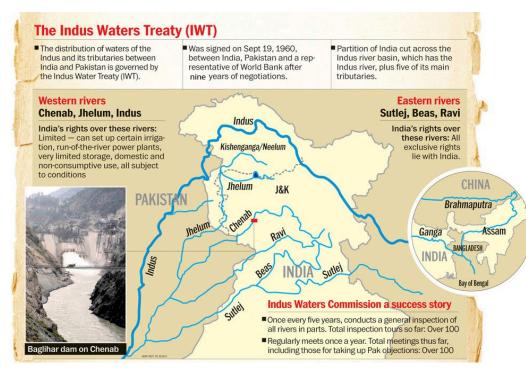
Sharing Agreements

Mains: Indus Waters Treaty (IWT), Hydroelectric Projects, India's Strategic Water Diplomacy

Context: In 2024, India issued a second notice to Pakistan to review and modify the Indus Waters Treaty (IWT), citing concerns over demographics, the environment, and cross-border terrorism.

Reasons for Renegotiation:

- Demographic Shifts: Population growth and changing water needs require revisiting the allocation of water resources.
- Environmental
 Concerns: Issues like
 climate change, global
 warming, and
 environmental
 degradation were not
 accounted for when the
 treaty was signed in
 1960.
- Energy Development: India's focus on clean energy, especially hydropower, to meet emission targets conflicts with Pakistan's objections to Indian hydroelectric projects on shared rivers.



 Terrorism: India has raised concerns about cross-border terrorism from Pakistan, impacting regional security and cooperation.

Hydroelectric Project Disputes:

• **Kishanganga Project:** 330 MW project on Jhelum tributary.

• Ratle Project: 850 MW project on Chenab.

• Pakistan's Objection: Both projects, being run-of-the-river, allegedly violate the IWT.

Pakistan's PCA Approach:

• In 2015, Pakistan sought a Neutral Expert to address its concerns but later shifted to the Permanent Court of Arbitration (PCA), creating a legal conflict with India.

• India refuses to participate in the PCA process, deeming it illegal, and insists on using a Neutral Expert as per the IWT's dispute resolution mechanism.

Modifications to the Treaty:

• The treaty needs amendments to address modern challenges, such as climate change and the energy demands of both countries.







- India's demand to modify the IWT stems from evolving geopolitical, environmental, and strategic concerns.
- As negotiations continue, the future of this longstanding agreement will hinge on the willingness of both nations to accommodate these changes.

2.Rapa Nui Genomes Reveal True History of Easter Island's Inhabitants

Source: The Hindu

Prelims: Rapa Nui, Easter Island, Genomic Studies, Population Dynamics

Mains: Indigenous History, Ecological Collapse, Genetic Research

Context: New genomic research sheds light on the true history of Rapa Nui (Easter Island), challenging

previous notions about ecological collapse and

population decline on this remote island.

Historical Background:

Rapa Nui, also known as Easter Island, is one
of the most isolated islands in the world,
covering 160 sq. km. It is part of Polynesia
and Chile.

• Early Polynesian explorers arrived centuries before Europeans, navigating harsh terrain with limited resources.

Previous Theories:

 The prevailing theory, popularized by Jared Diamond's book Collapse (2004), suggested that the island's ecological collapse was due to overpopulation and resource depletion.

The theory posited that the population eventually led to the island's downfall due to unsustainable practices.

New Evidence and Findings:

• Recent genetic studies reveal 8% Native American ancestry in Rapa Nui genomes, indicating pre-18th-century Native American admixture before European influence.

• A study published on September 11 in Nature by Víctor Moreno-Mayar and colleagues, using DNA from 15 Rapa Nui remains (1670-1950), reveals a population bottleneck around 1300 AD, not 1600 AD.

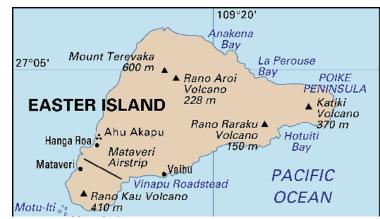
Population and Ecology:

• Contrary to earlier beliefs, the population decline was due to challenges from Chilean slave traders and smallpox outbreaks, not ecological mismanagement, which reduced the population to about a hundred individuals.

