

Today's Prelims Topics

Athena Spacecraft

Context

The **Athena lander** has successfully landed on the **Moon's surface**. However, concerns remain regarding its **exact condition and orientation** after landing.

About Athena Lander

- It is developed by **Intuitive Machines** under **NASA's Commercial Lunar Payload Services (CLPS)** program.
 - CLPS program is designed to facilitate private sector lunar exploration.
- **Location: Mons Mouton**, approximately **160 km from the Moon's South Pole**—the **closest landing to the South Pole ever achieved**.
- **NASA's Lunar Reconnaissance Orbiter** will soon capture images of Athena to determine its exact position.
- **Scientific Goals:**
 - **Primary Objective: Search for subsurface water ice**—a crucial resource for **future lunar missions**.
 - Conduct studies to support **NASA's Artemis program** for **long-term human exploration**.
 - Test **advanced technologies** that could be used for **future lunar and Mars missions**.

Scientific Instruments

- **Micro Nova Hopper (Grace) – A Jumping Robot:**

- Designed to **hop across the Moon's surface** instead of rolling like traditional rovers.
- It can **leap 100 meters high** and travel up to **2 km (1.2 miles)**.
- Planned to **make five jumps** to land inside a **permanently shadowed crater** to capture the **first-ever images of its interior**.
- Permanently shaded areas are **ideal locations for finding ice**, as they remain at **extremely low temperatures**.

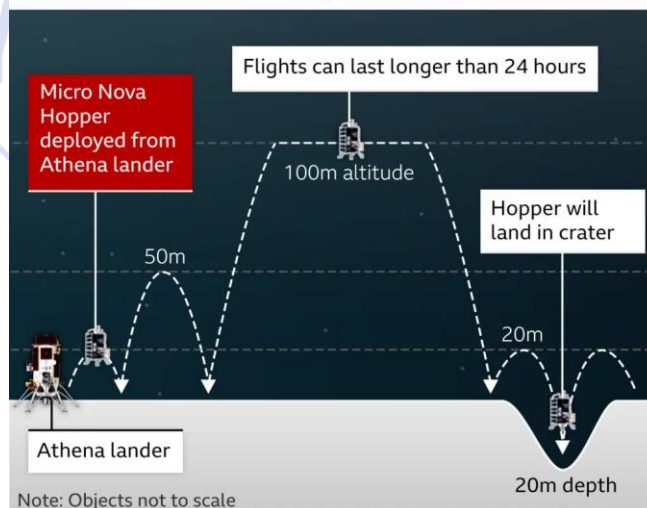
- **NASA's Scientific Instruments:**

- **Trident Drill:** Designed to **churn up lunar rocks and soil**.
 - Its goal is to determine **if ice exists beneath the Moon's surface**.
- **Mass Spectrometer:** It will analyze **gases released** from the lunar surface.
- **Lunar Mobile Communications Antenna (4G Technology by Nokia):** Aims to establish a mobile communication network on the Moon.

Source:

- [BBC - Athena](#)

How Micro Nova Hopper will explore Moon



Pashu Aushadhi initiative

Context

The Union government has launched the Pashu Aushadhi initiative, which aims to set up affordable generic veterinary medicine stores across the country.

About Pashu Aushadhi Initiative

- This initiative is part of the **revised Livestock Health and Disease Control Programme (LHDCP)**.
- **Concept Inspired by Janaushadhi Kendras:**
 - Modeled on **Pradhan Mantri Bharatiya Janaushadhi Kendras (PMBJK)**, which provide **quality generic medicines at affordable prices** to reduce healthcare costs for citizens.
 - Over **10,300 PMBJKs** are currently functional across India under the **Department of Pharmaceuticals, Ministry of Chemicals and Fertilisers**.
 - Just like **PMBJKs provide affordable generic medicines for humans**, **Pashu Aushadhi Kendras** will do the same for **livestock and other animals**.
- **Objectives:**
 - **Reduce farmers' financial burden** on veterinary healthcare.
 - **Improve livestock health & productivity** through affordable medicines.
 - Prevent and control major livestock diseases.
 - Promote traditional **ethnoveterinary treatments** alongside modern medicines.
- **Major Livestock Diseases Affecting Productivity:** Foot and Mouth Disease (FMD), Brucellosis, Peste des Petits Ruminants (PPR), Cerebrospinal Fluid (CSF), Lumpy Skin Disease.

