

9 PM Current Affairs Weekly Compilation

For UPSC CSE mains examination



2nd Week

Mar. 2024

Features :

Arranged as per syllabus Topics
Most complete coverage of major
News Papers editorials

Index

GS Paper 1	3
Subject: Indian Society	3
Topic-Role of Women and Women’s Organization, Population and Associated Issues, Poverty and Developmental issues, Urbanization, their problems and their remedies	3
Gender equality important in energy development	3
Shift in India's urban development- A new sense of urbanisation that is dominating	4
Bengaluru water crisis	5
GS Paper 2	6
Subject: Indian Polity	6
Topic- Indian Constitution—Historical Underpinnings, Evolution, Features, Amendments, Significant Provisions and Basic Structure	6
Court's decision on the GN Saibaba case- Justice delayed, empathy denied	6
Kovind panel on One Nation, One Election	7
Topic- Separation of Powers between various organs	7
Time to prohibit judges from joining politics	7
Topic- Salient Features of the Representation of People’s Act	10
"Missing voters"- 'Missing Voters': Forgotten, Not Gone	10
Concerns related to the ONOE Policy: The case against One Nation, One Election	11
Concerns with election expenditure in India - We need limits on election campaign spending	12
Topic-Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional Bodies	13
Changes in the Election Commission of India's selection process	13
Subject: Governance	14
Topic- Important Aspects of Governance, Transparency and Accountability	14
Need for transparent political funding: S Y Quraishi on electoral bonds: No going back to square one	14
Questions raised by making the Electoral Bonds scheme public: Five Facts, Five Takeaways .	15
New governance model for AI: In issuing AI advisory, MEITY becomes a deity	16
Topic: Issues relating to development and management of Social Sector /Services relating to Health, Education	17
Integrating modern and traditional medicine (AYUSH) systems	17
Issues of regulation of pharma industry	18
Subject: International Relations	19

9 PM Compilation March [Second Week] 2024

Topic- Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests.....	19
The India-EFTA trade deal : A win-win proposition on various dimension	19
Topic-India and its neighbourhood- relations.	20
Gelephu Mindfulness City project: Bhutan's opening move, its Gelephu gambit.....	20
GS Paper 3.....	21
Subject: Indian Economy	21
Topic- Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment.	21
Right to Apprenticeship law	21
Shift from "Make in India" to "Make Products in India"	22
Problems faced by Gig workers	23
Topic-Infrastructure: Energy, Ports, Roads, Airports, Railways etc.....	24
Gender equality important in energy development	24
Challenges with nuclear waste: How is nuclear waste generated?"	25
Subject: Science & Technology	26
Topic- Achievements of Indians in Science & Technology; Indigenization of Technology and Developing New Technology	26
Agni-5 trial: A blast-off for superior deterrence	26
India's Fast Breeder Reactor (FBR) program	27
India's Achievements in Research Output.....	27
Topic- Awareness in IT, Space, Computers, and Robotics	29
On National AI mission and Investing in Artificial Intelligence	29
Need for policy coordination to boost Trans-Asia Pacific e-commerce.....	30

GS Paper 1

Subject: Indian Society

Topic-Role of Women and Women's Organization, Population and Associated Issues, Poverty and Developmental issues, Urbanization, their problems and their remedies.

Gender equality important in energy development

News: This article discusses how gender equality and women's involvement are crucial for sustainable energy development.

Why is gender equality important in energy development?

Crucial Role in Household Energy Management: Women primarily manage household energy for cooking, heating, and lighting, showing their integral role in energy consumption.

Impact of Energy Inequality on Health: Limited access to clean energy forces women to use harmful alternatives like biomass, leading to significant health risks and deaths.

Economic and Environmental Benefits: Gender equality in the energy sector can drive economic growth and environmental sustainability.

Innovative Solutions and Productivity: Increasing women's participation in energy can lead to more innovative approaches, improved productivity, and enhanced social outcomes.

Global Impact: Closing the gender gap could boost global GDP by trillions of dollars, showing the vast potential of women's empowerment in energy.

What are the challenges in achieving gender equality in the energy sector?

Limited Energy Infrastructure Access: Women often receive energy access last, impacting their ability to manage household energy needs efficiently.

Reliance on Harmful Energy Sources: Due to inadequate access to modern energy, women resort to using traditional sources like biomass and kerosene. This leads to significant health risks, with household air pollution causing 3.2 million premature deaths annually, 60% of whom are women and children.

Low Representation in the Energy Sector: The energy sector is not gender diverse. Only 32% of employees in renewable energy and 22% overall are women, compared to 48% in the global workforce. In India, only 10% of technical energy jobs are held by women.

Educational and Skill Disparities: Women face barriers in accessing education and training needed for technical roles in energy, further widening the gender gap.

What should be done?

Change Perceptions: Alter societal views on women's roles in the energy sector to recognize their potential as key contributors.

Mainstream Gender in Energy Policies: Integrate gender considerations at sub-national, national, and international policy levels to ensure women's needs and contributions are addressed.

Support Women-led Initiatives: Back programs like the Women at the Forefront and the Energy Transitions Innovation Challenge (ENTICE), which encourage women's entrepreneurship in sustainable energy.

Promote Educational and Skill Development: Facilitate women's access to education and training, especially in technical fields within the energy sector.

Implement Distributed Renewable Energy (DRE) Projects: Utilize DRE to provide quick, affordable energy access, reducing women's workload and enhancing productivity, as seen in initiatives like Solar Mamas in India.

Shift in India's urban development- A new sense of urbanisation that is dominating

Context: This article discusses the shift in India's urban development, focusing more on religious cities like Ayodhya, contrasting with past emphasis on industry and modernism.

How are colonial and new cities different?

1. Colonial cities like Mumbai and Kolkata were **designed primarily for economic purposes, centered around trade, taxation, and the transport of goods**. They facilitated rural to urban migration, supporting the nation's industrial growth.
2. In contrast, **new cities** such as Ayodhya are being developed with a strong **focus on religious significance**. Ayodhya, for instance, is receiving a massive investment of ₹85,000 crore for infrastructure, underlining this shift in urban development philosophy.

What is the trend in current urbanization?

1. The current trend in **urbanization is blending traditional workplaces with religious significance**. Cities like Ayodhya are being developed not just as economic hubs but also as centers of pilgrimage and faith.
2. This trend is **attracting corporate investments in infrastructure**. Ayodhya, for example, is witnessing heavy investment, indicating a significant shift from the traditional, industry-focused urban development.
3. Unlike the past emphasis on modernism and industry, **the focus now is on developing cities aligned with religious importance**, marking a distinct shift in India's urbanization approach.

What is the concern with the current trend?

Centralization of Finances: The trend shows a centralization of financial resources towards religious projects. This can lead to imbalanced economic development focused more on religious cities.

Diversion from Social Infrastructure Investment: The significant spending on religious projects, like ₹85,000 crore in Ayodhya, raises questions about the prioritization of funds. It is potentially diverting resources from much-needed social infrastructure such as education and healthcare.

Shift Away from Democratic Governance: The trend may indicate a move away from secular, democratic governance towards a religiously influenced urban development strategy.

What should be the role of the state in urbanization?

Focus on Social Good: The state should prioritize urban development that serves social good over religious purposes. This includes enhancing infrastructure for education, health, and social services.

Promoting Inclusive Urban Development: Urban planning should cater to diverse needs, ensuring inclusivity and democratic values in city development, as opposed to focusing primarily on religious significance.

Adhering to World Bank Recommendations: The World Bank has estimated that India requires an investment of \$840 billion in urban infrastructure over the next 15 years. This suggests that the state should prioritize these broader developmental needs.

Bengaluru water crisis

News- Bengaluru is recently witnessing one of the worst water crises.

What is the reason behind such a water crisis in Bengaluru?

- 1) **Unplanned urbanization-** There has been haphazard and unplanned urbanization in Bengaluru. There are problems of contamination of groundwater resources by the discharge of industrial chemicals, sewers and improper mining activities
- 2) **Inadequate monsoon-** Bengaluru faced sub-par monsoon in 2023 and received little rain since November. Half the city depends on groundwater, but many borewells have run dry. This has created acute water stress.
- 3) **Concretization and reduced green cover-** High pace of concretization has reduced porous surface area and restricted rainwater from entering the lower layers of the grounds, because of which the groundwater table cannot be recharged.
For ex- in the 1970s, Bengaluru had 68% green cover, and 8% of the surface was paved. Now, 86% of the surface is concretized and the green cover has shrunk to 3%
4. **Encroachment of Natural Water Bodies-** Bengaluru is on a ridge, with a series of valleys acting as water conduits to rivers like Cauvery. Lakes were built across these valleys and floodwater flowed through them. Due to encroachment of valleys, the flow of rainwater was impeded which caused flooding and stagnation in these areas.
- 5) **Over-exploitation of ground water-** With limited supply of fresh water piped from Cauvery, the city's groundwater table has been over-exploited.
- 6) **Lack of effective water governance-** There is unregulated extraction, pumping and usage of water without any special protocol or judicious distribution. As a result, it reached a tipping point, when borewells ran out of water.
- 7) **Lack of sensitivity in citizens-** Since water is a free resource, it is not valued by the citizens. Citizens are completely detached from the water issues.

