27 March 2024

TOPICS COVERED

1. **Employment scenario in India grim, says ILO report (GS Paper III: Equality and Employment)**
2. **Sensing China threat, India joins Sri Lanka in race for seabed mining; applies for exploration rights   (GS Paper I: Geography)**
3. **A cry for help, a call for reflection and action   (GS Paper I)**
4. **Stop the war: On the U.N. Security Council's call for a Gaza ceasefire   (GS Paper II: IR)**
5. **The democratic political process is broken   (Essay)**
6. **Set the wheels in motion for a cyclists' manifesto   (GS Paper III: Infrastructure, GS Paper II: Scheme)**
7. **The need to curb black carbon emissions   (GS Paper III: Senvironment, GS Paper II: Scheme)**
8. **Can AI help in navigating mental health?   (GS Paper III: Use of S&T)**

Employment scenario in India grim, says ILO report

(GS Paper III: Equality and Employment)

- The **India Employment Report 2024**, released by the **ILO** and the IHD, highlights a concerning trend of rising unemployment among educated youth.
- **The share of unemployed youth with secondary or higher education nearly doubled from 35.2% in 2000 to 65.7% in 2022.**
- Youngsters constitute approximately **83% of the unemployed workforce** in India.
- Employment and underemployment among youth increased from 2000 to 2019 but declined during the pandemic years.
- Educated youth faced significantly higher levels of unemployment during this period.
- **Labour market indicators such as LFPR, WPR, and UR deteriorated between 2000 and 2018 but showed improvement after 2019**, coinciding with periods of economic distress.

Labour Force Participation Rate (LFPR):
- The percentage of the working-age population (usually 15 years and above) that is either employed or actively seeking employment.
- **Calculation:** LFPR = (Employed persons + Unemployed persons) / Working-age population x 100

Worker Population Ratio (WPR):
- The percentage of the working-age population that is employed.
- **Calculation:** WPR = Employed persons / Working-age population x 100

Unemployment Rate (UR):
- The percentage of the labour force (those employed or unemployed) that is actively seeking employment but unable to find work.
- **Calculation:** UR = Unemployed persons / Labour Force (Employed persons + Unemployed persons) x 100

Relationship:
- LFPR provides a broader picture of the working-age population's participation in the labour market.

- WPR focuses specifically on the employed population within the working age group.
- UR isolates the portion of the labour force that is actively seeking but unable to find work.

Importance of These Rates:

These rates are crucial indicators of a country's labour market health. They offer insights into:

- **Labour Market Activity:** A high LFPR suggests a large portion of the population is participating in the economy.
- **Employment Levels:** WPR indicates the percentage of working-age people with jobs.
- **Unemployment Levels:** UR helps assess the prevalence of unemployment within the labour force.

- The report cautions that the improvement in job indicators during economic slowdowns raises questions about its sustainability.
- Despite some improvements, the fundamental challenge remains **the insufficient growth of non-farm sectors to absorb workers from agriculture**.
- **Non-farm employment grew faster than farm employment until 2018**.
- Labour from agriculture was absorbed mainly by the construction and services sectors.
- However, **approximately 90% of workers remain engaged in informal work**, while the **share of regular work declined after 2018**.
- **Livelihood insecurities** are widespread in India, particularly in the non-agriculture, organized sector.
- Only a small percentage of workers in this sector are covered by social protection measures, and there has been a rise in contractualization.
- A significant portion of regular workers are covered by **short-term contracts**.
- Despite India's large young workforce being seen as a demographic dividend, many lack essential skills. For example, **75% cannot send emails with attachments, 60% cannot copy and paste files, and 90% cannot use mathematical formulas in spreadsheets**.
- India faces a **substantial gender gap** in the labor market, with low rates of female labor force participation.
- Social inequalities persist despite affirmative action and targeted policies, particularly affecting Scheduled Castes and Scheduled Tribes.
- While these groups have greater participation in the workforce due to economic necessity, they are often engaged in low-paid temporary casual wage work and informal employment.
- Despite improvements in educational attainment among all groups, social hierarchies persist within these communities.

Sensing China threat, India joins Sri Lanka in race for seabed mining; applies for exploration rights
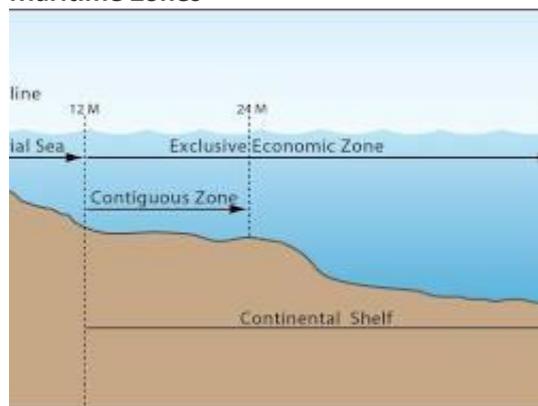
(GS Paper I: Geography)

- India applied to the **International Seabed Authority (ISBA) in Jamaica** for rights to explore two vast tracts in the Indian Ocean seabed.
- One of these regions is the **Afanasy Nikitin Seamount (AN Seamount),** known for its **cobalt-rich crust**.
- Sri Lanka has already claimed rights to this region under separate laws.

