Everything in the garden of elections is not lovely

Mains Master

Context:

• India stands on the precipice of a crucial general election, carrying immense weight for its democratic trajectory.
• Historically, India has served as a beacon of hope for liberal democracies, particularly in the Asian region.

Recent Chandigarh Mayoral Election Issue:

• The Chandigarh mayoral election case exposed vulnerabilities within the electoral system, where a Returning Officer, allegedly affiliated with the Bharatiya Janata Party (BJP), tampered with votes. This incident:
  ○ **Cast a spotlight on potential manipulation**: It raised concerns about the ease with which individuals within the system can subvert the electoral process, jeopardizing its integrity.
  ○ **Sparked anxieties about safeguarding electoral integrity:** The case highlighted the need for robust measures to ensure fair and impartial elections, free from undue influence or manipulation.

Importance of Elections in Democracy:

• **Cornerstone of Legitimacy and Public Trust**: Free and fair elections are the bedrock of any functioning democracy. They ensure the legitimacy of elected officials and foster public trust in the government, as citizens have a say in choosing their representatives.
• **Empowering Citizens**: Elections empower citizens by allowing them to actively participate in shaping their government. They provide a platform for individuals to hold elected officials accountable and express their preferences for the direction of the nation.
• They function as a **microcosm of the larger democratic structure**, empowering citizens to actively participate in choosing their representatives and shaping their government.

Challenges to Electoral Democracy:

  ○ **Increased Use of Religious Symbols and Rhetoric:** A noticeable rise in the presence of religious symbols and the use of religious language in public discourse and political campaigns is observed. This can:

  ■ **Exploit religious sentiments:** Political parties and leaders may leverage religious sentiments to gain political advantage, potentially swaying voters based on religious affiliation rather than policy or qualifications.

  ■ **Exacerbate societal divisions:** The increased use of religious rhetoric can exacerbate existing social and religious divides, hindering national unity and fostering an atmosphere of intolerance.
  ○ **Disregard for Electoral Laws**:

  ■ **Potential Violation of Section 123**: Section 123 of the Representation of the People Act, 1951, explicitly prohibits appeals to voters based on their religion or religious symbols during elections. However, there are concerns about potential disregard for this law, raising questions about the commitment to upholding fair and secular electoral practices.

  ■ **Attempts to Subvert the Process**: Instances like the Chandigarh case, where individuals within the system attempt to manipulate the process, highlight the vulnerability of the system and the need for stricter measures to prevent such occurrences.

Constitutional and Institutional Mechanisms:

• The Indian Constitution and legal framework establish various mechanisms to ensure fair elections:
  ○ **The Election Commission of India:** This independent constitutional body is tasked with conducting and overseeing elections to ensure their smooth and impartial conduct.
  ○ **Representation of the People Acts:** These Acts (1950 & 1951) form the legal framework governing elections in India, outlining the procedures, qualifications, and regulations for conducting fair and transparent elections.
• **The Supreme Court:** The Supreme Court plays a crucial role in upholding the legal framework and interpreting election laws. It has the power to intervene in cases of electoral malpractices and ensure adherence to the Constitution and established laws.

Supreme Court's Judgment:

• In the Chandigarh case, the Supreme Court intervened and emphasized the following:
  ○ **Free and Fair Elections as "Basic Structure":** The Court reiterated that free and fair elections are not just a legal requirement but an essential element of the Constitution's "basic structure." This elevates their significance and ensures their continued protection from fundamental alterations.
  ○ **Commitment to Protecting Electoral Integrity:** The Court's swift intervention and strong stance against electoral malpractices demonstrate its commitment to upholding the sanctity of the electoral process and addressing instances of manipulation.
• **Kuldeep Kumar vs Union Territory of Chandigarh and Others (2024):** This is the most prominently discussed judgment, also known as the "Chandigarh Mayor's election case." In this case, the Supreme Court emphasized the significance of free and fair elections as a part of the Constitution's basic structure and intervened to address vote tampering by the Returning Officer.
• **Ziyauddin Burhanuddin Bukhari vs Brijmohan Ramdass Mehra & Ors (1975):** The Court made strong observations against the use of religious appeals in elections, highlighting that such practices undermine the principles of democracy and secularism as envisioned in the Constitution.