Impact of Findings:

- The new data shows that the Rapa Nui lived sustainably before European contact, with their downfall caused by external factors, not self-destructive practices.
- The genomic evidence underscores the importance of accurate historical narratives and offers a revised perspective on the island's ecological and social history.

- The genomic research on Rapa Nui highlights the resilience and adaptive strategies of its people, refuting the myth of ecological collapse due to overpopulation.
- It emphasizes the role of external factors in the island's decline and provides a clearer understanding of the island's complex history.









GS II

3. How Simultaneous Elections in India Could Be **Implemented**

Source: The Indian Express

Prelims: Indian Polity, Electoral Reforms, Constitution Amendment

Mains: Simultaneous Elections, One Nation One Election, Election Commission of India, Constitutional

Context: The Union Cabinet has approved simultaneous elections for Lok Sabha, State Assemblies, and local bodies, as recommended by the Kovind Committee. This requires major constitutional and electoral changes.

Constitutional Amendments Key Simultaneous Elections:

- Amendment of Article 82: A new Article 82A will establish the procedure for holding simultaneous elections for the Lok Sabha and State Assemblies.
- Unexpired Term: If the Lok Sabha or a State Assembly is dissolved before its full five-year term, the new government would serve only the remaining period, aligning with future simultaneous elections.
- Article 324A and Unified Electoral Rolls: The creation of a single electoral roll for all elections, managed the by Election Commission of India (ECI), is

Declare the Election of India

recommended under this amendment. The State Election Commissions would play a consultative role.

Two-Phase Election Process:

- **Phase 1:** Lok Sabha and State Assembly elections will be conducted.
- Phase 2: Local body elections (municipal and panchayat) will be held within 100 days of the first phase.

Challenges and Requirements:

- Constitutional Amendments: Two Constitution Amendment Bills are needed, involving amendments to 15 provisions, including Articles 82, 83, 172, 327, and the insertion of Article 324A. **State Ratification:** Since local body elections fall under the State List, more than half of the state
- legislatures must ratify these amendments before they can be enacted.

Benefits of Simultaneous Elections:

- **Cost Efficiency**: Synchronising elections will significantly reduce the financial burden and administrative resources required for frequent elections.
- Governance Stability: Simultaneous elections would lead to longer uninterrupted periods of governance, preventing the policy paralysis often caused by frequent elections.

- Simultaneous elections, if implemented, would represent a major shift in India's electoral process.
- Although the system promises cost savings and governance stability, it requires extensive legal reforms and political consensus for successful execution.











4. Rs 35k Crore Allocated for PM-AASHA

Source: The Indian Express

Prelims: PM-AASHA, Minimum Support Price (MSP), Price Deficit Payment Scheme (PDPS) **Mains:** Agricultural Reforms, Price Support Mechanisms, Government Schemes for Farmers

Context: The Union Cabinet approved the continuation of the PM-AASHA scheme to ensure remunerative

prices for farmers and stabilize essential commodity prices for consumers.

Price Deficit Payment Scheme (PDPS):

- **Compensation Limit:** Under PDPS, the difference between MSP and the sale/modal price borne by the government is limited to 15% of the MSP.
- Farmer Compensation: Farmers will be compensated for the difference between the MSP and the monthly modal/actual sale price, capped at 25% of the MSP value.

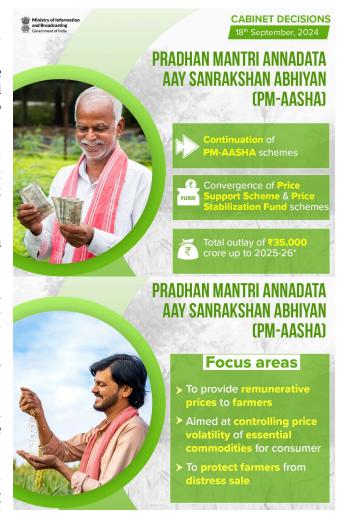
Key Components of PM-AASHA:

- The scheme includes the Price Support Scheme (PSS), Price Stabilization Fund (PSF), Price Deficit Payment Scheme (PDPS), and the Market Intervention Scheme (MIS).
- These components work together to stabilize prices, ensure minimum support, and intervene when necessary to protect both farmers and consumers.