- India's application is partly motivated by reports of **Chinese vessels conducting reconnaissance in the same area**.
- The **AN Seamount is a structural feature in the Central Indian Basin**, located about 3,000 km off India's coast.
- It is approximately **400 km long and 150 km wide**, with oceanic depths of about 4,800 meters rising to about 1,200 meters.
- The seabed is rich in deposits of **cobalt, nickel, manganese, and copper**.
- Any actual extraction would require countries to apply for an exploration license from the ISBA, established under the United Nations Convention on the Law of the Sea (UNCLOS).

Open ocean

- Rights to explore open ocean areas are specific to regions not claimed by any country, where no sovereignty is recognized.
- About **60% of the world's seas are open ocean**, potentially rich in mineral resources, but the costs and challenges of extraction are high.
- **No country has commercially extracted resources from open oceans yet**.
- The Commission on the Limits of the Continental Shelf, linked to UNCLOS, may affect India's exploration plans.
- **Countries have exclusive rights up to 200 nautical miles** from their borders, including the sea-bed.
- **Some countries may claim a continental shelf extending beyond 200 nautical miles by demonstrating a natural land connection**.
- Sri Lanka has claimed up to 500 nautical miles using different criteria, potentially impacting India's exploration interests.
- India is staking a claim for exploration in response to Chinese presence in the region to safeguard its interests for the future.

Maritime Zones

- **Baseline:** The normal low-water line along a coast serves as the starting point for measuring maritime zones.
- **Territorial Sea (12 Nautical Miles):** A country has full sovereignty over this zone, just like its land territory.
- **Contiguous Zone (24 Nautical Miles):** A nation may enforce limited customs, fiscal, immigration, and sanitary laws within this zone.
- **Exclusive Economic Zone (EEZ - 200 Nautical Miles):** A country has exclusive rights to explore, exploit, conserve, and manage resources within the water column and seabed of this zone. This includes fishing, oil and gas, and potential mineral resources.

- **Continental Shelf:** The natural seabed extension of a country's landmass. Under UNCLOS, a country's coastal shelf may extend beyond 200 nautical miles if they can prove a geological connection. This expands their rights to seabed resources.
- **Sovereignty vs. Rights:** Countries have more comprehensive authority (sovereignty) within their territorial waters, while in the EEZ, they possess specific economic rights.
- **Continental Shelf Significance:** Extending the continental shelf rights increases a nation's potential access to valuable undersea resources.

International Seabed Authority (ISBA)

- **It is** an autonomous international organization established under the United Nations Convention on the Law of the Sea (UNCLOS).
- **Headquarters:** Kingston, Jamaica.
- **Purpose:** To manage and regulate activities related to mineral resources in the deep seabed beyond national jurisdictions (known as 'the Area'). This includes exploration, exploitation, and environmental protection.

Key Roles and Responsibilities

- **Issuing Exploration and Exploitation Contracts:** Grants permission to states and companies to explore and potentially mine deep-sea minerals.
- **Developing Regulations:** Creates the 'Mining Code,' which sets environmental standards, royalty systems, and other rules for deep seabed mining activities.
- **Financial Distribution:** Ensures equitable sharing of benefits from deep seabed mining activities, especially to benefit developing countries.
- **Protecting the Marine Environment:** Plays a crucial role in environmental protection in the deep seabed.

United Nations Convention on the Law of the Sea (UNCLOS)

- It is a comprehensive international treaty often called the "constitution of the oceans."
- **Adoption:** Concluded in 1982 and entered into force in 1994.
- **Scope:** Governs all aspects of ocean use and resources, including:
  - Navigation Rights
  - Territorial Sea Limits (12 nautical miles)
  - Exclusive Economic Zones (EEZ – 200 nautical miles)
  - Definition of the Continental Shelf
  - Deep Seabed Mining
  - Marine Environmental Protection
  - Dispute Resolution Mechanisms

Significance of UNCLOS

- **Global Maritime Order:** Provides a legal framework for managing oceans, reducing conflicts, and promoting cooperation.
- **Resource Management:** Establishes regulations for utilizing marine resources (fisheries, minerals) in different zones.
- **Environmental Safeguards:** Contains provisions for the protection and preservation of the marine environment.

Heralding Ugadi

Rhythm and steps: Artistes enthral devotees at the temple of Sri Kanakamma Ammavaru at Maddilapalem in Visakhapatnam on Tuesday in connection with the *'jatharas'* (fairs) organised ahead of the Ugadi festival. V. RAJU

- Ugadi is a significant festival in Karnataka, Andhra Pradesh, and Telangana, marking the **beginning of the Hindu New Year**.
- Explains the mythological significance of the day, linked to **Lord Brahma creating the universe**.
- Highlights special foods (Ugadi Pachadi) and traditions associated with the celebration.
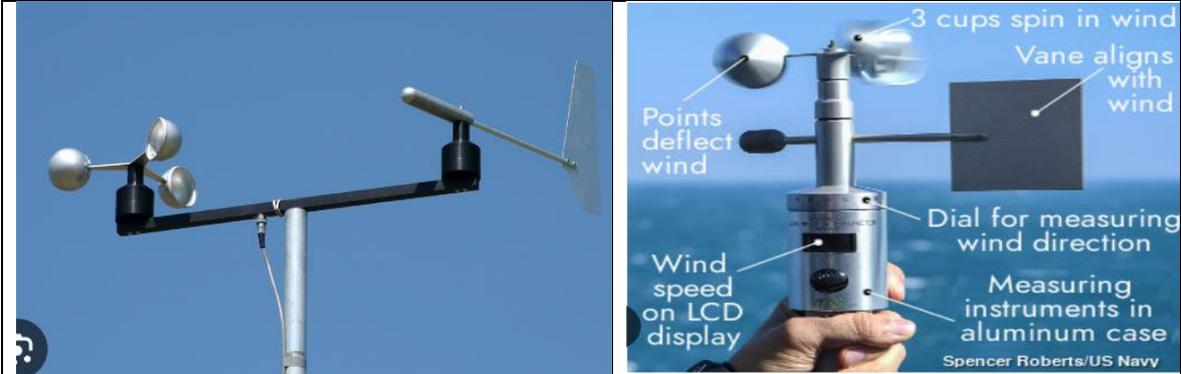
Wind speed monitoring devices to be installed along high speed rail corridor (GS Paper III: S&T)