Implementation & Functioning of Pashu Aushadhi Kendras

- **Who Will Run These Stores?**
 - Cooperative societies will manage the stores.
 - **Pradhan Mantri Kisan Samridhi Kendras (PMKSK)** will also be involved in operating these stores.
- **Will Also Sell Traditional Ethnoveterinary Medicines:**
 - Apart from generic medicines, Pashu Aushadhi Kendras will also offer ethnoveterinary medicines based on traditional and indigenous knowledge.
- **Ethnoveterinary Medicines (EVM):**
 - EVM is a traditional system of animal health care that uses plants, spices, and other home remedies to treat animals.
 - It's based on indigenous knowledge and practices that are passed down through generations.
 - **E.g. - Traditional remedy for animal fever includes:** Coriander, garlic, bay leaves, pepper, cumin, turmeric powder, chirata, betel, tulsi, neem, sweet basil, jaggery, shallots/onions.

Source:

- [Indian Express - Pashu Aushadhi initiative](#)

Ongole Cattle: The Breed Flourishing in Brazil but Declining in India

Context

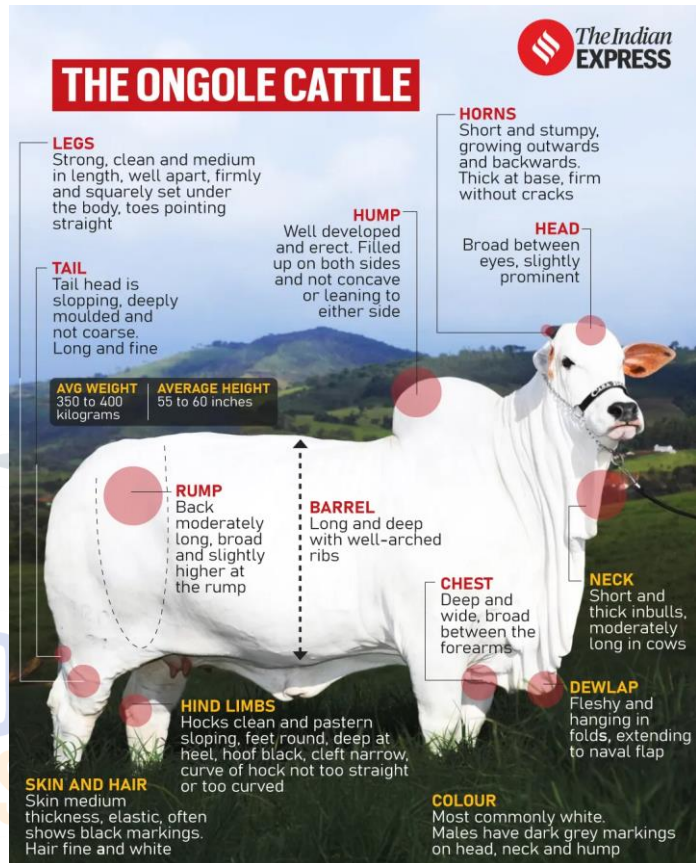
Recently a purebred Ongole calf was born at the Livestock Research Station (LAM Farm) in Guntur, Andhra Pradesh, through **IVF-embryo transfer technology**.

About Ongole Cattle

- Ongole cattle are native to the coastal plains of **Andhra Pradesh**, specifically the districts of Guntur, Prakasam, and Nellore.
- They are known for their **large size**, muscular build and a prominent hump, **Heat tolerance**, **Disease resistance**, **Strength & endurance & Survival on low fodder**
- Historically, they were used as **draught animals** for ploughing and transportation.