Enhanced Coverage:

- The coverage for oilseeds under PDPS has been expanded from 25% to 40% of the state's production, encouraging more states to adopt the scheme.
- Additionally, the implementation period has been extended from 3 months to 4 months for oilseeds.

- The continuation of PM-AASHA with an enhanced budget and expanded coverage highlights the government's commitment to stabilizing farmers' incomes and commodity prices.
- With key reforms like PDPS, PSS, and PSF, the scheme is set to play a crucial role in safeguarding both producers and consumers against market fluctuations.









5. U.N. General Assembly Supports Palestinian Resolution; India Abstains from Voting

Source: The Hindu

Prelims: U.N. General Assembly, Israel-Palestine Conflict, Two-State Solution, India's Position on

Palestine

Mains: International Relations, India's Foreign Policy, U.N. Role in Conflict Resolution

Context: The U.N. General Assembly voted on a nonbinding resolution demanding Israel end its occupation of Gaza and the West Bank. The resolution gained significant support, but India abstained from voting.

Resolution Details:

- **Vote Outcome**: The resolution was supported by 124 nations, while 14 opposed, and 43, including India, abstained.
- Nonbinding: While not legally binding, the resolution reflects global opinion on the issue.

India's Position:

- India reaffirmed its commitment to a peaceful two-state solution, achieved through direct negotiations.
- India's representative stressed that meaningful dialogue between Israel and Palestine is the key to peace.
- India abstained from voting, reflecting its balanced approach to the conflict.

Resolution's Provisions:

- Calls for the end of Israel's "unlawful occupation" in Palestinian territories within a year.
- Urges the withdrawal of Israeli forces and the evacuation of settlers.
- Suggests sanctions on those responsible for maintaining Israel's presence and halting arms exports if they are suspected of being used in occupied territories.
- Demands reparations to Palestinians for the damage caused by the occupation.

Global Reactions:

- The resolution is a response to the International Court of Justice (ICJ) ruling that Israel's occupation violates international law.
- Palestinian Ambassador hailed the vote as a turning point in their struggle for freedom.
- Israel's U.N. Ambassador condemned the resolution, labeling it as support for the Palestinian Authority's "diplomatic terrorism."
- U.S. Ambassador criticized the resolution for ignoring Hamas's control over Gaza and Israel's right to self-defense.

- India's abstention from the vote at the U.N. General Assembly reflects its cautious approach to the Israel-Palestine conflict.
- It is advocating for a negotiated two-state solution while maintaining a balanced foreign policy in a highly sensitive geopolitical issue.







GS III

6. Ahead of Winter, Changes in Delhi-NCR's Graded Plan to Tackle Pollution

Source: The Indian Express

Prelims: Environmental Issues, Pollution Control, Air Quality Management

Mains: Delhi-NCR Air Pollution, Graded Response Action Plan (GRAP), Policy Changes for Winter

Pollution

Context: The CAQM has revised the Graded Response Action Plan (GRAP) to address worsening air quality in Delhi-NCR before winter, following NGT criticism for not implementing GRAP during prolonged poor air quality.

Key Changes to GRAP:

Trigger Mechanism for GRAP Stages:

Earlier: Stages II, III, and IV were invoked

three days in advance.

Now: Actions will be initiated proactively if higher Air Quality Index (AQI) levels are projected to persist for longer periods (three days or more).

Modifications in GRAP Stage I (AQI 201-300):

 Earlier Rule: Mandatory recycling of construction and demolition (C&D) waste at processing facilities.

 Revised Rule: Recycling is no longer mandatory; instead, vehicles transporting C&D waste must be properly covered.

• Changes in GRAP Stage II (AQI 301-400):

- Diesel generators (DG) with a capacity between 62 and 800 kilowatts are now required to switch to dual fuel mode or use retrofitted emission control devices.
- This aims to reduce emissions from DG sets, a major source of air pollution.
- New Measures in GRAP Stage III (AQI 401-500):
 - Vehicle Restrictions: New restrictions apply to certain categories of Delhi-registered diesel vehicles.
 - Ban on Specific C&D Activities: Major welding, gas-cutting, cement coatings, and large-scale tile or stone work will be prohibited.
 - **Exemptions:** Telecommunications services, limited to non-open trench work, are exempt from the C&D restrictions.