Read more- [Water Crisis in India](#)

What are the steps taken by the government to address the water crisis in Bengaluru?

- 1) **Imposition of fines-** The Bengaluru Water Supply and Sewerage Board (BWSSB) has introduced fines, beginning at ₹5,000, for non-essential use of potable water such as gardening and car washing.
- 2) **Regulating price of water tankers-** The Karnataka government has capped water tanker prices based on distance travelled to avoid customers being overcharged. The government has also made it mandatory for the private water tankers in the city to register with the civic body.

What should be the way ahead?

- 1) **Creation of Waste water market-** A private marketplace to buy and sell treated waste water needs to be encouraged. A housing society, with a sewage treatment plant (STP) that treats water, can sell excess water to external parties. Treated water can be sold to agencies like BWSSB, other housing societies without STPs, or the civic body.
- 2) **Water Literacy-** There should be sensitization of citizens about the source of water, where it goes after usage, how much citizens consume, the cost of production, and the price we pay. This may ensure judicious use of water resources.

GS Paper 2

Subject: Indian Polity

Topic- Indian Constitution—Historical Underpinnings, Evolution, Features, Amendments, Significant Provisions and Basic Structure.

Court's decision on the GN Saibaba case- Justice delayed, empathy denied

News: This article discusses the release of Professor GN Saibaba from prison. The Bombay High Court (Nagpur bench) found his 10-year imprisonment illegal.

Background

G N Saibaba, a former Delhi University professor, and co-accused were arrested between 2013-2014 by Maharashtra's Gadchiroli police for alleged Maoist links.

In 2017, a special court convicted them: Saibaba and four others got life imprisonment; Vijay Tirki received 10 years.

The Bombay High Court in October 2022 acquitted them, citing invalid sanctions under the UAPA and procedural issues.

The Supreme Court suspended this verdict in October 2022, noting the need for detailed scrutiny.

In April 2023, the SC set aside the HC verdict and ordered a re-hearing.

On March 5, 2024, the Bombay HC reaffirmed the acquittal, pointing out prosecution failures and invalid UAPA sanctions.

What was the court's decision on the GN Saibaba case?

Illegal Detention: The Bombay High Court declared GN Saibaba's 10-year imprisonment illegal.

Rejecting Charges: Charges of aiding a banned organization to wage war against the government were dismissed.

Law and Evidence: The court based its decision on thorough scrutiny of law and evidence.

Free Speech Rights: The judgment affirmed that intellectual engagement with political ideas isn't criminal, upholding the right to free speech.

Misuse of UAPA: The court noted that downloading information or sympathizing with a philosophy doesn't warrant application of harsh laws like UAPA.

Critique of Vague Allegations: The court criticized the use of vague allegations for criminal conviction.

Focus on Human Rights: The decision highlights concern about human rights and justice in the judicial process.

What are the broader implications of the GN Saibaba case?

Highlighting Judicial System Flaws: The case underscores issues in India's judicial process, particularly in handling sensitive and high-profile cases.

Public Attention and Empathy: The case has garnered public interest, spotlighting the plight of vulnerable individuals in the criminal justice system. The situation stresses the importance of empathy and reason in

judicial decisions.

Potential for Legal Reform: This case could prompt a reevaluation of legal processes, advocating for reforms that align with justice and constitutional rights.

Raising Awareness: It serves as a reminder of the importance of safeguarding freedoms and dignity within the legal framework.

Kovind panel on One Nation, One Election

News: The article discusses a proposal by the Kovind panel for holding all elections in India together. This requires changing the Constitution and some laws. It suggests not all changes need state approval, but some legal experts might challenge this idea.

For details information on **One Nation, One Election** [read here](#)

What are the proposals of the Kovind panel on One Nation, One Election?

Simultaneous Elections: Proposes holding Lok Sabha, state assemblies, and local body elections together.

Constitutional Amendments: Recommends 15 amendments to the Constitution, altering and adding to various provisions.

Legal Changes for Union Territories: Suggests amendments to three statutes governing Delhi, Jammu and Kashmir, and other Union Territories.

Presidential Notification: A Presidential notification would set an "appointed date" for these simultaneous elections.

State Ratification Not Always Necessary: For syncing Lok Sabha and Assembly elections, state ratification isn't required. However, for a common electoral roll and aligning local body elections with national polls, state approval is needed.

Constitutional Authority: According to the panel, the Constitution mainly entrusts Parliament, not states, with the power to conduct Assembly elections.

For For more information on **Govt panel to study simultaneous polls** [read here](#)

What are the challenges in implementing it?

1. Needs 15 constitutional amendments, which is a **complex and lengthy legislative process**.
2. Relies on a Presidential notification to set an election date, **adding a procedural challenge**.
3. **Certain amendments require approval from half of the states**, which might be difficult to achieve.
4. **Judicial Review Possibility:** Past examples, like the Kihoto Hollohan case, show that such significant legal changes can be subject to judicial scrutiny and potential overturning by courts.

Topic- - Separation of Powers between various organs

Time to prohibit judges from joining politics

Context- Justice Abhijit Gangopadhyay has recently resigned as a judge of the Calcutta High Court and joined the political party.

What are the legal and constitutional provisions regarding judges who wish to join politics?

Created with love ❤ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.

9 PM Compilation March [Second Week] 2024

India does not have any legislation for regulating the judicial conduct of judges of constitutional courts. They are not legally barred from occupying executive posts.

What are the issues associated with judges joining politics?

- 1) **Breach of oath** - Third Schedule of the Constitution requires a judge-designate to swear that he will perform his duties without fear or favour, affection or ill-will. Joining political parties for electoral office raises questions over impartiality and propriety.
- 2) **Undermine judicial independence**-Judicial independence is of paramount importance for preserving the sanctity of constitution. Judges may give politically biased judgements in return for favors from political executives.
- 3) **Violation Of Bangalore Principles of Judicial Conduct (2002)**- The declaration enlists certain judicial values including independence, impartiality, integrity, propriety etc. It asks judges to ensure that their conduct “both in and out of (the) court maintains and enhances the confidence of the public and the legal profession in impartiality of the judges.
- 4) **Breach of public trust**- The Supreme Court in **C. Ravichandran Iyer v. Justice A.M. Bhattacharjee (1995)** held that, “To keep the stream of justice clean and pure, the Judge must be endowed with sterling character, impeccable integrity and upright behaviour”.

In All India Judges’ Association v. Union of India (1991), the court highlighted the significance of society’s expectation from judicial officers. All these lofty ideals are violated when judges compromise on their neutrality.

What should be the way forward?

- 1) The top court should expressly prohibit judges of constitutional courts from taking the political plunge even after their resignation
- . 2) There should be a judge-made law on this issue since Parliament has no incentive to correct it.

Topic- Issues and Challenges Pertaining to the Federal Structure

Central Transfers- Issue of shares of some States

Context- Sixteenth Finance Commission will have to deal with Southern States' complaints which claim they have been facing a decline in their share of the resources transferred from the Centre to the States.

Which Indian States have been gaining and which are losing their share over time?

Share of States/groups of States in tax devolution

Table 1: Share of States (%) in Commission-wise tax devolution for groups and selected States

Region	Overall				Overall	Distance criterion
	FC12	FC13	FC14	FC15 (final)	FC15 (final) minus FC12	
Northern of which:	32.666	33.031	30.285	30.897	-1.769	4.907
Bihar	11.028	10.917	9.665	10.058	-0.970	0.862
Uttar Pradesh	19.264	19.677	17.959	17.939	-1.325	2.509
Central	12.726	12.392	13.767	14.564	1.838	1.298
West of which:	14.434	14.359	14.478	16.207	1.773	2.822
Maharashtra	5.082	5.284	5.649	6.317	1.235	1.758
Gujarat	3.625	3.101	3.156	3.478	-0.147	-0.089
Southern of which:	19.785	18.575	17.978	15.800	-3.985	-8.055
Tamil Nadu	5.305	4.969	4.023	4.079	-1.226	-1.736
Eastern	15.453	15.671	15.277	15.179	-0.274	-0.192
Hilly	3.639	4.421	6.361	7.353	3.714	-0.020

Source (basic data): Reports of Finance Commissions (Twelfth to Fifteenth) and writers' estimates

Notes: (1) The Fifteenth Finance Commission had submitted two reports. Here, the reference is to the final report. | (2) Shares are not strictly comparable across Commissions because of change in the status of Jammu and Kashmir for FC15.