The wind speed monitoring device, also known as an anemometer, is designed to provide real-time on wind speed data within the range of 0 to 252 kmph, and wind direction.

- Wind speed monitoring devices, called **anemometers**, will be installed along the Mumbai-Ahmedabad high-speed rail corridor.
- They will be placed in up to 14 locations to monitor wind speed and direction.
- These devices will **provide real-time data on wind speeds ranging from 0 to 252 kmph**.

- The high-speed train will pass through coastal areas in the western part of the country, where strong winds are concentrated.
- The purpose of installing these devices is to anticipate and mitigate the potential impact of strong winds on train operations on the viaduct.

Anemometer

- An anemometer is an instrument that measures wind speed and sometimes wind direction.
- The word "anemometer" comes from the Greek word "anemos," which means "wind."

Types of Anemometers
- **Cup Anemometer:** The most common type, it features several cups mounted on arms rotating with wind force. The number of rotations is used to calculate wind speed.
- **Hot-wire Anemometer:** A sensitive instrument using an electrically heated wire cooled by the wind. The rate of cooling determines wind speed.
- **Sonic Anemometer:** Relies on ultrasonic sound waves sent between transducers. Differences in the speed of sound along different paths allows calculation of both wind speed and direction.
- **Laser Doppler Anemometer:** Employs laser light to detect the Doppler shift caused by moving air particles, determining wind speed.

Applications
- **Meteorology and Weather Stations:** Crucial for collecting wind data to inform forecasts, weather patterns, and storm warnings.
- **Aviation:** Used at airports to provide essential wind information for safe takeoffs, landings, and aircraft navigation.
- **Renewable Energy:** Invaluable for assessing the wind potential of sites suitable for wind turbines.
- **Construction:** Helps determine safe operating conditions for cranes and other wind-sensitive structures.
- **Research:** Used in scientific studies of air flow, air quality, and pollution dispersion.

- Wind speed monitoring devices are being installed in five locations in Maharashtra and nine locations in Gujarat along the **Mumbai-Ahmedabad high-speed rail corridor**.
- In Maharashtra, these locations include **Desai Khadi, Ulhas river, Bangala Pada, Vaitarna river, and Dahanu suburb**.
- In Gujarat, the locations are along **Daman Ganga river, Par river, in Navsari suburb, Tapi river, Narmada river, in the mid-section of Bharuch-Vadodara, Mahi river, Baraja, and Sabarmati river**.

- These devices will focus on monitoring wind speed, especially in areas prone to gusts and river bridges.
- The Operation Control Centre (OCC) will oversee the monitoring of wind speeds through the installed anemometers.
- Train speeds will be adjusted accordingly if wind speeds range from 72 kmph to 130 kmph, as per the statement from the National High Speed Rail Corridor Limited (NHSRCL).
- Union Railways Minister Ashwini Vaishnaw announced that the **initial segment of the bullet train project, from Bilimora to Surat, is expected to be completed by 2026**.

A cry for help, a call for reflection and action (GS Paper I)

The unyielding quest for scholastic distinction often causes many an Indian student to go into a spiral, with tragic outcomes

- The socio-academic climate in India is causing concerns regarding the well-being of students.
- Changes in socio-economic dynamics are leading to despondency among youth and increasing stress in their academic pursuits.
- This **stress often culminates** tragically in **student suicides**.
- An example is the case of a teenager from Bihar who wrote a note before committing suicide in Kota, Rajasthan, a major hub for coaching institutes.
- The note referenced the **stress of preparing** for the Joint Entrance Examination (JEE), a highly competitive exam.
- Reports indicate a concerning trend of student suicides in Kota, with **15 cases reported in 2022, 18 in 2019, and 20 in 2018**.
- During the **COVID-19 pandemic years of 2020-21**, when traditional coaching centers were either closed or operated virtually, **there was negligible data on student suicides**.

Coaching and student welfare in Kota

- Every year, Kota attracts over 2,00,000 students from across India who come to prepare for competitive entrance exams like JEE and NEET.
- The city's coaching institutes contribute significantly to Kota's economy, generating an annual revenue of approximately **₹10,000 crore**.
- To address the issue of student suicides, coaching institute management has implemented **anti-suicide features in hostels**, such as **devices on ceiling fans and iron grills on balconies and passages**.
- However, **maintaining uniformity in safety measures** across the approximately 25,000 paying guest accommodations in Kota poses a challenge.
- As a preventive measure, the **local government has halted routine testing in coaching institutes for over two months**.
- **Hostel staff are receiving training** to enhance their ability to support students' well-being, including **mess administration, psychological support, and behavioral counseling**.