Reason for Revisions:

- In May, the NGT criticized CAQM for not invoking GRAP I, despite the AQI remaining in the 201-300 range for six consecutive days.
- The revised plan introduces more responsive measures to tackle seasonal pollution spikes, especially during winter.

Conclusion:

- The changes in GRAP reflect a more proactive approach to pollution management in Delhi-NCR.
- It has stricter controls on construction, demolition activities, and diesel vehicles, aimed at mitigating severe air quality deterioration during winter.





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7.Union Cabinet Approves Venus Mission, Indian Space Station, and Other Key ISRO Projects

Source: The Indian Express

Prelims: Venus Mission, Chandrayaan-4, Gaganyaan, Bharatiya Antariksh Station (BAS)

Mains: India's Space Exploration Plans, Vision 2047, Role of ISRO in Expanding India's Space Capabilities Context: The Union Cabinet approved four major space projects as part of ISRO's Vision 2047, including a Venus mission, a new lunar mission, continuation of the Gaganyaan program, and the establishment of the Indian Space Station.

Venus Mission:

- Launch Target: ISRO is aiming for a March 2028 launch for the Venus mission, timed when Earth and Venus are at their closest.
- Mission Objectives: The mission, approved with a budget of ₹1,236 crore, involves an orbiter to study the surface, atmosphere, and interaction of Venus with the Sun. It will analyze volcanism, clouds, dust, and the ionosphere.
- India's Second Planetary Mission: After the success of the Mars Orbiter Mission (Mangalyaan) in 2014, this will be India's second planetary exploration mission.

Chandrayaan-4 Mission:

- **Approved Budget:** ₹2,014 crore for a duration of 36 months.
- Mission Overview: Chandrayaan-4 will involve sample collection from the Moon's surface, storing them in a vacuum container, and bringing them back to Earth. It will also demonstrate docking and undocking capabilities, a first for India.
- **Human Moon Mission:** This mission is a preparatory step for India's ambitious goal of sending humans to the Moon by 2040.

Bharatiya Antariksh Station (BAS):

- Timeline: The Indian Space Station, dubbed BAS, is targeted for completion by December 2029, with a total budget of ₹20,193 crore.
- **Modules:** The project will involve eight missions, four of which will build the space station. This is in addition to the Gaganyaan program's two uncrewed and one crewed mission already approved.
- **Significance:** This station will enable long-term human presence in space and increase India's capability in space exploration.

Next Generation Launch Vehicle (NGLV):

- **Project Cost**: ₹8,239 crore, with a development time of 96 months.
- Launch Capacity: The NGLV will increase ISRO's payload capacity to 30 tonnes to Low Earth Orbit (LEO) from the current 10 tonnes.
- Role in BAS: This new launch vehicle is critical for setting up the Indian Space Station and will see its first launch in 84 months.

Conclusion:

- The Union Cabinet's approval of these major ISRO projects marks a significant milestone in India's expanding space capabilities.
- With missions to Venus and the Moon, along with the development of a space station and next-gen launch vehicles, India is positioning itself as a major player in global space exploration, in line with its Vision 2047 goals.



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8. Earth to Get a Temporary New Moon This Month: Asteroid 2024 PT5

Source: Space.com

Prelims: Mini-Moon, Asteroid, Space Events, Earth's Orbit **Mains:** Astronomy, Space Science, Near-Earth Objects

Context: This month, Earth will temporarily gain a second moon in the form of the asteroid 2024 PT5. Unlike our permanent moon, this new "mini-moon" will remain in Earth's orbit for only two months before returning to its asteroid belt.

Discovery and Dynamics:

- Asteroid 2024 PT5 belongs to the Arjuna asteroid belt, located at an average distance of 93 million miles (150 million kilometers) from the sun.
- The asteroid will be temporarily captured by Earth's gravity due to its low velocity of around 2,200 miles per hour (3,540 km/h) and close approach to Earth—2.8 million miles (4.5 million km).
- This capture will last for about two months, but the asteroid will not complete a full orbit around Earth.

Mini-Moon Events:

- These events occur when an object temporarily becomes geocentrically bound to Earth. There are two types:
 - Long captures: Lasting for years and involving multiple revolutions around Earth.
 - o Short captures: Lasting for days, weeks, or months with no full revolution.
- 2024 PT5 falls into the short capture category. Only a few such events are recorded, with past examples including 1991 VG, 2022 NX1, and 2024 PT5.