In the case of the southern States, there has been a steady fall in their share, from 19.785% to 15.800%. In a comparison of these two Commissions, the northern and eastern States have also lost. The 'gainer States' were the hilly, central, and western States including Maharashtra.

Read more- [Fiscal Centralization in India](#)

What is the reason behind this uneven gain and loss?

1) **Income distance Criterion-** The main reason for the loss of the southern States is the income distance criterion (Table 1). It means that the farther a State is from the highest income State, the higher its share.

Table 2: Relative weights for different tax devolution criteria: FC12 to FC15 (2)

#	Criteria	FC12	FC 13	FC 14	FC 15 (final)
1	Population	25	25	17.5	15.0
2	Demographic change	-	-	10	12.5
3	Income/ fiscal capacity distance	50	47.5	50	45.0
4	Area	10	10	15	15.0
5	Forest cover	-	-	7.5	10.0
6	Tax effort	7.5	-	-	2.5
7	Fiscal discipline	7.5	17.5	-	-

Source (basic data): Reports of Finance Commissions (Twelfth to Fifteenth)

Table 3: Share of Centre and States in combined revenue (%)

FC period	Pre-transfer		Post-transfer	
	Centre	States	Centre	States
12th FC	64.3	35.7	38.7	61.3
13th FC	61.8	38.2	36.1	63.9
14th FC	62.3	37.7	31.9	68.1
15th FC (first 3 years)	62.6	37.4	31.3	68.7
2020-21	62.3	37.7	29.3	70.7
2021-22	64.1	35.9	32.3	67.7
2022-23	61.5	38.5	32.5	67.5

Source (basic data): IPFS, Union Budget documents, RBI

Notes: (1) Transfers include tax devolution and Finance Commission as well as other grants. | (2) Grants from the Centre to States after 2015-16 are taken from the Union Budget. It includes grants-in-aid to the Union Territories.

2) **Forest cover**- The main reason for the gain of the hilly States is area/forest criterion.
3) **Population**- For the Fifteenth Finance Commission, data for the population in 2011 was used (Before that population data of 1971 was used). The demographic change criterion was introduced so that states that showed better performance in reducing fertility rates are not unduly penalized.

What is the impact of these changes on Indian states?

The joint impact of these two changes, that is income distance criterion and population, has been marginal for all groups of States. For Tamil Nadu, the joint impact was marginally positive.

What should be the way forward?

- 1) **Income distance criterion**- The Sixteen Finance Commission can reduce the weight of this criterion by 5% to 10% points and increase weightage of another criterion.
- 2) **Cess and surcharge**- The Centre has increased the cesses and surcharges, thereby reducing the size of the divisible pool. This is not desirable. There is a need to limit the share of cesses and surcharges to 10% of the Centre's gross tax revenues.

Topic- Salient Features of the Representation of People's Act.

"Missing voters"- 'Missing Voters': Forgotten, Not Gone

News: This article discusses how many voters, mainly young, single male migrants in cities, don't vote because their addresses don't match their current homes. The Election Commission's plan to use remote voting machines could help them vote, impacting future politics and party strategies.

For information on steps taken by ECI to ensure voting rights for migrants [read here](#)

Who are the "missing voters"?

The "missing voters" are primarily young, single male migrants in urban areas, who are unable to vote because their addresses on electoral rolls don't match their current living places. Often residing in slums and constantly moving for work, these voters, typically aged between 16 and 30, slip through the voting net. For example, in cities like Delhi and Bengaluru, a significant number of these migrants are unmarried men who have moved for employment opportunities.

What impact could their voting have?

Increased Voter Turnout: Allowing these 'missing voters' to participate could raise the voter turnout significantly, potentially up to 30% more, broadening democratic participation.

Shift in Political Focus: Their unique concerns and backgrounds would force political parties to recalibrate their manifestos, focusing on different issues like urban employment and migration-related challenges.

Influence on Long-term Strategies: The sudden inclusion of young, urban, mostly single, and male voters would lead parties to adapt their long-term election strategies to appeal to these new demographics.

Demand for Specific Policies: These voters would likely push for policies that address job security and skill development, reflecting their needs as transient workers.

What changes might political parties make?

Focus on Job Security and Skills: Political parties may prioritize policies for job security and skill enhancement, addressing the needs of the transient workforce.

Address Urban Worker Issues: With the inclusion of migrant workers as voters, parties might focus more on urban employment challenges.

Consider Rural Demands: As men leave villages for city jobs, women's rising role in agriculture might lead parties to address rural needs and women farmers' concerns.

Support for Small-scale Enterprise: Parties might focus on small-scale enterprises, as women are increasingly active in this sector and their political interests grow.

Way forward

To address the issue of 'missing voters', the Election Commission's plan to use remote electronic machines is crucial. This will enable migrant workers to vote, thereby ensuring a more inclusive and representative democratic process.

Concerns related to the ONOE Policy: The case against One Nation, One Election

News: The article discusses a proposal in India for holding all elections at the same time. It mentions various concerns and opinions about this idea, including its impact on democracy, federalism, and the election process.

For details information on **One Nation, One Election (ONOE)** [read here](#)

What are the recommendations of the High-Level Committee on the One Nation, One Election (ONOE) Policy?

Two-Phased Strategy: The Committee suggests implementing ONOE in two phases across all government levels.

Amending the Constitution: They propose changing Articles 83 and 172 to enable simultaneous elections without needing state approval.

Handling Early Dissolutions: If an assembly is dissolved early, new elections should only be for the remaining term.

Preventing Constitutional Conflicts: They acknowledge the current Constitution guarantees a five-year term for each assembly, which this plan would alter.

For information on **Kovind panel on One Nation, One Election** [read here](#)

What are the concerns related to the ONOE Policy?

Federalism and Local Issues: Combining elections may blur distinctions between national and local concerns, possibly neglecting local needs.

Constitutional Challenges: The policy might conflict with the Constitution's provision for a five-year term for elected assemblies.

State Opposition: Tamil Nadu's government has strongly opposed ONOE, labeling it undemocratic and autocratic.

Election Commission's Neutrality: Recent events raise doubts about the Election Commission of India's independence, crucial for managing fair elections.

Logistical Feasibility: Questions exist about the practicality of conducting simultaneous elections nationwide, considering the requirements for security, officials, and voting machines.

What does the Supreme Court say?

Basic Structure Doctrine: The Supreme Court, in past rulings like **Kesavananda Bharati vs State of Kerala**, emphasized the Constitution's basic structure, which includes free and fair elections.

Democracy as a Constitutional Feature: The Court, through the **Indira Gandhi vs Raj Narain case**, affirmed that democracy, with impartial elections, is a fundamental constitutional aspect.

Judicial Review Role: In a recent **case involving Chandigarh's mayoral election**, the Supreme Court showed readiness to intervene in electoral processes if they appear constitutionally unsound.

Potential Review of ONOE: The Supreme Court's past decisions suggest it will closely scrutinize ONOE for constitutionality, focusing on maintaining democratic principles.

Concerns with election expenditure in India - We need limits on election campaign spending

News: The article discusses the high cost of elections in India. It talks about the government and political parties spending a lot on advertising and other campaign activities, which can be unfair. The article suggests reforms to make elections more equal and transparent.

What is the current status of election expenditure in India?

Government Ad Spending: The central government spent ₹3,020 crore on advertisements from 2018-19 to 2022-23, with a spike in election years, like ₹1,179 crore in 2018-19.

Candidate Expenditure Limits: ₹95 lakh per Lok Sabha constituency in larger states, ₹75 lakh in smaller states. However, these limits are often exceeded.

Party Spending: No limit for political parties. In the 2019 elections, BJP spent ₹1,264 crore, Congress ₹820 crore. Estimated total spending by parties was around ₹50,000 crore.

What are the concerns with election expenditure in India?

Lack of Spending Caps for Parties: While candidates have specific spending limits, there are no caps for political parties. This leads to excessive spending, as seen in the 2019 elections where political parties reportedly spent around ₹50,000 crore.

Influence of Money on Fairness: The large amount of money spent, particularly by major parties like BJP and Congress, raises concerns about the fairness of elections.