- The Kota police are promoting **proactive measures among hostel wardens** through campaigns like "**darwaze pe dastak (knock on the door**)."
- Additionally, **kitchen workers and meal service providers are encouraged to report any signs of students skipping meals or showing unusual behavior** to authorities promptly.
- **In 2022, over 13,000 Indian students took their own lives**, accounting for 7.6% of total suicide fatalities.
- This marked **an increase from previous years**, with 10,335 student suicides in 2019, 12,526 in 2020, and 13,089 in 2021.
- NCRB data from 2018 showed that nearly **95,000 students** had ended their lives between 2007-2018.
- **Over half of India's population, approximately 53.7%, consists of individuals under the age of 25**.
- **Despite this youthful demographic, many young people face barriers to entering the labor force due to a lack of essential skills**.
- The rise in student suicides over the past decade is closely linked to the **dearth of viable job opportunities for young people**.

The education system

- In contemporary India, the combination of **limited job opportunities, scarcity of government seats, and high fees in private institutions has intensified competition in the education system**.
- This **intense competition** exerts significant pressure on young students, **exacerbated by parental expectations** that may not align with their child's wishes.
- Some students are pushed relentlessly to achieve academic excellence or gain admission to specific institutions, while others **face criticism for not meeting expectations**.
- The strain of these demands can become unbearable for students, leading some to tragically **choose suicide as an escape**.
- According to the **All India Survey on Higher Education (AISHE) report (2019-20), only 21.4% of colleges are government-administered, with the majority (78.6%) under private entities**.
- A study published in The Lancet in 2008 revealed that **approximately 61% of global suicide fatalities were concentrated in Asia**.
- Many families in India, particularly those in **middle and lower-income brackets, cannot afford additional educational resources like coaching and tuition**, further intensifying the pressure on students to succeed.
- **Faculty members in educational institutions are sometimes reported to chastise students for poor academic performance instead of providing support and encouragement**.

Society and family expectations

- In contemporary Indian society, there's a **noticeable weakening of crucial connections between children and their families, impacting a child's ability to engage with relatives**.
- Factors influencing a child's development within the Indian context affect social relationships.
- **Parental imposition of academic preferences, emotional detachment, and societal expectations sideline a student's individual interests**.
- **Students struggle to meet parental standards, especially when they lack innate interest in the forced subject or course**.

- **Indian society emphasizes expectations, performance, and personal interests** in family interactions, which can either positively reinforce students or negatively affect them due to socio-economic circumstances.
- **Failure to meet parental expectations can leave young individuals feeling humiliated, dejected, desperate, and harassed**.
- **Creating an atmosphere of empathy and acceptance** is crucial to mitigate potential negative consequences for the younger generation.
- The **relentless pursuit of academic excellence often overshadows students' social lives**, **leading them to sacrifice interpersonal bonds and essential pursuits**.
- Young students express their distress on social media platforms, indicating their inner turmoil.
- Educational institutions often fail to provide the emotional support these young minds require, exacerbating their challenges.
- **Pupils from socioeconomically underserved communities face endemic discrimination, intensifying their hardships**.
- There's an urgent need for a more supportive and accommodative social infrastructure to assist these young lives.

MAINS PRACTICE QUESTION: GS PAPER II: EDUCATION SYSTEM

Question: Analyze the role of parental control, emotional detachment, and societal norms in shaping student experiences. Recommend strategies to foster a supportive environment that encourages holistic development and mitigates the adverse effects of societal pressures on students. (250 words/15 marks)

ANSWER APPROACH

- Introduce the answer with recent context and data associated with it.
- Then bring the role of parental control, emotional detachment, and societal norms in shaping student experiences
- Further recommend strategies to foster a supportive environment that encourages holistic development and mitigates the adverse effects of societal pressures on students.
- Conclude with a suggestive note.

ANSWER

The current socio-academic climate in India has created a high-pressure environment for students, leading to significant concerns about their well-being. The transformation of socio-economic dynamics is not only instilling a sense of despondency among youth but is also becoming a cause for stress in their academic endeavours.

- Parents often exert control over their children's academic pursuits, driven by societal expectations and the desire for success.
- This parental control, coupled with emotional detachment, can have detrimental effects on students' mental health and overall development.

- Parents play a crucial role in shaping their children's experiences, often imposing their academic preferences and aspirations on them. This control can stifle students' individual interests and passions, leading to feelings of frustration and resentment.
- Moreover, emotional detachment from parents further compounds students' struggles, leaving them feeling unsupported and misunderstood. This lack of emotional connection can exacerbate feelings of loneliness and isolation, contributing to mental health issues such as anxiety and depression.
- Societal norms also play a significant role in shaping student experiences, with an emphasis on academic success and achievement.
- Students are expected to excel academically, often at the expense of their mental and emotional well-being. This pressure to meet societal expectations can lead to feelings of inadequacy and self-doubt, further exacerbating stress and anxiety.