Previous Mini-Moon Episodes:

- Earth's long-term mini-moons include 2006 RH120 and 2020 CD3.
- Short-term captures, like 2024 PT5, are more frequent, occurring multiple times per decade.

Observation and Research:

- The asteroid will be too small and dim for amateur telescopes, but it can be observed using professional telescopes with at least 30-inch diameter equipped with CCD or CMOS detectors.
- Researchers will conduct spectroscopic and photometric studies of 2024 PT5 to better understand its nature.

Return to Orbit:

• After its brief period as Earth's mini-moon, 2024 PT5 will be ejected due to gravitational disturbances from the sun and return to its orbit in the Arjuna asteroid belt.

- The temporary capture of asteroid 2024 PT5 as a mini-moon adds to our understanding of near-Earth objects and gravitational dynamics.
- While short-lived, these events provide valuable opportunities for astronomical study.







Editorial, Ideas and Opinions

9. Exact Definition of Climate Finance Needed, Inequality Gap in Technology Must Be Closed:

Source: The Indian Express

Prelims: Climate Finance, Paris Agreement, Technology Transfer

Mains: Climate Justice, Inequality in Climate Action, Role of Developed and Developing Nations in Climate

Change

Context: At the RE-Invest summit in Gandhinagar, the Union Environment Minister called for a clear definition of climate finance and stressed closing the technology and finance gap between developed and developing nations.

Outdated Climate Finance Targets:

- **Current Target:** Developed countries are currently committed to mobilizing \$100 billion annually to support developing nations in combating climate change.
- Revised Target Post-2025: As per the Paris Agreement, this ceiling will be revised after 2025, with further negotiations planned during the COP29 summit in Baku, Azerbaijan later this year.

Need for a Clear Definition of Climate Finance:

- It is critical for supporting developing countries in mitigation (reducing emissions) and adaptation (preparing for climate impacts).
- The United Nations defines climate finance as investments required to tackle climate change, sourced from public, private, or alternative funding streams at local, national, or transnational levels.

Common but Differentiated Responsibilities:

- The importance of the CBDR-RC principle (Common But Differentiated Responsibilities and Respective Capabilities), where developed nations, having historically contributed more to emissions, must take on greater responsibilities.
- India's lower per capita emissions despite being one of the world's largest greenhouse gas emitters and called for equitable consideration of developing countries' needs.

India's Pathway to Net-Zero:

- India to achieve its net-zero emissions target by 2070. These include:
 - Strengthening renewable energy grids and promoting low-carbon technologies.
 - Making the transport sector more environmentally friendly and urban development more sustainable.
 - Policy interventions in fuel efficiency, the promotion of green hydrogen, and empowering medium and small enterprises.

Global Leadership:

• India's leadership in advancing the voice of the Global South, advocating for equitable climate action on the global stage.

Conclusion:

- It reflects India's stance on the need for a more inclusive and fair approach to climate finance and technology transfer.
- The upcoming negotiations in Baku will be crucial in determining how developed nations will support developing countries in their climate actions, especially as the Paris Agreement targets are revised.



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In Brief

10. India Could Generate Up to 9.2 Lakh TWh from Blue Renewable Energy Sources: INCOIS

Source: The Indian Express

Prelims: Blue Economy, Renewable Energy, INCOIS, Ocean Energy

Mains: Sustainable Energy, Blue Economy, India's Renewable Energy Potential

Context: The Indian National Centre for Ocean Information Services (INCOIS) has developed the Integrated Ocean Energy Atlas, identifying sites along India's coast for generating renewable energy from tidal waves, currents, and salinity gradients.

Atlas Overview:

 The atlas provides estimated values of renewable energy generation potential from individual or integrated blue energy sources at 5 km x 5 km resolution along India's coastline.

• India's Exclusive Economic Zone (EEZ) has the potential to generate about 9.2 lakh terawatt hours (TWh) from multiple sources, offering significant scope for energy generation.

energy generation. Significance of Blue Energy:

 Blue energy sources include sun, wind, tides, waves, salinity gradient, currents, and ocean thermals. These sources are largely untapped but hold substantial potential.