Illegal Practices and Opacity: Apart from legal expenditures, the distribution of cash to voters and opaque funding sources contribute to corrupt electoral practices, undermining the democratic process.

For information on **Issues in Electoral Funding in India** [read here](#)

What should be done about it?

According to the "**Proposed Electoral Reforms**" submitted by the Election Commission of India in 2016, the key suggestions included:

Ban Pre-Election Government Ads: Introduce a ban on government advertisements six months before elections to prevent misuse of public funds for political gains.

Equalize Party and Candidate Spending Limits: Amend laws to include a spending cap for political parties, similar to the limits for individual candidates (₹95 lakh in larger states, ₹75 lakh in smaller states).

Transparent Party Financing: Implement measures for greater transparency in party financing to reduce the influence of undisclosed donations and corporate funding.

Swift Legal Action on Violations: Appoint additional judges in High Courts for quick resolution of election-related cases, creating a deterrent against overspending and other violations.

Explore State Funding of Elections: Consider state funding of elections, as suggested by the Indrajit Gupta Committee (1998) and the Law Commission report (1999), to reduce dependence on private donations.

For more information on **State Funding of Election** [read here](#)

Topic-Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional Bodies.

Changes in the Election Commission of India's selection process

Background

In March 2023, the Supreme Court (Anoop Baranwal v. Union of India Case) ordered the creation of a selection committee for the ECI with the Chief Justice of India (CJI) as a member. However, later, Parliament passed a law excluding the CJI from this committee.

For information on changes introduced by SC regarding selecting Election Commissioner [read here](#)

What are the changes in the Election Commission of India's selection process?

Introduction of a Selection Committee: A committee was formed for selecting Election Commission of India (ECI) members, initially including the Chief Justice of India (CJI).

Exclusion of the CJI: Later, a law was passed that removed the CJI from this committee, raising concerns about potential bias in the selection process.

Restoration of Equivalence with Supreme Court Judges: In the final amendments, the equivalence of the CEC and ECs with Supreme Court judges was restored, reversing an earlier proposal to equate them with the Cabinet Secretary.

Disparity in Removal Process Unchanged: The government did not establish parity in the removal process between the CEC and ECs. The CEC continues to have a removal process like a Supreme Court Judge, while ECs can still be removed by the President upon the CEC's recommendation.

Change in Search Committee Leadership: The role of the chair of the Search Committee was shifted from the Cabinet Secretary to the Law Minister. Additionally, the requirement for committee members to have election-related experience was dropped.

For information on key features of the Bill for appointments to the Election Commission [read here](#)

What are the concerns about these changes?

1. Exclusion of the Chief Justice of India (CJI) from the selection committee for the Election Commission of India (ECI) **raises concerns about potential bias in the selection process.**
2. The equivalent of Chief Election Commissioner (CEC) and Election Commissioners (ECs) with Supreme Court judges was restored, but the disparity in their removal process remains, **leading to confusion.**
3. The replacement of the Cabinet Secretary by the Law Minister as chair of the Search Committee, and changes in committee member criteria, **raises questions about the expertise and independence of the selection process for the ECI.**

Subject: Governance

Topic- Important Aspects of Governance, Transparency and Accountability

Need for transparent political funding: S Y Quraishi on electoral bonds: No going back to square one

News: The article discusses the Supreme Court's decision to declare India's electoral bonds scheme unconstitutional. It focuses on the need for transparent political funding and suggests alternatives.

What are the concerns about political donations in India?

Pre-Electoral Bonds

Opacity in Donations: Prior to 2018, political funding was primarily in cash and lacked transparency. Only donations over Rs 20,000 were reported to the Election Commission and eligible for income tax rebates.

Concerns of Corruption: Cash-based donations raised suspicions of corruption and influenced government decisions.

Electoral Bonds

Increased Secrecy: Introduction of electoral bonds led to a total lack of transparency about donors and recipients.

No Accountability: The identities of both donors and recipients were kept secret, heightening concerns over quid pro quo arrangements.

Legal Challenges: The Supreme Court's ruling against the scheme highlighted the urgent need for reform in political funding for democracy's integrity.

For more information on Issues in Electoral Funding in India [read here](#)

What are the proposed solutions for transparent political financing?

State Funding of Political Parties: A proposal of Rs 100 for every vote a party receives, aiming to eliminate corporate influence. However, it raises questions about funding new parties or independents.

For information on state funding [read here](#)

National Election Fund: Establishing a fund where corporates and private entities can contribute with tax concessions. This aims to reduce corporate fears of harassment from political parties. The concern here is ensuring equitable distribution among parties.

Independent Auditing: Political party accounts should be audited by independent auditors, not in-house auditors, to ensure accountability.

Public Funding Mechanism: A suggestion for the public to fund the democratic process through means like a small cess on petrol.

Transparency in Electoral Trusts: Addressing the lack of transparency in existing electoral trusts, which are supposed to provide a layer of separation between firms and political parties.

For more information on Electoral Trust [read here](#)

How do other countries handle political financing?

According to the International Institute for Democracy and Electoral Assistance's 2012 study 'Political Finance Regulations Around the World':

State Funding Based on Votes: Out of 180 countries, 71 provide state funds to political parties based on the number of votes they secure.

European Adoption: This system is prevalent in 86% of European countries.

African Utilization: 71% of African countries use this funding method.

Americas' Implementation: It's adopted by 63% of countries in the Americas.

Asian Practice: 58% of Asian countries follow this approach.

Potential in India: Given the widespread global usage and India's association with the institute, this system could be feasible in India.

Questions raised by making the Electoral Bonds scheme public: Five Facts, Five Takeaways

News: The article discusses the Supreme Court's decision to strike down the Electoral Bonds scheme as unconstitutional. It highlights the need for transparency in political donations and raises concerns about the potential for corruption and unfair advantages in elections.

What are the facts and questions raised by making the Electoral Bonds scheme public?

Unconstitutional Scheme:

The Supreme Court declared the Electoral Bonds scheme unconstitutional due to its lack of transparency.

High Volume of Funds: ₹12,679 crore in bonds were purchased, with ₹12,155 crore used by political parties. This highlights the scale of political funding involved.

Dominant Party Beneficiary: The Bharatiya Janata Party received over ₹6,000 crore, significantly more than other parties.

Donor Anonymity: Most donors are private, unlisted companies. For example, Future Gaming and Hotel Services Pvt Ltd was a top donor. This raises questions about the transparency of donor identities.

Financial Discrepancies: Some companies donated beyond their financial capacity, like a company donating ₹90 crore with net profits under ₹250 crore, questioning the motive behind such donations.

Potential Quid Pro Quo: Concerns arise about possible favors exchanged for donations, needing further investigation into donor-recipient relationships.

Integrity of Politics: The massive funds required for elections suggest difficulties for ordinary citizens to participate in politics, questioning the fairness and inclusivity of the political system.

9 PM Compilation March [Second Week] 2024

For more information on Issues in Electoral Funding in India read [article 1](#), [article 2](#)

What should be done?

Implement Transparency: Introduce clear guidelines for disclosing donor identities and donation amounts, addressing the opaqueness criticized by the Supreme Court.

Monitor Donor Backgrounds: Scrutinize donors, especially private, unlisted companies like Future Gaming and Hotel Services Pvt Ltd, to understand their financial capabilities and motives.

Ensure Fair Political Funding: Address the imbalance shown by the ₹6,000 crore received by the Bharatiya Janata Party, aiming for equitable distribution among parties.

Investigate Quid Pro Quo Scenarios: Thoroughly investigate potential favors exchanged for donations, ensuring political integrity.

Reform Election Spending: Reform how campaign funds are spent, promoting legal and ethical practices to foster clean elections.

New governance model for AI: In issuing AI advisory, MEITY becomes a deity

News: The article discusses how India's MEITY issued vague advisories on AI regulation, without clear legal basis. These advisories, often made in response to specific events, demand compliance from tech companies but lack detailed guidelines or legal authority. This approach has led to criticism and confusion.

What is MEITY's recent AI regulation?

MEITY's recent AI regulation, issued on March 1, 2024, introduces a new governance model for AI that involves licensing AI models. This regulation specifically targets AI models for bias prevention and categorizes them as "under testing" or "unreliable."

For information on Regulation of AI [read here](#)

What is the controversy around MEITY's advisories?

MEITY's advisories lack legal clarity: They are not well-defined under the principal legislation of the IT Act, causing uncertainty about their legal standing.

Reactive to specific events: Advisories were issued in response to events like the viral deepfake video of Rashmika Mandanna and a controversial AI response about the Prime Minister.

Vague requirements: Terms like "bias prevention" and "unreliable AI" in the advisories are undefined, leading to ambiguity and confusion.