Recommendations to foster a supportive environment:

- **Promoting Open Communication:** Encouraging open and honest communication between parents and children can help bridge the gap and foster a supportive environment. Parents should actively listen to their children's concerns and aspirations, providing guidance and support without imposing their own expectations.
- **Emphasizing Emotional Support:** Parents should prioritize building strong emotional bonds with their children, providing them with a sense of security and belonging. Emotional support from parents can help students navigate academic challenges and cope with stress more effectively.
- **Challenging Societal Norms:** It is essential to challenge societal norms that prioritize academic achievement over holistic development. Educating parents and communities about the importance of mental health and well-being can help shift attitudes and promote a more supportive culture.
- **Providing Mental Health Resources:** Schools and educational institutions should prioritize mental health resources and support services for students. Access to counseling and therapy can help students cope with academic stress and develop healthy coping mechanisms.
- **Encouraging Holistic Development:** Emphasizing the importance of holistic development can help students cultivate diverse interests and talents beyond academics. Schools should offer opportunities for extracurricular activities, sports, and creative pursuits to promote well-rounded development.
- **Creating Supportive Communities:** Building supportive communities within schools and neighborhoods can provide students with a sense of belonging and connection. Peer support groups and mentorship programs can offer valuable emotional support and encouragement.
- **Promoting Empathy and Acceptance:** Creating an atmosphere of empathy and acceptance is crucial for supporting students from diverse backgrounds and experiences. Educators and parents should cultivate a culture of understanding and acceptance, celebrating individuality and diversity.

Thus, to foster a supportive environment that encourages holistic development and mitigates the adverse effects of societal pressures, it is essential to promote open communication, prioritize emotional support, challenge societal norms, provide mental health resources, encourage holistic development, create supportive communities, and promote empathy and acceptance. By adopting these strategies, stakeholders can work together to mitigate academic stress, reduce mental health issues, and support students in achieving their full potential.

Stop the war: On the U.N. Security Council's call for a Gaza ceasefire   (GS Paper II: IR)

Israel must heed the UNSC resolution for a ceasefire

- Israel launched an attack on Gaza, causing significant casualties and displacing over 90% of the population.
- On March 25, the UN Security Council (UNSC) called for an immediate ceasefire and the release of hostages held by Hamas.
- The United States, which previously vetoed similar resolutions, abstained this time, indicating a shift in policy under the Biden administration.
- Other UNSC members, including Britain, voted in favor of the resolution.
- Israel reacted angrily, canceling a planned visit of two cabinet aides to Washington and criticized the resolution for not linking the ceasefire to the release of hostages.
- Israel's leaders had hinted at a possible invasion of Rafah, but such action would be inappropriate after the UNSC's ceasefire call.
- The situation underscores Israel's vulnerability, and any further military action could lead to more bloodshed.
- The recent war was sparked by Hamas's cross-border attack on October 7, resulting in Israeli casualties.
- Initially, Israel garnered sympathy and support worldwide for its response.
- However, Israel's subsequent actions, which targeted the entire Gaza population, led to a shift in global public opinion against Israel.
- The October 7 attack itself was **a massive intelligence and security failure** for which Mr. Netanyahu should take responsibility. Instead of doing that, he went to war with full force, without proper achievable targets.
- After months-long fighting, Israel has turned much of Gaza into rubble, but **has neither destroyed Hamas nor rescued hostages**.
- Israeli Prime Minister Benjamin Netanyahu's handling of the situation has faced criticism, leading to internal rifts within his government.
- The **prolonged conflict has exacerbated Israel's isolation, straining its relationships even with close allies like the United States**.
- **Continuing the war without a clear resolution risks exacerbating both domestic and international challenges for Israel**.
- **Netanyahu faces a choice**: heed the UN Security Council's call for a ceasefire, facilitate humanitarian aid to Gaza, and engage in negotiations for hostage release and troop withdrawal, or persist with the conflict, perpetuating uncertainty and suffering.

The democratic political process is broken   (Essay)

All traditional sites of consensus-building — public discourse, civil society, and political parties — have evolved to structurally impede dialectical cooperation

Many institutional news media have lost credibility due to which they are unable to establish a baseline of facts or exercise narrative control. Picture shows journalists during a candlelight vigil in Mumbai against police brutalities and attacks on press freedom. | Photo Credit: Reuters

- The democratic political process in India is described as broken.
- The capture of institutional machinery makes it challenging to change power dynamics or address issues effectively.
- Democratic politics aims at constructive collaboration rather than just regime change or resistance.
- Building consensus and providing platforms for collective action are vital aspects of democratic politics.
- Traditional consensus-building sites like public discourse, civil society, and political parties hinder cooperative efforts.
- Institutional capture differs from the inability to collaborate effectively, as institutions derive credibility from procedural integrity.
- The inability to collaborate hampers progress even on issues with widespread public support, leading to outrage, protest, or resignation.
- Identifying and addressing the pathologies affecting consensus-building sites is crucial for restoring the democratic potential of India's political process.

The nature of discourse

- Public discourse in democracy fosters **consensus-building** through dialogue.
- **Three interconnected developments** have hindered effective public discourse:
  - **Loss of credibility in institutional news media**, making it difficult to establish factual baselines or control narratives.
  - **Rise of social media, leading to decentralization of content creation and prioritizing virality over substance**.
  - **Increase in hyper-partisanship, where news and content serve factional interests rather than promoting dialogue**.
- Media proliferation has fragmented collective attention, and issues are treated as transient due to the constant flow of content.

- **Visibility and capturing attention** have become more important than **fostering dialogue**.
- Public discourse has turned into **individual battles for attention and reinforcement of tribal affiliations**.
- **Civil society serves as the conscience of a society** and traditionally moots alternatives.
- However, liberal civil society's focus has **shifted towards dependence on the state** and its institutions for legitimacy.
- **Instead of representing diverse viewpoints**, civil society now emphasizes **normative purity and relies on single-issue campaigns**.
- **There's a tendency for civil society to bypass political processes and resort to institutional interventions like judicial or bureaucratic routes**.
- Political parties also **suffer from internal issues** that reduce space for deliberation and focus on constituency issues.
- **Elected representatives** struggle to extrapolate constituency issues into a broader policy agenda due to limited power and inclination within party structures.
- **Elections often prioritize party symbols over candidate policies**, leading to a concentration of power in decision-makers for party tickets.
- Institutional positions of power within parties are limited, leading to internal power struggles and sycophancy.