Why Did Ongole Cattle Decline in India?

- **Shift in Dairy Preferences:** Milk yield comparison:
 - Exotic breeds (Jersey, Holstein-Friesian) yield **25-30 liters/day**.
 - Ongole cows yield **4-6 liters/day**.
 - Farmers **preferred crossbreeds & exotic cattle** for higher milk production.
 - This led to **reduced breeding of Ongole cattle** for dairy purposes.
- **Mechanization of Agriculture:**
 - With the advent of: Tractors & mechanized ploughing & Transport vehicles replacing bullock carts, Demand for **draught cattle declined**, reducing their role in Indian agriculture.
- **Government Policies & Export Ban:**
 - Until the **1960s**, Ongole cattle were **exported to Latin America**, but: India **banned cattle exports** due to concerns over **meat trade**.
 - Brazil continued to breed & improve Ongole cattle, while India restricted further **global demand**.
- **Reduction in Pure Breeding Programs:**
 - In **India**, Ongole cattle were selectively bred for **strength** (draught power), not **milk productivity**.
 - Over time, **genetic purity declined** due to **crossbreeding** with other local breeds.
- **Population Decline:**
 - **1944:** Ongole population was **15 lakh (1.5 million)**.
 - **2019 Livestock Census:** Dropped to **6.34 lakh (634,000)**.
 - Meanwhile, **crossbred cattle increased by 29.5% (2012-2019)**.

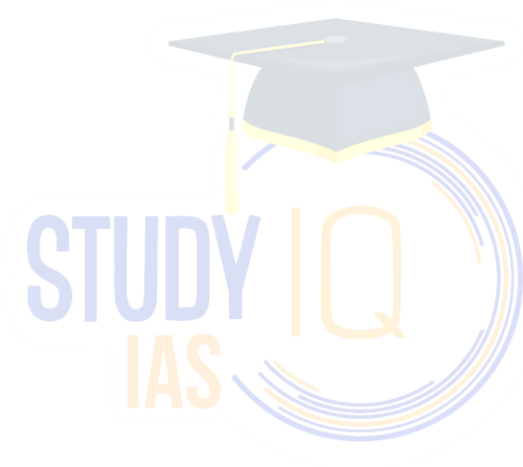


How Ongole Cattle Transformed Brazil

- In **1885**: The first **Ongole cow & bulls** were sent to Brazil. **7,000 Ongole cattle** were exported before the 1960s ban.
- Brazilian breeders **focused on size, meat quality, and climate adaptability**.
 - **Result**: Bigger, heavier, and more muscular Ongole cattle.
- **80% of Brazil's 226 million cattle** are Ongole/Nelore breed.
- Brazil became the **world's largest beef exporter**, supplying to: **China, Middle East, Europe, USA**

Source:

- [Indian Express - Ongole Cattle](#)



ASTRA MK-III/ Gandiva

Context

India's latest and most advanced air-to-air missile, **Astra MK-III**, has been officially renamed **Gandiva**.

About Astra MK-III

- It is India's most advanced Beyond Visual Range (BVR) air-to-air missile (AAM). It is currently **under development**.
- **Developed by:** Defence Research and Development Organisation (DRDO).
- The missile will be deployed on the IAF's **Sukhoi Su-30MKI jets and the Light Combat Aircraft Tejas**.



Features & Capabilities

- **Long-Range Target Engagement:**
 - Strikes up to 340 km (at 20 km altitude).
 - Hits 190 km range (at 8 km altitude).
- **Advanced Propulsion:**
 - Dual-pulse solid-fuel ducted ramjet engine for extended range and sustained speed.
- **High Speed & Maneuverability:**
 - **Launch speed:** 0.8 to 2.2 Mach.
 - **Target engagement speed:** 2.0 to 3.6 Mach.
 - Engages highly maneuverable aircraft with **20° angle of attack**.
- **Advanced Guidance & Targeting:**
 - **Active Radar Seeker** for precise target tracking & **Electronic Counter - Countermeasures (ECCM)** to resist jamming.