Unclear enforcement: The advisories imply compliance but don't state clear penalties or legal consequences, making them seem more like forced suggestions.

How has the government responded to criticism?

Exemption announcements on social media: The Minister exempted startups from the advisory in a Twitter post, showing an informal response to concerns.

Unclear explanations: In response to criticism, the Minister offered vague interpretations on social media, failing to provide concrete clarifications or official documentation.

Avoiding key issues: Despite criticism, the Minister avoided discussing the controversial licensing requirement, focusing instead on labeling the advisory as merely a suggestion.

Changing stance: The government's approach shifted from formal retraction in the past (like the Draft Encryption Policy in 2014) to maintaining their position despite the recent backlash, indicating a less responsive stance to public criticism.

What does this reflect about technology policy in India?

Influencer culture influence: Technology policy in India is increasingly swayed by social media and press coverage rather than thorough, deliberative processes.

Expanding scope of IT Rules: The IT Rules, 2021, originally for user-generated content, now broadly cover digital news and online gaming, leading to legal challenges.

Decline in Formal Policy Processes: The trend of modifying advisories informally on social media indicates a departure from formal legislative procedures.

Risks in Criticism: A new environment where critiquing government policies carries greater risk, indicating a shift towards more authoritarian digital governance.

Topic: Issues relating to development and management of Social Sector/Services relating to Health, Education.

Integrating modern and traditional medicine (AYUSH) systems

News: The article discusses the challenges and possibilities of integrating modern and traditional medicine (AYUSH) systems.

What are the models for integrating modern and traditional medicine (AYUSH) systems?

Competitive Model: Features rivalry between modern and AYUSH medicine, with each pointing out the other's weaknesses and competing for patients. This model involves conflicts at the level of professional associations and possible litigation.

Coexistence Model: Recognizes both systems' legitimacy, allowing them to operate separately without interference. In this model, modern medicine practitioners may permit patients to opt for AYUSH treatments. Conversely, AYUSH practitioners typically request patients to discontinue their modern medications if they wish to start AYUSH therapies.

Cooperation Model: Ideal integration where both systems acknowledge each other's strengths and work together for patient care. This could improve modern medicine's focus on prevention. For example, yoga is increasingly accepted by modern practitioners due to evidence of its effectiveness.

What are the challenges in integrating modern and traditional medicine (AYUSH) systems?

Trust Deficit: There's skepticism between practitioners of modern and AYUSH systems due to varying outcomes when patients switch treatments, often based on anecdotal evidence.

Technical Differences: AYUSH is diverse, with each discipline requiring unique integration strategies. For example, yoga's effectiveness is recognized, but integrating ayurvedic or homeopathic medicines remains contentious.

Operational Challenges: Effective teamwork requires understanding each other's strengths and limitations. However, there is a lack of knowledge about AYUSH among modern medicine practitioners and vice versa.

Regulatory Issues: The regulation of integrated practices is evident, as modern practitioners sometimes use

ayurvedic pills without full understanding. Similarly, AYUSH practitioners may practice modern medicine without proper authorization.

What should be done?

Build Evidence for AYUSH: Enhance trust by developing evidence-based AYUSH treatments, filtering out ineffective ones.

Create Composite Guidelines: If evidence supports, develop combined standard treatment guidelines integrating the best of both systems.

Implement Strong Regulation: Establish clear rules for collaboration, with accountability defined for both AYUSH and modern medicine practitioners.

Educational Integration: Consider teaching basic AYUSH concepts in modern medical courses, but without overburdening the curriculum.

Health Technology Framework: Utilize existing frameworks in India for assessing and regulating integrated practices, focusing on safety, quality, and efficacy.

Issues of regulation of pharma industry

Context- There were reports of a big fake drugs racket in Delhi recently. Further, the Government has notified the Uniform Code for Pharmaceutical Marketing Practices (UCPMP) 2024.

What is the existing system to ensure safety and quality of drugs in India?

- 1) Manufacturing facilities need to be licensed.
- 2) The details of inputs that go into manufacturing are inspected and recorded.
- 3) The qualifications of individuals in charge of manufacturing are prescribed.
- 4) Production facilities are continuously inspected by competent authorities.

Read more- [National List of Essential Medicines \(NLEM\) and Drug Pricing in India](#)

What are the issues in ensuring safety and quality of drugs in India?

- 1) **Archaic legislation-** The legislation is over 75 years old, with many patchwork amendments. Despite improvement in knowledge about effective regulation, most of this knowledge has not been incorporated into the regulation of drug quality.
- 2) **Price control mechanism-** The price control mechanism used in India interferes with the expenditure levels of manufacturers. This leads to compromise with quality of drug manufactured.
- 3) **Sale of fake medicine-** The medicines could be fake or spurious and may have been substituted in place of the original medicines by unscrupulous middlemen.
- 4) **Substituted medicine-** This happens when the brand of medicine recommended by the doctor is not available. Thus, the dispensing person in the shop needs to be knowledgeable and give the patient exactly what is required. However, this does not happen because of unavailability of qualified persons.
- 5) **Unauthorized pharmacies-** There are many unauthorized pharmacies in operation. The regulatory responsibility is distributed across the Union and the state government which creates overlapping jurisdictions.
- 6) **Presence of multiple regulator-** There is a separate regulator to deal with the education, profession, and practice of pharmacists.

7) **Lack of quality data**-There is lack of robust data in the workings of drug industry and the prevalence of various kinds of failings.

What should be the way forward?

Drug traceability systems on **public blockchains** can potentially help improve the authenticity of medicines throughout the supply chain.

By associating each drug unit with a digital identity, stakeholders can easily track and verify its origin, authenticity, and movement across the supply chain.

Subject: International Relations

Topic- Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests.

The India-EFTA trade deal : A win-win proposition on various dimension

Context- India has recently signed a free trade agreement (FTA) with four European countries-Iceland, Liechtenstein, Norway, and Switzerland.

What is the European Free Trade Association (EFTA)?

The European Free Trade Association (EFTA) is an intergovernmental organization set up for the promotion of free trade and economic integration to the benefit of its four Member States – Iceland, Liechtenstein, Norway, and Switzerland – and the benefit of their trading partners around the globe.

These are very high-income countries and have a **strong position** in certain supply chains. For ex-in the world of finance, both Switzerland (**through its banking sector**) and Norway (through its **sovereign wealth fund**) have a disproportionate influence.

Liechtenstein has an innovative financial sector, particularly when it comes to ESG (**environment, social, governance**) investing.

Read more- [European Free Trade Association \(EFTA\)](#)

What is India-EFTA trade dynamics?

EFTA countries	Exports	Imports	Trade balance
Iceland	13	5	8
Liechtenstein	0	8	-8
Norway	484	782	-298
Switzerland	1,382	19,657	-18,275
TOTAL	1,879	20,452	-18,574

*CY2023

As shown in the table, India has a **consistent trade deficit** with all the 4 EFTA countries. Switzerland is India's largest trade partner among the groups 4 members.

What is the significance of India-EFTA trade deal for India?

- 1) **Boost to trade opportunities** -It will empower Indian exporters access to specialized inputs and create conducive trade and investment environment. This would boost exports of Indian made goods as well as provide opportunities for services sector to access more markets.
- 2) **India- EU markets integration**-Over 40% of Switzerland's global services exports are to the EU.Indian companies can look to Switzerland as a base for extending its market reach to EU.
- 3) **Strengthening Make in India and Atmanirbhar Bharat**- It will encourage domestic manufacturing in various sectors like Infrastructure and connectivity, manufacturing, machinery, pharmaceuticals, chemicals, Food Processing etc.
- 4) **Technology Transfer**-EFTA countries could help India integrate cutting-edge technological advancements in its manufacturing, agriculture and service sectors. It could also help India in production of green energy.
- 5) **Win-win proposition**- EFTA countries have cutting-edge technology. However, they lack scale. India can provide scale to these countries.
- 6) **Serves as a template**- India has innovated by including a different kind of "behind-the-border" requirement in its deal with EFTA countries. It has conditioned the lowering of tariffs on the mobilization of largescale investment by the EFTA countries. This could serve as a template when India has to negotiate trade agreements with other developed countries.

Topic-India and its neighbourhood- relations.

Gelephu Mindfulness City project: Bhutan's opening move, its Gelephu gambit

News: The article discusses Bhutan's plan to build a carbon-neutral city called Gelephu Mindfulness City, which faces challenges like geography and funding. It's important for Bhutan's economy and India's regional influence, but requires big investments and cooperation from India.

What is the Gelephu Mindfulness City project?