Our ability to come together

- Various dysfunctions in **media, civil society, and political parties** hinder our ability to unite.
- Media may highlight issues, but progress requires organization from civil society and political parties.
- Dysfunction in the information ecosystem has allowed unserious individuals to gain influence.
- **Top-down structure of political parties** has raised the **bar for grassroots mobilization**, reducing civil society's organizational strength.
- Civil society now focuses on lobbying through intermediary institutions or executing bureaucratic projects, diminishing its ability to intervene in politics.
- These interrelated issues resist simple solutions, but efforts must be made to address them in the world's largest democracy.

Set the wheels in motion for a cyclists' manifesto   (GS Paper III: Infrastructure, GS Paper II: Scheme)

Political parties in India should focus on cycling, which in India is not another transport issue but a matter of social justice and transformation

- In India, cycling holds significance beyond transportation and is considered a matter of social justice with transformative impacts on people's lives.
- Despite the dominance of car-centric road infrastructure and increasing motor vehicle ownership, cycling has remained resilient in India.

Data on cycling ownership and use

- Data from National Family Health Surveys shows a marginal increase in national cycling ownership from **48% to 55% over two decades**.
- However, some states like Madhya Pradesh, Rajasthan, Uttar Pradesh, and West Bengal have seen phenomenal growth in cycling ownership, with percentages increasing to more than 75% in some cases.
- In comparison, the population-weighted average car ownership across these states was only 5.4% in 2021.
- Data also indicates that increased ownership of cycles correlates with higher usage, especially for school travel.
- A study by the Indian Institute of Technology Delhi found that nationally, **cycling to school increased from 6.6% in 2007 to 11.2% in 2017**.
- **Rural areas saw a nearly doubled level of cycling to school**, while urban areas remained stable.
- **States that implemented bicycle distribution schemes (BDS)** witnessed significant increases in cycling to school.
- For example, **Bihar saw a quadrupling of cycling to schools** from **3.6% in 2007 to 14.2% in 2017 after implementing BDS in 2006**.
- Similarly, **West Bengal's Sabooj Saathi scheme** led to a **12 percentage point increase in cycling to school from 2014 to 2017**.

Social outcomes

- **Access to bicycles can significantly impact children's lives, especially in areas where schools are far and walking is not feasible for daily commutes**.
- **Bihar's bicycle distribution scheme (BDS) aimed at girls in class nine led to increased enrolment and exam appearances**, indicating improved access to education.
- Similar outcomes were observed in **Karnataka**, where BDS facilitated girls' enrolment and participation in secondary school exams.
- The **BDS addressed the challenge of children missing school due to distance and inability to afford bicycles**.
- **In Bengaluru, a small-scale experiment provided free bicycles to low-income women working in garment factories, resulting in two-thirds of them switching to cycling for commuting**.
- Many beneficiaries couldn't afford bicycles previously, highlighting the financial barrier to transport use.
- Initiatives like **Karnataka's Shakti scheme**, offering free bus travel to women, saw a 23% increase in daily bus ridership, indicating the importance of addressing out-of-pocket expenses.
- There's a need for more State governments to implement BDS schemes, expanding coverage to urban areas and removing restrictions.
- Consideration should be given to schemes targeting adults, like **Uttar Pradesh's provision of free bicycles to labourers**, for wider implementation.

Cyclists and urban challenges

- **Cycling in urban areas faces challenges due to road infrastructure designed for motor vehicles, posing hazards for cyclists**.
- **Features like multi-lane roads, flyovers, and wide junctions increase risks for cyclists navigating traffic**.

- Estimates suggest that for the same distance travelled, **cyclists are 40 times more likely to be involved in traffic fatalities compared to car occupants**.
- Cities need to invest in **dedicated cycling infrastructure to improve safety, including cycle tracks, secure parking facilities, and repair shops**.
- Political parties in India can address cycling issues by including a cyclists' manifesto in their promises during parliamentary elections.

The need to curb black carbon emissions

(GS Paper III: Senvironment, GS Paper II: Scheme)

What is black carbon and why is it harmful for the environment? Which sector in India is the biggest contributor of black carbon? How has the Pradhan Mantri Ujjwala Yojana helped in reducing the use of traditional cooking fuels?

- **India pledged to achieve net-zero emissions by 2070 at the COP26** climate talks in November 2021.
- The **Ministry of New and Renewable Energy reported that India had installed over 180 GW of renewable energy capacity by 2023 and aims to reach 500 GW by 2030**.
- Carbon dioxide mitigation strategies are crucial for long-term benefits, but short-term relief efforts are also needed.

Why is black carbon relevant?

- **Black carbon, emitted alongside other pollutants during incomplete combustion of biomass and fossil fuels**, is significant.
- Black carbon contributes **to global warming and poses health risks, including heart disease**, birth complications, and premature death.
- **In India, black carbon emissions primarily come from burning biomass in traditional cookstoves, such as cow dung or straw**.
- The **residential sector contributes 47%** of India's total black carbon emissions, followed by industries (22%), diesel vehicles (17%), open burning (12%), and other sources (2%).
- **While decarbonization efforts in industries and transport have reduced black carbon emissions, the residential sector remains a challenge**.