 Mapping energy potential will aid in the transition toward a blue economy, which emphasizes sustainable ocean-based development.



renewable energy sources



iravitational potentia energy of water converted into electrical energy through a hydraulic



Kinetic energy of win converted into electricity by wind turbines



The sun's energy turned into electricity heat energy by solar panels/solar heaters



Energy obtained from plant and animal remains; e.g., burning wood produces heat energy



Heat energy trapped inderneath the earth's crust converted into electricity by steam turbines



Oceanic thermal and tidal energy converted into electricity by turbines and other systems



Hydrogen's potential chemical energy converted into electricity by hydrogen fuel cells

Energy Potential Sites:

• Coastal areas in West Bengal and Gujarat are suitable for tidal energy.

• The salinity gradient is prominent in regions along Andhra Pradesh and West Bengal.

• The atlas accounts for factors like fishing zones, shipping lines, cyclone-prone areas, ports, and harbors, essential for industries planning infrastructure development.

Energy Transition:

• The atlas is expected to support industries in renewable energy planning and guide policymakers in assessing the potential of blue energy.

• The MoES Secretary emphasized that this tool would help industries and policymakers better harness India's blue energy resources in pursuit of its net-zero goals.

Conclusion:

• The Integrated Ocean Energy Atlas is a groundbreaking tool that offers comprehensive insights into India's blue renewable energy potential.

• With its detailed mapping, India can strategically tap into its vast coastal resources to support its energy transition and sustainability goals.







Daily Quiz

Q1. Consider the following statements regarding India's push for a review and modification of the Indus Waters Treaty (IWT):

- 1. The treaty, signed in 1960, did not account for modern challenges such as climate change and increased energy demands, which now necessitate its revision.
- India's focus on hydropower projects on shared rivers, such as the Kishanganga and Ratle projects, has led to disputes with Pakistan, which claims these projects violate the IWT.
- 3. Pakistan's legal approach to dispute resolution under the IWT has shifted from seeking a Neutral Expert to requesting intervention from the Permanent Court of Arbitration (PCA), a move that India deems illegal.

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

Q2. Consider the following statements regarding recent genomic research on Rapa Nui (Easter Island):

- 1. **Statement 1**: Recent genetic studies reveal 8% Native American ancestry in Rapa Nui genomes, indicating pre-18th-century admixture before European influence, and a population bottleneck was identified around 1300 AD.
- Statement 2:The study suggests that the population decline on Rapa Nui was primarily due to overpopulation and ecological mismanagement, aligning with earlier theories popularized by Jared Diamond.

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

A. Both statements are correct, and Statement 1 provides further context on the genetic findings and population

- bottleneck while Statement 2 aligns with earlier theories.
- B. Both statements are correct, but Statement 2 contradicts the new evidence provided in Statement 1.
- C. Statement 1 is correct, and Statement 2 is incorrect.
- D. Statement 2 is correct, and Statement 1 is incorrect.

Q3. Which of the following constitutional amendments is crucial for implementing simultaneous elections in India?

- A. Amendment of Article 82A to establish the procedure for simultaneous elections for Lok Sabha and State Assemblies.
- B. Insertion of Article 370A to redefine the relationship between the central and state governments.
- C. Amendment of Article 21 to ensure the protection of personal liberty in the context of electoral reforms.
- D. Amendment of Article 368 to address the process for constitutional amendments related to simultaneous elections.

Q4. Consider the following statements regarding the PM-AASHA scheme:

- 1. Under the Price Deficit Payment Scheme (PDPS) of PM-AASHA, the government compensates farmers for the difference between the Minimum Support Price (MSP) and the sale price, with a cap on compensation at 25% of the MSP value.
- 2. The PM-AASHA scheme includes components such as the Price Support Scheme (PSS), Price Stabilization Fund (PSF), Price Deficit Payment Scheme (PDPS), and the Market Intervention Scheme (MIS), all aimed at stabilizing prices and supporting both farmers and consumers.
- 3. The coverage for oilseeds under PDPS has been expanded from 25% to 40% of the state's production, and the



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implementation period for the scheme has been extended from 3 months to 4 months.