Nature of the Project: Gelephu Mindfulness City (GMC) is a planned carbon-neutral city in Bhutan, spanning 1,000 square kilometers.

Focus Areas: It will concentrate on eco-friendly industries such as IT, education, hotels, and hospitals.

Economic Necessity: Bhutan aims to diversify its economy beyond hydropower and tourism, addressing challenges like youth outmigration.

What are the challenges faced by the Gelephu Mindfulness City project?

Geographical Challenges: Gelephu's location on a broad plain in a mountainous area leads to high rainfall and flooding during monsoons.

Environmental Concerns: The city is situated near wildlife corridors, which requires careful planning to prevent disturbing natural habitats.

Regional Security: Past insurgencies in nearby Assam and Myanmar, and a history of militant activities in the area, highlight security challenges.

Infrastructure Dependencies: As a landlocked area, Gelephu is dependent on neighboring countries, mainly

India, for essential infrastructure like trade and transport.

Economic Constraints: The project requires significant investment for infrastructure development, including upgrading the local airport to international standards.

Political Dynamics: The initiative is influenced by Bhutan's economic needs and geopolitical factors, including relationships with India and China.

What are the implications of the Gelephu Mindfulness City project?

Implications for India:

Strategic Influence: India's involvement in the Gelephu project strengthens its influence in South Asia, countering China's growing presence.

Economic Benefits: The project dovetails with India's regional connectivity plans, enhancing trade routes and infrastructure development.

Investment Opportunities: India's role in financing and expertise, particularly in airport expansion, opens avenues for further investments in Bhutan.

Global Implications:

Environmental Model: The carbon-neutral aspect of Gelephu Mindfulness City sets a precedent for sustainable urban development globally.

Geopolitical Balance: The project offers Bhutan a platform for international engagement, potentially balancing relations with India and China.

Regional Connectivity: The city's location is strategic for India's "Act East" policy, improving connectivity to Southeast Asia and the Indo-Pacific region.

GS Paper 3

Subject: Indian Economy

Topic- Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment.

Right to Apprenticeship law

News-The article presents a critical analysis of mandating Right to Apprenticeship law.

What is the Right to Apprenticeship law?

This is a proposed law which mandates private or public sector players to provide a one-year internship to any college degree/diploma holder on demand. The internship will be partially funded by the government.

What are the problems associated with mandating such law?

- 1) **Hampers business ecosystem** - The idea of forcing companies to accept candidates seeking temporary employment is undesirable. The decision to hire, even if for only a year, should be the employer's prerogative and not a government diktat. This will discourage private investment in India.
- 2) **High cost for private players** - The student does not contribute much to the firm's revenues during training.

Created with love ❤️ by ForumIAS- the knowledge network for civil services.
Visit academy.forumias.com for our mentor based courses.

Further, there's no certainty that the apprentice who has acquired the requisite skills will remain after the training period is over. Thus, it may be an uneconomical proposition for private industries.

3) **Limitation of MSMEs**- MSMEs will have difficulty in investing resources for training employees due to their financial and logistical limitations.

Read more- [Skill Development – Initiatives, challenges and solutions](#)

What is the significance of mandating the Right to Apprenticeship law?

1) **Creation of skilled workforce**- The government subsidizing an apprenticeship training system in private industry may pave the way for proper skilling of young workforce. It can also enhance academic-industry linkage.

2) **Mainstreaming of employment issues**- The legal and statutory right would create the onus on the government to pay special focus on employment for youths.

3) **Minimize populist scheme**- A government-financed workforce training programme can incentivize private companies to hire trained people. This is better than giving unemployment allowance schemes which lead to high fiscal deficit for state governments.

Shift from “Make in India” to “Make Products in India”

Context- The article highlights the need to shift from Make in India to Make Product in India for realizing the vision of Viksit Bharat.

What is the need for this shift?

1) **Ensuring high growth rate**- India's annual growth must consistently surpass 10 to 12 % for next many years to achieve a developed country status. In this context, it is important to focus developing products in domains like electronics, automobiles, and defence which can drive India's growth at faster pace. For ex-South Korea's success could be attributed to the development of these sectors.

2) **Knowledge driven economy**- In a tech-driven knowledge economy, a product's intellectual property contributes half its value. This makes it challenging to equal value-creation through manufacturing only. Hence, there is a need to shift from Make in India to Make Products in India.

Read more- [An analysis of PLI \(production-linked incentive\) scheme](#)

What steps can be taken to shift from Make in India to Make Products in India?

1) **Liberalize research & development** - There is a need to open research and development (R&D) beyond the public sector. This has been successfully done in the case of space and drones. There is a need to add atomic energy and deep-sea exploration to this list.

2) **Public-Private partnership**- There is a need to transform competition into meaningful partnerships. For instance, during the Covid pandemic, the National Institute of Virology, an ICMR lab, isolated the strains of SARS-Cov-2 virus and shared them with Bharat Biotech. This led to the development of Covaxin, which became available in just a few months.

3) **Ease of doing innovation**- Regulators must prioritize innovation over adherence to rules. For ex-during pandemic, despite the rules not providing for emergency use authorisation, authorities invoked a generic provision and issued restricted use licences for vaccines.

4) **Government procurement**- An OECD survey in 2017 revealed that 80 % of nations supported innovation through assured government procurement. It acts as a validation for innovators, instils consumer confidence,

and ensures revenue streams, thereby mitigating risk.

5) **Government Funding** - There is a need to mitigate risk in product development through government funding. India should learn from successful models like Darpa in the USA and Jozma in Israel. There should be expansion of iDEX model beyond defense.

6) **Demographic dividend** - India's demographic dividend needs to be leveraged to create a sizable talent pool in emerging technologies. Academic universities should be transformed into hubs that nurture entrepreneurship and innovation.

7) **Brand building for indigenously developed products** - Indian Brand Equity Foundation should be tasked with creating global brands for indigenously-developed-products. Further, the government should promote export of indigenously developed products through bilateral and multilateral mechanisms.

8) **Standard Making** - Geopolitics plays a huge role in standard making. For ex- delayed World Health Organization approval for Covaxin. Thus, to assert influence, the government must collaborate with industry to secure decision-making roles in global bodies.

"Make Products in India" is a strategic imperative and immediate government attention is necessary.

Problems faced by Gig workers

Context- The survey titled "Prisoners on Wheels" highlighted the plight of cab drivers and delivery persons in India

What is a gig worker?

According to the Code on Social Security, 2020, A gig worker is a person who performs work or participates in work arrangements and earns from such activities, outside of the traditional employer-employee relationship.

What is the status of gig workers in India?

There are over 7 million gig workers in the country. It may rise to 23.5 million by 2030.

Read more- [Labour Reforms](#)

What are the issues faced by the gig workers as revealed by the recent survey?

- 1) **Exploitation at multiple levels**-The survey revealed a picture of overwork, financial struggle, caste discrimination, and arbitrary work-culture for gig workers.
 - 2) **Underpaid**-The majority in both categories, that is cab drivers and delivery persons, have reported low fares and rates with higher premium reductions by platforms.
 - 3) **Toxic work conditions**- There are issues of arbitrary ID deactivation, and customers behaving badly with cab drivers.
 - 4) **Lack of social security provision**-They are not provided with social security benefits like accident, health, and retirement benefits
 - 5) **Lack of political will**- One of the labor codes passed by Parliament provides some protection to gig workers. However, the rules have not been framed at the all-India level.
- There is a need for robust legislative protection for gig workers. However, the law should not be so stringent that it should stifle the growth of formal employment.

Topic-Infrastructure: Energy, Ports, Roads, Airports, Railways etc.

Gender equality important in energy development

News: This article discusses how gender equality and women's involvement are crucial for sustainable energy development.

Why is gender equality important in energy development?

Crucial Role in Household Energy Management: Women primarily manage household energy for cooking, heating, and lighting, showing their integral role in energy consumption.

Impact of Energy Inequality on Health: Limited access to clean energy forces women to use harmful alternatives like biomass, leading to significant health risks and deaths.

Economic and Environmental Benefits: Gender equality in the energy sector can drive economic growth and environmental sustainability.

Innovative Solutions and Productivity: Increasing women's participation in energy can lead to more innovative approaches, improved productivity, and enhanced social outcomes.

Global Impact: Closing the gender gap could boost global GDP by trillions of dollars, showing the vast potential of women's empowerment in energy.

What are the challenges in achieving gender equality in the energy sector?

Limited Energy Infrastructure Access: Women often receive energy access last, impacting their ability to manage household energy needs efficiently.

Reliance on Harmful Energy Sources: Due to inadequate access to modern energy, women resort to using traditional sources like biomass and kerosene. This leads to significant health risks, with household air pollution causing 3.2 million premature deaths annually, 60% of whom are women and children.