Source:

- [Economic Times - MK III](#)

AI Initiatives launched by MeitY

Context

On the anniversary of the **IndiaAI Mission**, the **Ministry of Electronics and Information Technology (MeitY)** launched several key AI initiatives.

About AI Kosha

- AI Kosha is designed as a **data-sharing platform** to provide datasets for AI model development.
- It mainly contains **non-personal data** for use by **start-ups, academia, and researchers** to develop AI tools.
- Aims to enhance India's capabilities in **language translation tools** and other AI-driven applications.
- It serves as a central repository, offering over 300 datasets, 80+ models, and diverse AI use cases.
- It also features an **AI sandbox** with an integrated development environment, tools, and tutorials.

IndiaAI Compute Portal

- It is a centralized platform to provide affordable AI compute, network, storage, platform, and cloud services to startups, academia, and enterprises.
- Initially offering access to 10,000 GPUs, with 8,693 more GPUs to be added in subsequent phases.

AI Competency Framework for Public Sector Officials

- It is a structured framework to **upskill** government officials in AI.
- **Aim:** To **equip policymakers** with AI-related knowledge to make informed decisions.

iGOT-AI: AI-Powered Personalized Learning for Government Officials

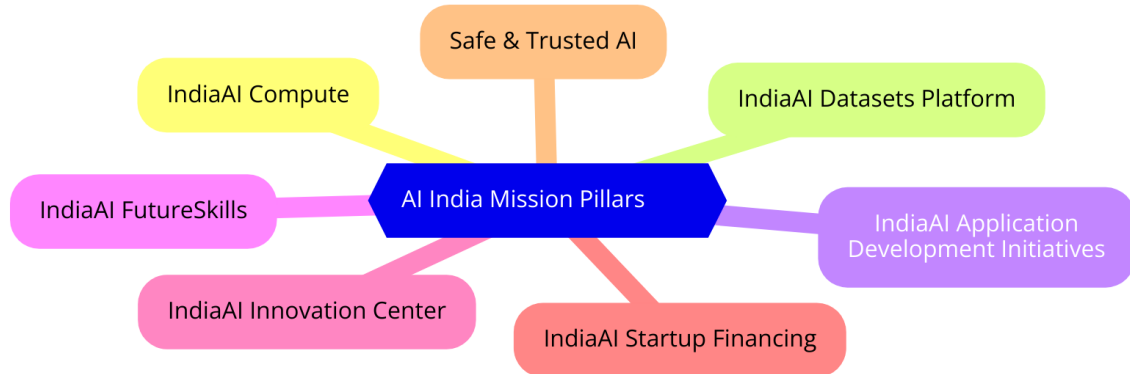
- It is an **AI-driven content recommendation system** integrated with the **iGOT Karmayogi platform**.
- It will enhance the **learning experience of public officials** by offering personalized AI training modules.

IndiaAI Startups Global Acceleration Program

- It is a **collaborative program with STATION F (France) and HEC Paris**.
- **10 Indian AI startups** will participate in a **four-month acceleration program**:
 - **1 month online**, followed by **3 months onsite** at STATION F, the world's largest startup campus in Paris.
- **Benefits:** mentorship, networking, and global market expansion in Europe.