Has PMUY helped?

- Pradhan Mantri Ujjwala Yojana (PMUY) was **launched in May 2016** to provide free liquefied petroleum gas (LPG) connections to households below the poverty line.
- The main **goal was to offer clean cooking fuel to rural and poor households**, reducing their reliance on traditional cooking fuels.
- PMUY includes infrastructure like free gas stoves, LPG cylinder deposits (Rs 1600), and distribution networks.
- The program has **helped reduce black carbon emissions** by offering a cleaner alternative to traditional fuel consumption.
- As of January 2024, PMUY has provided connections to over **10 crore households**.
- However, in 2022-2023, **25% of PMUY beneficiaries, around 2.69 crore people, either didn't refill their LPG cylinders or refilled them only once**, **still relying entirely on traditional biomass for cooking**.

- On average, **PMUY beneficiary households consume only 3.5-4 LPG cylinders per year**, compared to the **six or seven used by regular non-PMUY households**.
- This means up to half of the energy needs of a PMUY beneficiary household are met by traditional fuels, which emit high levels of black carbon.
- The shortage of LPG and higher usage of traditional fuels disproportionately affect women and children, exposing them to higher levels of indoor air pollution, leading to health issues and premature deaths.

- PMUY's primary goal is to provide clean cooking fuel (LPG connections) to women from Below Poverty Line (BPL) households. This aims to reduce health hazards caused by traditional cooking fuels and empower women.
- **Launched:** May 1, 2016, in Ballia, Uttar Pradesh by Prime Minister Narendra Modi.
- **Implementing Agencies:** Ministry of Petroleum and Natural Gas, in collaboration with Oil Marketing Companies (OMCs).

Key Features
- **Financial Assistance:** Beneficiaries receive a one-time financial support of Rs. 1600 for acquiring an LPG connection (including security deposit, stove, and first refill cost).
- **Eligibility Criteria:** Primarily targeted at women of BPL households identified from the Socio-Economic Caste Census (SECC) list. Additional categories were later included.
- **Application Process:** Potential beneficiaries can apply at LPG centers or through designated camps with relevant documents. Applicants must not have a prior LPG connection.

Achievements
- **Reach:** Exceeded the initial target of 5 crore connections by reaching 8 crore connections in August 2019, seven months ahead of schedule.
- **PMUY 2.0:** Launched in 2021, expanding eligibility criteria and includeing a free refill along with the stove.
- **Increased LPG Use:** Contributed to a major shift towards LPG, increasing national LPG coverage.

Government's role in enhancing quality of life:

- Securing access to clean cooking fuels is crucial for improving life quality in rural areas.
- Immediate benefits for rural communities come from using LPG, despite future renewable energy promises.
- Government increased LPG subsidy to **₹300 from ₹200 in October 2023** to make it more affordable.
- However, even with subsidies, the cost of a **14.2-kg LPG cylinder remains high at about ₹600**, deterring PMUY beneficiaries.
- Prime Minister Modi announced a further **₹100 price reduction in March 2024**, but it's expected to be temporary.
- **Government spending on PMUY subsidies has increased each year, reaching around ₹12,000 crore in 2024-2025**.
- **Availability issues need addressing to improve refill rates.**
- **Lack of last-mile connectivity in the LPG distribution network hinders success, especially in remote rural areas**.
- Local production of coal-bed methane (CBM) gas by composting biomass could provide a solution, offering cleaner fuel with lower black-carbon emissions.
- Panchayats can play a role in producing CBM gas locally, ensuring access to clean cooking fuel for every rural household.

India's role on the global stage:

- **Prioritizing black carbon reduction, such as through the PMUY scheme**, can position India as **a global leader in addressing** regional health concerns.
- It aligns with **India's Sustainability Development Goal of providing affordable clean energy to everyone and contributes to global climate mitigation efforts**.
- Mitigating residential emissions could **prevent over 6.1 lakh deaths per year** from **indoor exposure to air pollution**, according to recent estimates.

Can AI help in navigating mental health?

(GS Paper III: Use of S&T)

- Natural Language Processing (NLP) is a branch of Artificial Intelligence (AI) that helps computers understand and interpret human language.
- In mental healthcare, AI and NLP are being increasingly used to provide affordable access to therapy and support for clinicians.
- NLP programs offer text-based platforms and virtual mental health assistants, providing privacy and anonymity to users, which can improve help-seeking behavior.

How does it help patients?

- Chatbots powered by NLP can support users by reframing thoughts, validating emotions, and providing personalized care, especially when human support is unavailable.
- Digital therapy assistants help improve patient health outcomes by offering continuity of care and holistic approaches to mental health treatment.
- These chatbots are scalable, cost-effective, and available 24/7, making them accessible for integration into existing health programs.
- Companies developing chatbots should expand service delivery through partnerships and collaborations for follow-up services like referrals and in-person treatment when necessary.

How does it help clinicians?

- AI tools, including NLP programs, help clinicians by summarizing vast datasets containing clinical notes, patient conversations, neuroimages, and genetic information.
- This allows clinicians to quickly understand a patient's entire history, saving time during sessions.
- Recent advancements in NLP enable forecasting responses to antidepressants and antipsychotic drugs by analyzing brain electrical activity, neuroimages, and clinical surveys.
- Predictive capabilities of AI streamline treatment decisions and reduce the risk of ineffective interventions.
- Some chatbots create e-triaging systems that decrease wait times and free up clinical hours.