Low Representation in the Energy Sector: The energy sector is not gender diverse. Only 32% of employees in renewable energy and 22% overall are women, compared to 48% in the global workforce. In India, only 10% of technical energy jobs are held by women.

Educational and Skill Disparities: Women face barriers in accessing education and training needed for technical roles in energy, further widening the gender gap.

What should be done?

Change Perceptions: Alter societal views on women's roles in the energy sector to recognize their potential as key contributors.

Mainstream Gender in Energy Policies: Integrate gender considerations at sub-national, national, and international policy levels to ensure women's needs and contributions are addressed.

Support Women-led Initiatives: Back programs like the Women at the Forefront and the Energy Transitions Innovation Challenge (ENTICE), which encourage women's entrepreneurship in sustainable energy.

Promote Educational and Skill Development: Facilitate women's access to education and training, especially in technical fields within the energy sector.

Implement Distributed Renewable Energy (DRE) Projects: Utilize DRE to provide quick, affordable energy access, reducing women's workload and enhancing productivity, as seen in initiatives like Solar

Mamas in India.

Challenges with nuclear waste: How is nuclear waste generated?"

Context: This article discusses how nuclear waste is created in nuclear reactors and the challenges of managing it. It explains the methods used to handle, store, and treat nuclear waste, including the reprocessing of spent fuel.

What is nuclear waste?

Nuclear waste is the byproduct of nuclear reactors, like when uranium-235 splits into barium-144 and krypton-89. These leftover elements can't undergo fission, so they become waste. This waste is very radioactive and needs careful storage to avoid environmental harm.

For more information [read here](#)

What are the challenges with nuclear waste?

Storage Duration: Nuclear waste requires isolation for millennia, far longer than modern humans have existed.

Accident Risks: For instance, an accident at the Waste Isolation Pilot Plant in the U.S. in 2014 released radioactive materials.

Environmental Impact: Concerns about contamination, like in Germany's Asse II salt mine, where nuclear waste possibly affected water resources.

Cost: Managing nuclear waste is expensive, adding \$1.6-7.1 per MWh to nuclear energy costs.

Liquid Waste Management: Challenges include how to safely treat and store liquid waste, as highlighted by issues with vitrification plants.

What are the best practices of nuclear waste management?

Cooling and Dry Cask Storage: Spent fuel is initially cooled underwater for decades, then transferred to dry casks for safer, long-term storage.

Liquid Waste Treatment: Treatment and controlled release into the environment, like Japan's disposal of Fukushima's treated water into the Pacific Ocean.

Geological Disposal: Burying waste underground in special containers, away from human activities, in stable geological formations like granite or clay.

Reprocessing: Separating fissile material from spent fuel for further use, reducing waste volume and increasing fuel efficiency, as practiced in India's reprocessing plants in Trombay, Tarapur, and Kalpakkam.

How does India handle its nuclear waste?

Reprocessing Plants: India has facilities in Trombay, Tarapur, and Kalpakkam. Trombay reprocesses fuel for plutonium production, while Tarapur and Kalpakkam handle spent fuel from power reactors.

On-Site Management: Nuclear power stations in India manage low and intermediate-level waste on-site, treating and storing it in specialized facilities.

On-Site Management: Nuclear power stations in India manage low and intermediate-level waste on-site, treating and storing it in specialized facilities.

Operational Challenges: There are concerns about the efficiency of these plants. For example, the delays in the PFBR project suggested operational issues at Tarapur and Kalpakkam, with a combined capacity factor of around 15%.

Future Complications: Handling waste from the PFBR will introduce new challenges due to its unique fission product and transuranic element composition.

Subject: Science & Technology

Topic- Achievements of Indians in Science & Technology; Indigenization of Technology and Developing New Technology

Agni-5 trial: A blast-off for superior deterrence

Background- China has in recent years been expanding its presence in the Indian Ocean region as part of an encirclement game.

What is an Agni-V Missile?

- 1) **Introduction-** Agni-5 is an ingeniously built advanced surface-to-surface ballistic missile developed under the Integrated Guided Missile Development Programme (IGMDP). It is a fire-and-forget missile, which cannot be stopped without an interceptor missile.
- 2) **Range-** The missile has the capability of hitting targets beyond the range of 5000 km.
- 3) **Technology Used-** It has incorporated Multiple Independently Targetable Re-entry Vehicle (MIRV) technology. This allows a single missile to carry multiple warheads targeting different locations.

What are the advantages of MIRV-Equipped Missiles?

- 1) It can inflict multiple damage with a single strike.
- 2) It can penetrate missile defense systems by overwhelming them with multiple warheads.

Read more- [India's missile capability](#)

What is the strategic significance of Agni-V Missile?

- 1) **Enhanced nuclear deterrence-** Agni-category missiles form the backbone of India's land-based nuclear deterrence and it is at the core of the country's deterrence in the larger context of the Sino-Indian power equation.
- 2) **Boosting defence capabilities-** India's defence arsenal has received a significant boost with Agni-V induction.
- 3) **Intercontinental Range Ballistic Missile (ICBM) Club-** It is not strictly an intercontinental ballistic missile (ICBM) of the order possessed by the Big Five that can hit targets as far as 15,000km. However, its 5,000km (about 3106.86 mi)-plus range can bring the farthest parts of China and even some of Europe within India's strike radius.
- 4) **Nuclear retaliation to first strike-** India's nuclear doctrine commits to "no first use". In this backdrop, it becomes more important to have a **tougher retaliatory** stance at first strike. The retaliation should be such that it inflicts maximum damage on the other side.

India's Fast Breeder Reactor (FBR) program

Context: The article discusses India's first Fast Breeder Reactor (FBR) in Kalpakkam, Tamil Nadu. This reactor is part of India's plan to use its thorium reserves for nuclear power. The reactor turns non-fissile material into fissile material, which can be used for energy.

What is the Fast Breeder Reactor (FBR) Project in India?

India has started '**core loading**' (process of placing nuclear fuel into the reactor's core) at its first Fast Breeder Reactor in Kalpakkam, Tamil Nadu. This is part of a three-stage nuclear program aimed at using thorium for nuclear power. The reactor transforms non-fissile material into fissile material, which can be used to generate electricity.

How has India's FBR program progressed?

Initiation: India's FBR program started two decades ago, aiming to harness thorium for power generation.

Organizational Setup: In 2003, Bharatiya Nabhikiya Vidyut Nigam Ltd (BHAVINI) was established to oversee this advanced nuclear project.

Challenges and Delays: The project's completion was initially expected by September 2010. Due to technological hurdles, the completion date faced postponements, with the latest target set for October 2022.

Global Standing: Upon completion, **India will become the second country after Russia to operate a commercial FBR.**

What is the significance of using thorium?

Abundant Resource: India has vast thorium reserves, located primarily in coastal sands across various states like Kerala and Tamil Nadu, offering a long-term energy solution.

Dr. Bhabha's Vision: The utilization of thorium was a key part of Dr. Homi J Bhabha's strategy to ensure India's energy security.

From Fertile to Fissile: Thorium, being a fertile material, can be converted into a fissile isotope like U233, making it a valuable resource for nuclear power.

Closed Fuel Cycle Approach: India's approach involves reprocessing spent fuel, allowing for efficient use of thorium by converting it into usable nuclear fuel.

What are the three stages of India's nuclear program?

For information on three stages of India's nuclear program [read here](#)

Way forward

With the commencement of core loading in India's first Fast Breeder Reactor, the way forward is clear. This crucial step in the second stage of India's nuclear program, using MOX fuel and a U238 blanket, is pivotal for advancing to the third stage, where thorium-rich resources can be effectively utilized for long-term energy security.

India's Achievements in Research Output

Context: The article discusses India's commitment to research and development (R&D). It mentions a new government fund for innovation, compares India's R&D spending with other countries.

What is the New Funding for Research and Development in India?

New Funding Announcement: The Indian government announced a corpus of ₹1 lakh crore in the 2024-25 interim Budget.

Purpose: This fund is aimed at bolstering the research and innovation ecosystem within India.

Slogan Change: Reflecting this focus, the government rebranded the slogan to 'Jai Jawan, Jai Kisan, Jai Vigyan, Jai Anusandhan'.

Significance: It underscores the importance of research and innovation in development, technological advancement, and global competitiveness.

Background Data: India's R&D expenditure increased from ₹6,01,968 million in 2010-11 to ₹12,73,810 million in 2020-21.

Comparative Perspective: Despite growth, India's R&D spending as a percentage of GDP (0.64%) is lower than major economies like China, Germany, and the USA.