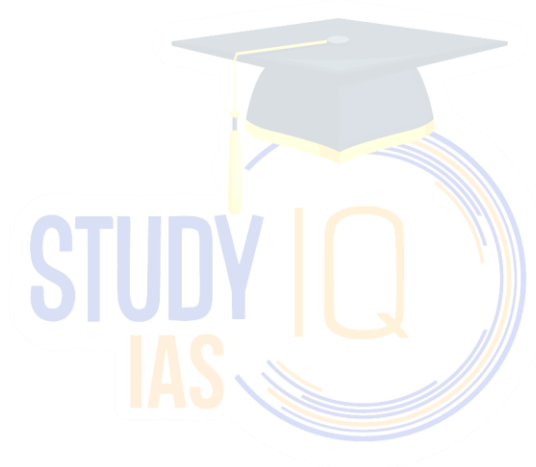
India AI Mission

- It is a government initiative (**launched in March,2024**) to promote Artificial Intelligence (AI) innovation in India.
- **Focus areas:** Healthcare, education, agriculture, smart cities and infrastructure.
- **Seven Pillars of India-AI Mission:**



Source:

- [The Hindu - AI Kosh](#)
- [PIB](#)



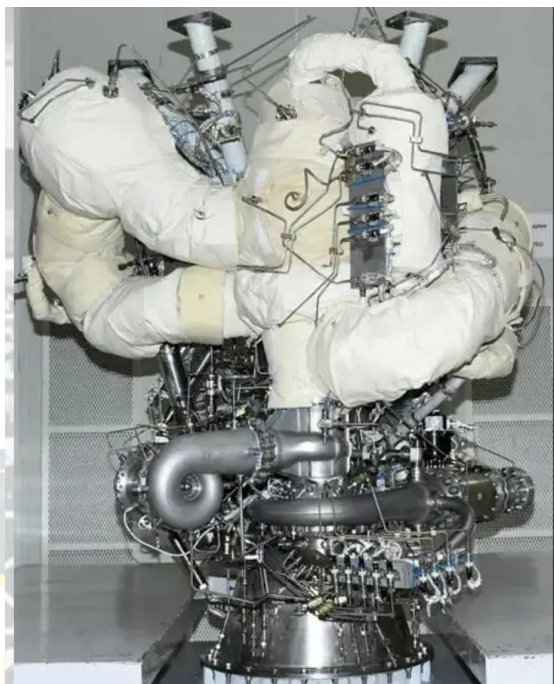
ISRO Successfully Conducts Crucial Test for Semi-Cryogenic Engines

Context

ISRO successfully tested SE2000 semi-cryogenic engine's Power Head Test Article for future heavy space launches.

About Power Head Test Article (PHTA)

- ISRO is developing a semi-cryogenic engine that uses a **Liquid Oxygen and Kerosene-based propulsion system** that offers an enhanced thrust.
- PHTA is the first hardware test for the development of semi-cryogenic engines.
- The test involves performing a hot-firing for an extremely brief duration of not more than **4.5 seconds**.



Why Semi-Cryogenic Engines Matter

- Current **cryogenic engines** use **Liquid Oxygen (LOX)** and **Liquid Hydrogen (LH2)**.
- **Liquid hydrogen is difficult to handle** due to its extreme storage temperature (**-253°C**) and **high inflammability**.
- The **semi-cryogenic engine** uses **LOX and Kerosene**, which has advantages such as:
 - **Higher density impulse** (more efficiency than cryogenic)
 - **Less toxic storage**
 - **More cost-effective** propulsion
 - **Easier handling** of kerosene compared to liquid hydrogen

Upcoming Developments by ISRO - Upgradation of LVM-3

- ISRO is working on upgrading **Launch Vehicle Mk III (LVM3)**.
- The LVM3 will be equipped with a **C32 cryogenic upper stage**, replacing the older **C25 stage**.
- **C32 advantage over C25:**
 - **Carries more propellant**, extending mission duration.
 - **Increases payload capacity by 25%**.
 - Will **increase spacecraft launch capacity from 4 tonnes to 5.1 tonnes** to **Geosynchronous Transfer Orbit (GTO)** without increasing cost.

Source:

- [Indian Express - Cryogenic Engine](#)

Places in News

Bangus Valley

- The Jammu and Kashmir government has announced new ecotourism policies for Bangus Valley.
- **Gurez, Machil, and Keran** are other tourist spots near the LoC that have recently been developed.
- The move comes as a response to **uncontrolled tourism and illegal construction** in established tourist hubs like **Pahalgam, Gulmarg, and Sonamarg**.