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

Q5. Consider the following statements regarding the recent revisions to the Graded Response Action Plan (GRAP) for Delhi-NCR:

- Statement 1: The revised GRAP includes proactive measures based on projected higher AQI levels and introduces changes in various stages to address air pollution more effectively.
- 2. **Statement 2:** The plan eliminates mandatory recycling of construction and demolition (C&D) waste, requires diesel generators to switch to dual fuel or use emission control devices, and imposes new vehicle restrictions and bans on specific C&D activities.

Which of the following is correct?

- A. Both statements are correct, with Statement 1 providing an overview of proactive measures and changes, while Statement 2 details specific modifications and restrictions.
- B. Both statements are correct, but Statement 2 contradicts aspects of Statement 1.
- C. Statement 1 is correct, and Statement 2 is incorrect.
- D. Statement 2 is correct, and Statement 1 is incorrect.

Q6. Consider the following statements regarding India's abstention from the U.N. General Assembly vote on the Palestinian resolution:

- The resolution demanding an end to Israel's occupation of Gaza and the West Bank was supported by 124 nations, with 43 nations, including India, abstaining from the vote.
- 2. India abstained from the vote to emphasize its support for a peaceful two-state solution through direct

- negotiations, reflecting a balanced foreign policy approach.
- The resolution calls for the end of Israel's "unlawful occupation" within a year, urges withdrawal of Israeli forces, and suggests sanctions and reparations to Palestinians.

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

Q7. What is the targeted completion date for the Bharatiya Antariksh Station (BAS), the Indian Space Station?

- A. December 2027
- B. December 2028
- C. December 2029
- D. December 2030

Q8. Consider the following statements regarding the temporary capture of asteroid 2024 PT5 by Earth:

- Asteroid 2024 PT5 belongs to the Arjuna asteroid belt and will be captured by Earth's gravity for approximately two months due to its close approach and low velocity.
- 2. The temporary mini-moon 2024 PT5 will complete a full orbit around Earth before being ejected back to the asteroid belt.
- 3. Short-term mini-moon captures, like 2024 PT5, are rare events with only a few recorded instances in history, including 1991 VG and 2022 NX1.
- 4. The asteroid will be observable with amateur telescopes due to its significant size and brightness during its capture.

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 and 4 only

Q9. Which principle underlines the differing responsibilities of developed and developing nations in climate action, considering their historical contributions to emissions?



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- A. Paris Agreement Principle
- B. Common But Differentiated Responsibilities and Respective Capabilities (CBDR-RC)
- C. Technology Transfer Principle
- D. Global Climate Equity Principle

Q10. Consider the following statements regarding India's blue renewable energy potential as per the Integrated Ocean Energy Atlas developed by INCOIS:

- 1. **Statement 1**: The atlas identifies India's Exclusive Economic Zone (EEZ) as having the potential to generate up to 9.2 lakh terawatt hours (TWh) from various blue energy sources, including tidal waves, currents, and salinity gradients.
- 2. **Statement 2**: The atlas highlights coastal areas in West Bengal and Gujarat for tidal energy, and salinity gradient potential

along Andhra Pradesh and West Bengal, while factoring in critical considerations like fishing zones, shipping lines, and cyclone-prone areas.

Which of the following is correct?

- A. Both statements are correct, with Statement 1 providing an overview of the energy potential in India's EEZ, and Statement 2 detailing specific locations and considerations for blue energy development.
- B. Both statements are correct, but Statement 2 contradicts some aspects of Statement 1.
- C. Statement 1 is correct, and Statement 2 is incorrect.
- D. Statement 2 is correct, and Statement 1 is incorrect.







Solutions

1. Correct Answer is D Explanation:

- Statement 1: Correct: The Indus Waters Treaty (IWT), signed in 1960, did not anticipate modern challenges like climate change and the evolving energy needs of both countries. These factors have created a need to revisit and potentially modify the treaty to address contemporary issues.
- Statement 2: Correct: India's development of hydropower projects such as the Kishanganga (330 MW) and Ratle (850 MW) on shared rivers has been a point of contention with Pakistan. Pakistan argues that these projects violate the treaty's provisions, which has led to disputes between the two countries.
- Statement 3: Correct: Pakistan initially sought a Neutral Expert to resolve disputes under the IWT. However, it later shifted to the Permanent Court of Arbitration (PCA), which India considers illegal under the treaty's dispute resolution mechanism. India insists on the use of a Neutral Expert as originally stipulated by the IWT.