• **Abhiram Singh vs C.D. Commachen (2017):** A seven-judge Bench of the Supreme Court offered a broader interpretation of the term "corrupt practices" referenced in Section 123 of the Representation of the People Act. It held that appeals in the name of religion include not just appeals based on the religion of the candidate but also the religion of the voters, further strengthening the principle of secular elections.

Way Forward:

• **Adherence to Legal and Constitutional Principles:** Political parties must adhere to legal and constitutional principles, particularly those enshrined in Section 123 of the Representation of the People Act, by avoiding religious appeals in their campaigns.
• **Citizen Vigilance and Accountability:** Citizens have a crucial role to play in safeguarding democracy:
  ○ **Remaining vigilant:** By staying informed and engaged with the electoral process, citizens can identify and raise concerns about potential malpractices.
  ○ **Holding elected officials accountable:** Citizens have the right to hold their elected officials accountable for upholding democratic values and adhering to the principles of fair and inclusive elections.
• **Continued Judicial Scrutiny:** The judiciary's continued commitment to upholding the law and intervening in cases of malpractice is crucial for strengthening and safeguarding the integrity of India's electoral democracy.

Overall, while India faces significant challenges to its electoral democracy, the existence of robust constitutional and institutional mechanisms, coupled with the judiciary's active role, offers hope for maintaining a fair and impartial electoral process.

Article 142: Supreme Court's Power of Complete Justice

What it grants: The power to the Supreme Court to pass any decree or order necessary for complete justice in any case before it.

Key points:

• **Flexibility**: Go beyond strict legal interpretation to deliver justice.
• **Enforcement**: Decrees and orders are binding throughout India.
• **Oversight**: Parliament or President can prescribe enforcement methods.

When used:

• Existing legal remedies are inadequate.
• Fundamental rights are violated.
• Public interest or social justice is at stake.

Context:

• Land is a multifaceted resource vital for human survival and well-being; it provides essential ecological services (e.g., clean air, water regulation, biodiversity), economic benefits (e.g., agriculture, mining), social functions (e.g., cultural landscapes, recreation), and cultural significance (e.g., sacred sites, traditional practices).

• However, traditional land management practices often focus on specific aspects like agriculture or mining, overlooking other values and creating imbalances that lead to:

○ **Excessive stress:** Depletion of nutrients, soil erosion, and overexploitation of resources.

○ **Land degradation:** Loss of productivity, desertification, and reduced biodiversity.

○ **Environmental drawbacks:** Increased risk of natural disasters, climate change impacts, and disrupted ecosystem services.

Global Status:

• The annual cost of land degradation is estimated at a **staggering $6 trillion globally,** highlighting the significant economic and environmental consequences of unsustainable practices.

• Recognizing the urgency of this issue, international efforts have emerged:

○ The **UN Convention to Combat Desertification (COP14)** held in 2019 specifically addressed issues of land degradation faced by different countries and sought solutions to achieve **land degradation neutrality** (achieving a balance between land degradation and restoration).

○ The **Intergovernmental Panel on Climate Change (IPCC)** released a special report on "**Climate Change and Land" (2019)**, emphasizing the need for country-level assessments of current practices and recommending various near- and long-term actions. These actions focus on land management options that reduce competition for land, offer co-benefits (addressing multiple challenges simultaneously), and minimize negative impacts on key ecosystem services.

○ The **Food and Agriculture Organization (FAO)** report titled "**State of the World's Land and Water Resources for Food and Agriculture: The System at Breaking Point" (2021)** emphasizes the crucial need for immediate action in addressing land management. The report calls for a shift in focus towards caring for the long-term sustainability of land, soil, and water resources.

Challenges in India:

• **Land scarcity:** India faces a unique challenge with only 2.4% of the world's landmass but housing over 17% of the global population. This creates immense pressure on available land resources.

• **Land degradation**: Around 30% of India's total land area is already classified as degraded, further reducing the availability of productive land.

• **Competition and conflict:** Various sectors, including agriculture, infrastructure development, rapid urbanization, and environmental protection, all compete for a limited land pool, leading to conflicts and rising land prices. This competition can also have social and political ramifications.

• **Fragmented management:** Land management currently falls under the purview of individual state governments, leading to a lack of cohesion and consistency across the country. Additionally, cultural land ownership often resides with private individuals, further complicating the implementation of unified land management policies.