For more information [read here](#)

What are India's Achievements in Research Output?

PhDs Produced: India annually awards 40,813 PhDs, ranking third globally, after the United States and China.

Publication Count: In research publications, India also holds the third position globally, with over 300,000 publications in 2022.

Global Patent Grants: India secured the sixth position worldwide in patent grants, with 30,490 patents granted in 2022.

Intellectual Capital: This reflects India's focus on fostering intellectual capital and its significant contribution to global research.

Research Ecosystem: These achievements highlight the strength and potential of India's research ecosystem in various fields, despite lower R&D spending compared to some other countries.

What are the New Initiatives to Boost R&D in India?

National Deep Tech Startup Policy (NDTSP): Aims to promote technological progress and innovation, especially in private sector engagement.

Anusandhan National Research Foundation (ANRF) Act: Enacted to catalyze research and innovation, focusing on development. The Act is designed to bridge India's R&D investment gap and nurture a robust research culture within Higher Education Institutions (HEIs).

Challenges Addressed: The initiatives target equitable fund distribution, interdisciplinary collaborations, and maintaining global standards.

Strategy: These policies are intended to elevate R&D spending, guide research and innovation, and encourage private sector involvement, particularly in burgeoning industries.

Topic- Awareness in IT, Space, Computers, and Robotics

On National AI mission and Investing in Artificial Intelligence

News - The government has allocated Rs10,371.92 crore package for the National AI (artificial intelligence) Mission to promote artificial intelligence in India.

What is National AI mission?

Objective- The primary objectives of the AI Mission include establishing robust computing powers for AI within India.

What are the steps taken by the government to promote AI?

- 1) The government has announced 10,371.92 crore package for the National AI (artificial intelligence) Mission.
- 2) Under the allocated fund, there is viability-gap funding of around 4,500 crores for setting up 10,000 high-end graphics processing units (GPUs).
- 3) There will be establishment of an "AI marketplace", designed to offer AI as a service and pre-trained model.
- 4) It will develop foundational models with capacities exceeding 100 billion parameters. It will be trained on datasets covering major Indian languages for sectors such as healthcare, agriculture, and governance.

What are the challenges in realizing full potential of AI in India?

- 1) **Under-investment as compared to other countries**- According to Stanford's AI Index 2023, the US has invested nearly \$250 billion in 4,643 companies, China has invested \$95 billion in 1,337 artificial intelligence (AI) startups. Whereas India has invested only \$8 billion in 296 startups since 2013.
- 2) **Lack of sophistication in microchip manufacturing** - AI needs chips below 5nm whereas the recently inaugurated chip manufacturing plant will manufacture chips in the size of 28-40 nanometres (nm).
- 3) **Graphics processing units (GPUs)**- India lacks Graphics Processing Units (GPUs) that are crucial to train AI models and build indigenous large language models (LLMs) and LMMs. The recently allocated money would only be sufficient to fund only 1,000-1,500 high-end GPUs.
- 4) **Inadequate local large multimodal models (LMMs)**- While India has only a handful of local LLMs, China already has at least 130 LLMs, accounting for 40% of the global total.
- 5) **Lack of digital data for Indian language**- Out of 22 official Indian languages, most of them do not have digital data. There is a lack of quality non-personal data.

What should be the way forward?

- 1) There should be more sophistication in microchip manufacturing to meet the demands of AI industry.
- 2) **Policy support**- The AI ecosystem needs sensible, clear regulation and legislation, and enabling policy such as-
 - a) A sensible Customs and tax policy for importing relevant hardware.
 - b) A push to encourage local manufacture of high-end equipment including semiconductors.
 - c) Since AI depends a lot on data, there is an urgent need to finetune the processing and storage of both personal and non-personal data.

Need for policy coordination to boost Trans-Asia Pacific e-commerce

Context- The Asia Pacific (APAC) region, with over 50 diverse countries, is currently experiencing phenomenal economic growth.

What is APAC Region?

The Asia Pacific (APAC) region has 50 diverse countries. It is home to more than half the world's population (52% in 2023). The region's GDP (35.4% of the world's in 2023) has surpassed that of North America and Europe.

What is the status of e-commerce in the region?

The APAC region has become the world's largest market for electronic commerce. According to a 2023 study by Data Bridge Market Research, the e-commerce sector of the region was valued at \$2.9 trillion in 2022. By 2030, it is projected to reach nearly \$6.2 trillion. In 2022, the region accounted for around 58% of the global retail e-commerce market.

What are the reasons behind the APEC region becoming a hotbed of e-commerce activity?

- 1) **Rise of middle-class-** The region has an increasing middle-class with rising disposable income. It is projected to reach 3.5 billion by 2030 which will form a massive consumer base eager to shop online.
- 2) **Enhanced participation of MSMEs** – Around 72% of MSMEs in the region are leveraging e-commerce platforms for their businesses and vulnerable groups like women entrepreneurs are adapting fast to e-commerce platforms.
- 3) **Better connectivity-** There is fast internet penetration in the region coupled with a mobile-first population of over 4.8 billion users. This creates a ready online audience.
For ex- India has the second-highest number of smartphone users globally (659 million in 2022). A significant part of these users is using digital wallets based on platforms like the Unified Payments Interface.
- 4) **Advancement in technology-** Rise of advanced technologies like faster telecom networks and big data, offer personalized experiences and improved logistics for businesses and consumers. This is contributing to the rise of e-commerce in APAC region.

What are the challenges in the e-commerce sector in APAC region?

- 1) **Lack of adequate support to MSME's-** MSMEs face issues of high logistical costs, stiff customs rules and complex clearance procedures. It restricts their global expansion and complicates their cross-border trade.
- 2) **Logistical issues-** Many countries in Southeast Asia still prefer Cash on Delivery. This creates logistical challenges and limits access to credit.
- 3) **Cybersecurity challenges-** Cybersecurity threats such as data privacy concerns and the presence of counterfeit products on some platforms can discourage consumers and businesses from adopting an e-commerce path.
- 4) **Issue of E-commerce regulation-** The regulations are not uniform across region. For ex- countries (like Singapore with its 2014 E-Commerce Act) have established specific regulations, whereas others rely on broader consumer protection laws.

What should be the way forward?

- 1) **Collaboration-** There is a need for discussions, sharing of best practices and partnerships to facilitate trade and exports among countries.
- 2) **Robust infrastructure-** There should be infrastructure improvements, regulatory harmonization and

9 PM Compilation March [Second Week] 2024

robust cybersecurity measures to ensure a secure and trustworthy online environment.

3) **Enhanced role of India**- An APAC policy forum, with India taking the lead, could help forge partnerships and lead to regional cooperation and policy harmonization. This can benefit businesses (especially MSMEs and women entrepreneurs) and consumers by fostering a more predictable and secure environment for online trade. **European Union adopts first AI Law**

News- The European Parliament has passed the first comprehensive regulatory regime for artificial intelligence, laying down “harmonized rules” called the Artificial Intelligence Act (AI Act, 2024).

What are the provisions of the Artificial Intelligence Act?

1) **Objective**-To improve the internal market's functioning by laying down a uniform legal framework for use of artificial intelligence systems in the Union.

2) **Jurisdiction**-It states that provisions will apply to AI providers for services in the European Union, irrespective of whether the providers are in the EU or in a third country.

3) **Restricted Activities**-It prohibits certain AI practices that can distort the behavior of a person or a group of persons by impairing their ability to make an informed decision.

4) **Establishing Artificial Intelligence Board**- There will be establishment of European Artificial Intelligence Board. The board will have representatives from member states and the Commission. Further, within each nation state a national supervisory authority will be tasked with monitoring the application and implementation of the new law.

5) **Imposition of fines**-Fines will vary from 30 million euros or 6 per cent of the total worldwide annual turnover. Fines depend on the severity of the infringement.

6) **Time period**-The new law will not come into force immediately. It gives AI developers and providers time to familiarize themselves with the regulations. The law will come into force in phases varying from six to 36 months (about 3 years).

What is unique about the act?

It categorizes AI into its potential for harm based on the level of intelligence of the programme.

1) It explicitly bans “**harmful AI practices**” that are a “clear threat to people”. It also lists 4 harmful practices in the act.

2) It seeks to regulate “**high risk AI systems**” that create “adverse impact on people’s safety or their fundamental rights.” The law has two kinds of high-risk AI systems.

3) It regulates AI systems that present **limited risk** such as systems that interact with humans like chatbots, emotion recognition systems, and AI systems that manipulate image, audio or video (deepfakes). These systems would also be subject to a limited set of transparency obligations.

4) It will provide ways to imagine the regulatory regime for AI to other countries.