2. The correct Answer is C Explanation:

- Statement 1 is accurate as it reflects the findings of the recent genomic research, which includes evidence of Native American ancestry in Rapa Nui genomes and identifies a population bottleneck around 1300 AD.
- Statement 2 is incorrect because the new research contradicts earlier theories of population decline due to overpopulation and ecological mismanagement. Instead, it highlights that the decline was caused by external factors such as slave traders and smallpox outbreaks.

3. Correct Answer is A Explanation:

- The amendment of Article 82A is specifically designed to provide a framework for holding simultaneous elections for both the Lok Sabha and State Assemblies, which is crucial for the implementation of this system.
- Articles 370A and 368 pertain to other constitutional issues, and Article 21 relates to personal liberty.

4. Correct Answer is D Explanation:

- Statement 1: Correct: Under PDPS, the government compensates the difference between the MSP and the sale price, with compensation capped at 25% of the MSP value.
- Statement 2: Correct: PM-AASHA encompasses several components, including PSS, PSF, PDPS, and MIS, all designed to stabilize prices and support farmers and consumers.
- Statement 3: Correct: The coverage for oilseeds under PDPS has indeed been increased from 25% to 40% of the state's production, and the scheme's implementation period for oilseeds has been extended from 3 months to 4 months.

5. The correct Answer is A Explanation:

- Statement 1 outlines the revised GRAP's proactive measures to address air pollution based on projected high AQI levels. It covers updates across different stages:
 - Stage I (AQI 201-300): Shift from mandatory C&D waste recycling to covering vehicles transporting C&D waste.
 - Stage II (AQI 301-400): Requirement for diesel











- generators to use dual fuel or emission control devices.
- Stage III (AQI 401-500): New vehicle restrictions and bans on specific C&D activities.
- Statement 2 details these changes, including the removal of mandatory C&D waste recycling, new rules for diesel generators, and vehicle restrictions.

6. Correct Answer is D Explanation :

- Statement 1: Correct: The resolution was supported by 124 nations, 14 opposed, and 43, including India, abstained from voting.
- Statement 2: Correct: India's abstention reflects its cautious approach, emphasizing support for a negotiated two-state solution while maintaining a balanced foreign policy.
- Statement 3: Correct: The resolution includes provisions to end Israel's occupation, withdraw Israeli forces, impose sanctions, and demand reparations to Palestinians.

7. The correct Answer is C Explanation:

The Indian Space Station (BAS) is targeted for completion by December 2029, with a significant budget allocated for its development.

8. The correct Answer is C Explanation:

- Statement 1: Correct: Asteroid 2024 PT5 belongs to the Arjuna asteroid belt and will be temporarily captured by Earth's gravity for about two months due to its low velocity and close approach.
- Statement 2: Incorrect: The asteroid 2024 PT5 will not complete a full orbit around Earth; it will only remain in Earth's orbit temporarily.

- Statement 3: Correct: Short-term mini-moon captures, like 2024 PT5, are relatively rare events, with past examples including 1991 VG and 2022 NX1.
- **Statement 4: Incorrect:** The asteroid 2024 PT5 will be too small and dim for amateur telescopes; it requires professional telescopes for observation.

9. Correct Answer is B Explanation:

The Common But Differentiated Responsibilities and Respective Capabilities (CBDR-RC) principle is key in international climate negotiations, recognizing that:

• Historical Responsibility:
Developed countries have contributed more to greenhouse gas emissions historically and are thus more responsible for addressing climate change.

 Greater Capability: Developed nations have more resources, so they are expected to provide more climate finance and technology transfer to developing countries.

 Differentiated Responsibilities: While all nations must act, developed countries bear greater obligations due to their historical emissions and capacity.

10. The correct Answer is A Explanation:

- Statement 1 is correct as it provides an accurate figure (9.2 lakh TWh) for the energy potential from blue renewable sources in India's EEZ, as identified by INCOIS.
- Statement 2 is also correct, detailing key regions for tidal energy (West Bengal and Gujarat) and salinity gradients (Andhra Pradesh and West Bengal), while considering critical logistical factors for planning energy infrastructure.



















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