• **Knowledge gaps and short-sighted planning:** Limited knowledge sharing, a predominantly short-term planning perspective, and a lack of preparedness for unforeseen events (e.g., natural disasters, economic fluctuations) hinder the adoption of sustainable land management practices.

• **Regulatory barriers**: Existing rules and regulations may unintentionally create impediments to implementing effective land management strategies.

Recent Global Initiatives:

• The **European Landscape Convention** recognizes the importance of **landscape management** for individual and social well-being. It emphasizes the interconnectedness of land use and its impact on people's lives and cultural values.

• The UK Parliament's Office of Science and Technology released Brief 42 titled "**Sustainable land management: managing land better for environmental benefits" (2021).** This document acknowledges the complexity of land management and the need for improved policies that address the interconnected challenges of climate change, food security, biodiversity conservation, and sustainable land use. It highlights the shortcomings of existing policies in the UK and urges for a more comprehensive approach.

Way Forward:

• **Multi-stakeholder platforms:** Establish platforms at the district and sub-district levels that bring together diverse stakeholders, including farmers, land managers, policymakers, civil society organizations, business leaders, and investors. This collaborative approach fosters communication, knowledge sharing, and collective decision-making for sustainable land management.

• **Landscape approach:** Implement a landscape-based approach to land management. This method takes into account the interconnectedness of different land uses within a specific geographical area. It allows for a comprehensive assessment

Key Points:

• Houthi attacks on the Red Sea:

○ **Since November 2023:** The Houthi militia, based in Yemen, has launched attacks on ships traversing the Red Sea.

○ **Motivation**: The Houthis claim these actions are in solidarity with Palestinians in the ongoing conflict with Israel.

○ **Impact**: These attacks have significantly disrupted trade through the Suez Canal, a critical waterway connecting Asia and Europe.

• **Dramatic shift in shipping routes:**

○ Companies rerouting ships: To avoid the security risks associated with the Red Sea, companies are opting for the longer route around the Cape of Good Hope, the southern tip of Africa.

○ **Suez Canal decline:**

■ Container tonnage, a measure of cargo volume, crossing the Suez Canal fell by a staggering 82% in the first half of February 2024 compared to the previous period.

■ This indicates a drastic reduction in the number of ships using the canal.

○ **Cape of Good Hope surge:**

■ Container tonnage on the Cape of Good Hope route increased by 60% in the same period.

■ This signifies a significant shift in shipping patterns as companies prioritize safety over efficiency.

• **Panama Canal under stress:**

○ **Drought impact:** The Panama Canal, another major global shipping route, is facing low water levels due to ongoing drought conditions.

○ **Reduced capacity:** This has resulted in fewer vessels transiting through the canal, further straining global trade.

■ decline in monthly transits through both the Suez and Panama Canals.

○ **Long-term trend:** While the Suez Canal decline is a recent phenomenon, the Panama Canal has been experiencing decreasing transits over the past two years, making the current situation even more challenging.

- **Increased distances and costs:**
  - **Longer journeys:** Rerouting through the Cape of Good Hope significantly increases the distance ships need to travel.
    - For example, an oil tanker traveling from Saudi Arabia to the Netherlands would face an additional 7,617 km by avoiding the Suez Canal.
  - **Higher shipping costs**: The increased distances translate to higher fuel consumption and operational costs for shipping companies.
    - Container freight rates, the cost to ship goods, for routes between Asia and Europe have significantly increased since November 2023.
    - The average container spot freight rate saw its highest ever weekly increase of $500 in December 2023.
    - This surge in freight rates has ripple effects across the globe, impacting prices in various locations like Asia and the United States' west coast.
- **Impact on India:**
  - **Fuel price concerns:** As Russia, a major source of India's oil, typically sends shipments through the Suez Canal, the disruptions could potentially impact India's fuel prices in the future.
  - **Export challenges:** India is also a growing exporter of petroleum products like petrol and diesel, refined from crude oil.
    - These exports heavily rely on the Suez Canal route, and any disruptions could significantly increase export costs and potentially render them unviable.

Conclusion:

The combined effects of attacks on the Red Sea and drought in the Panama Canal are creating significant disruptions in global trade by:

- Disrupting major shipping routes and causing a shift towards longer, less efficient alternatives.
- Increasing travel distances and operational costs for shipping companies, which are then passed on to consumers through higher prices.
- Potentially impacting fuel prices and creating challenges for exporting countries like India.