What's next?

- With improving technology, mental health providers can dedicate more time to severe mental illnesses like bipolar disorder and schizophrenia, which require specialized care.
- There's immense potential in these applications, with growing adoption expected.
- Companies should refine these applications using diverse datasets to minimize bias and incorporate a wider set of health indicators for comprehensive patient care.

- Continuous testing and adherence to global compliance standards are essential for user safety and well-being.
- Governments and institutions should prioritize updating laws and regulations to ensure better standards of care as these applications evolve.

PRELIMS PRACTICE QUESTIONS

Question 1: Civil society is best described as:
(a) A branch of the government that deals with social welfare programs.
(b) A network of independent organizations that promote social and political participation.
(c) A department within the United Nations focusing on human rights issues.
(d) A group of individuals advocating for a specific political ideology.

Question 2: Consider the following characteristic:
1. Non-profit and non-governmental
2. Advocate for social change and public interest
3. Subject to government control and direction
4. Promote citizen participation and democratic values

How many of the above is/are a typical characteristic of civil society organizations?
a. Only one
b. Only two
c. Only three
d. All the four

Question 3: Consider the following role:
1. Implementing government policies directly.
2. Monitoring government actions and holding them accountable.
3. Providing essential services not delivered by the state.

In how many of the above Civil society organizations can play a crucial role?
a. Only one
b. Only two
c. All the three
d. None

Question 4: A major challenge faced by civil society in India includes:
(a) Excessive government funding and interference.
(b) Difficulty in mobilizing resources and funding.
(c) Lack of skilled and dedicated volunteers.
(d) Limited opportunities for participation in policymaking.

Question 5: What is the primary function of an anemometer?
(a) To measure air pressure
(b) To measure wind speed
(c) To measure wind direction
(d) To measure humidity

Question 6: Which of the following principles is NOT typically used in anemometers?
(a) Rotating cups that capture wind and spin
(b) Heating and cooling of a wire filament due to wind
(c) Measurement of pressure difference between two points
(d) Measurement of sound waves generated by wind

Question	Explanation
Question 1: Civil society is best described as: (a) A branch of the government that deals with social welfare programs. (b) A network of independent organizations that promote social and political participation. (c) A department within the United Nations focusing on human rights issues. (d) A group of individuals advocating for a specific political ideology.	**Answer:** (b) A network of independent organizations that promote social and political participation. **Explanation:** Civil society is the realm outside of government and business. It encompasses various organizations like NGOs, advocacy groups, community groups, and social movements, all working towards social change and public good.
Question 2: Which of the following is NOT a typical characteristic of civil society organizations? 1. Non-profit and non-governmental 2. Advocate for social change and public interest 3. Subject to government control and direction 4. Promote citizen participation and democratic values How many of the above is/are a typical characteristic of civil society organizations? a. Only one b. Only two c. Only three d. All the four	**Answer:** (c) Subject to government control and direction **Explanation:** A key characteristic of civil society organizations is their independence from government control. They operate autonomously and can even act as watchdogs for government actions
Question 3: Consider the following roles: 1. Implementing government policies directly. 2. Monitoring government actions and holding them accountable. 3. Providing essential services not delivered by the state. In how many of the above Civil society organizations can play a crucial role? a. Only one b. Only two c. All the three d. None	**Answer:** (c) All the three **Explanation:** Civil society organizations have a multifaceted role: Monitoring government: Scrutinizing policies, ensuring transparency, and holding power to account. Service provision: Filling gaps where the state fails to deliver essential services like education, healthcare, or disaster relief. **Policy advocacy:** Influencing policy and representing the voices and interests of citizens
Question 4: A major challenge faced by civil society in India includes: (a) Excessive government funding and interference. (b) Difficulty in mobilizing resources and funding. (c) Lack of skilled and dedicated volunteers. (d) Limited opportunities for participation in policymaking.	**Answer:** (d) Limited opportunities for participation in policymaking. **Explanation:** Despite their significance, civil society organizations in India often face constraints in meaningfully contributing to policymaking, including restrictions on funding, legal hurdles, and a lack of formal consultative mechanisms.
Question 5: Consider the following pairs of terms and their description: Term Description	**Answer:** (d) All the four **Explanation:** All the pairs are accurately matched. They correctly describe the unique characteristics and functions of different types of civil society organizations.

Advocacy Group	Promotes a specific cause or issue	
NGO (Non-Governmental Organization)	Independent organization that works on social welfare or development	
Self-Help Group	Community-based group formed by individuals to address common needs	
Social Movement	Large-scale collective action to bring about social change	

How many of the above pairs is/are correctly matched?
 a. Only one
 b. Only two
 c. Only three
 d. All the four

Question 6: What is the primary function of an anemometer? (a) To measure air pressure (b) To measure wind speed (c) To measure wind direction (d) To measure humidity	Explanation: Anemometers are instruments specifically designed to measure wind speed.
Question 7: Which of the following principles is NOT typically used in anemometers? (a) Rotating cups that capture wind and spin (b) Heating and cooling of a wire filament due to wind (c) Measurement of pressure difference between two points (d) Measurement of sound waves generated by wind	Explanation: Sound wave measurement is not a common principle used in anemometers. Options (a), (b), and (c) represent common operating principles for different types of anemometers.