These developments highlight the vulnerability of global supply chains to various unforeseen events and the interconnectedness of global trade, where disruptions in one region can have cascading effects across the world.

Russia's economy after two years of war

Context

- Russia invaded Ukraine in February 2022.
- Western nations imposed sanctions to cripple the Russian economy.

Background

- Sanctions included:
  - Exclusion from financial services.
  - Frozen assets.
  - Travel restrictions.
  - Oil price cap.
  - Military goods ban.

Russian Economy After Two Years of War

- **Unexpected Resilience:**
  - Avoided collapse.
  - Limited growth (2.6% projected in 2023).
  - Low budget deficit.
- **Reasons for Resilience:**
  - Strong central bank (high interest rates).
  - Currency controls.
  - Sanctions workarounds (e.g., "dark fleet").
  - High energy prices.
- **War as Economic Engine:**
  - Elevated military spending (40% of budget).
  - Unsustainable growth due to high rebuilding costs.

Future Outlook

- Prolonged war may be only option to avoid collapse:
  - Economy heavily focused on war effort.
  - Labor shortage due to casualties and brain drain.
  - Uncertain international relations and potential further sanctions.

Prelims Booster

What is Bitcoin halving and what does it mean for the crypto community

- 🔍 Bitcoin halving refers to the 50% reduction in the reward paid to Bitcoin miners who successfully process transactions, impacting the supply of BTC in circulation. This event occurs approximately every four years and is designed to control the supply of Bitcoin and maintain its value over time.
- 🔌 The process results in huge carbon footprints and requires a vast amount of electricity due to the intense activity of Bitcoin miners relying on advanced computer equipment. This energy-intensive process has raised concerns about the environmental impact of Bitcoin mining.
- 💰 Bitcoin halving matters to crypto investors as it reduces the rate at which coins are released, making the asset more scarce and potentially pushing up prices. This scarcity is comparable to the impact of limited gold reserves on its value.
- 📈 The impact of Bitcoin halving on investors varies based on their involvement with Bitcoin and its ecosystem, with different reactions from corporate-level miners, new traders, and experienced traders. Corporate-level miners may be eager to earn their block reward before the reduction, while new traders may not react to the news of the halving.
- 📉 The future of the crypto market after the next Bitcoin halving is uncertain, with predictions and claims about price trajectory being educated guesses at best. The impact of halving on the market is influenced by a variety of factors, including investor emotions, geopolitical events, and economic shocks.

Will 'colour molecules' make quantum computers accessible?

1. 🔬 Quantum systems typically require very low temperatures to operate effectively
   - Most physical systems used as qubits in quantum computers function optimally at extremely low temperatures
   - The fragility of superpositions in qubits increases with the number of interaction channels, leading to faster decoherence
2. 🎧 Qubits are the fundamental components of quantum computers and need to be identical and controllable
   - Qubits, with two quantum states, are essential for quantum computing and must be identical and controllable
   - The ability to manipulate individual qubits and their interactions is crucial for quantum information processing
3. 💰 Quantum computers based on existing technologies are expensive, prompting the search for cost-effective alternatives
   - Current quantum computing technologies, such as superconducting junctions and trapped ions, are costly due to the need for low temperatures
   - Researchers are exploring simpler and more affordable technologies to make quantum computing commercially viable
4. 🌈 Researchers have achieved room-temperature qubits using metal-organic frameworks and chromophore molecules
   - A recent collaborative study in Japan successfully realized qubits at room temperature within a metal-organic framework (MOF)
   - The MOF, containing chromophore molecules, demonstrated the potential for room-temperature qubits in quantum computing
5. ❄️ Singlet fission process in the chromophore molecules enables the creation of long-lived superposition states
   - The singlet fission process in chromophore molecules allows the generation of long-lived superposition states
   - This process, facilitated by the interaction between chromophores, contributes to the stability of triplet states in the quantum system
6. 🌐 The availability of room-temperature qubits is a significant achievement for quantum computing
   - The successful creation of room-temperature qubits represents a major advancement in quantum computing technology
   - Room-temperature qubits offer the potential to make quantum computing more accessible and cost-effective
7. 📈 Further research is needed to demonstrate quantum gate operations and achieve controllability
   - Ongoing research aims to demonstrate quantum gate operations and achieve controllability with room-temperature qubits
   - The development of practical quantum gate operations and controllable qubit assemblies is crucial for advancing quantum computing capabilities