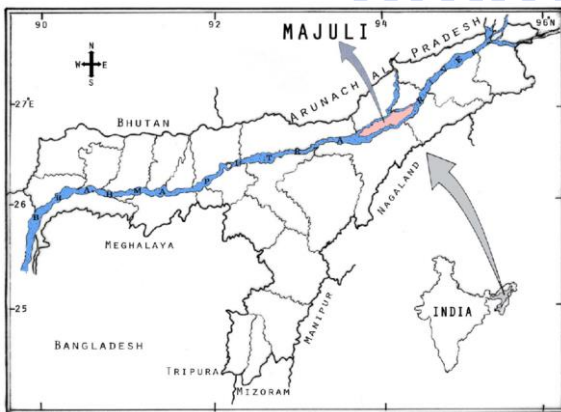
- **Location:** Kupwara, Jammu & Kashmir, in the Pir Panjal range, close to the Line of Control (LoC).
- It has **Two bowl-shaped meadows** surrounded by dense forests and snow-capped mountains.
- **Biodiversity:** Home to 50+ animal species and 10+ bird species.
- The valley is surrounded by Rajwar and Mawar in the east, Shamasbury and Dajlungun Mountains in the west and Chowkibal and Karnah Guli in the north.

Source:

- [The Hindu - Bangus Valley](#)

Majuli Island

- Increasing human-wildlife conflicts on Assam's Majuli River Island are endangering the livelihoods of the local farming community.



- **World's largest river island**, located on the **Brahmaputra River** in Assam.
- **Declared a district in 2016** (India's first island district).
- Rich in **wetlands, forests, and diverse wildlife**.
- It was formed due to course changes by the river **Brahmaputra** and its tributaries, mainly the **Lohit**.
- It is home to **Vaishnavite monasteries (Satras)**, founded by **Srimanta Sankardeva** in the 15th century.

Source:

- [NE News - Majuli Island](#)

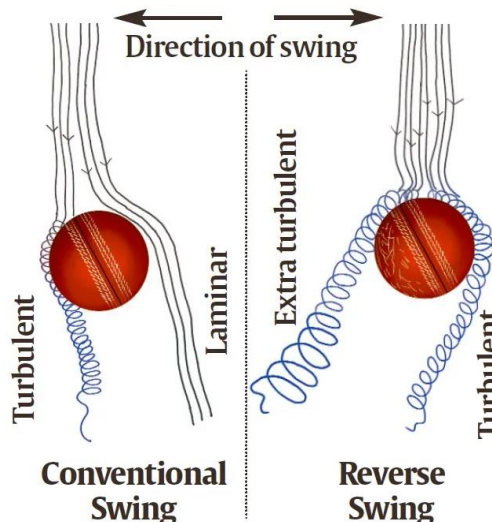
News in Shorts

How does a Cricket Ball Swing

- Indian fast bowler **Mohammad Shami** has appealed to the **International Cricket Council (ICC)** to reconsider the **ban on using saliva** to shine cricket balls. The ban was introduced as a **Covid-19 precautionary measure**.

What is Swing?

- Swing refers to the **lateral movement** of a cricket ball in the air **before pitching**.
- It occurs due to an **air pressure difference** on either side of the ball.
- **How Does a Cricket Ball Swing?**
 - When a bowler releases the ball, a **thin air layer (boundary layer)** forms on its surface.
 - This boundary layer **separates from the surface** at different points on either side of the ball.
 - The **location of this separation** determines the **air pressure** on each side.



Role of Seam in Swing

- Bowlers **tilt the seam** in one direction to disturb airflow.
- The **raised seam side** creates **turbulent airflow**, which **sticks to the ball longer** and **moves faster**.
- The **smooth side** has **laminar flow**, meaning the air travels **slower**.
- **According to Bernoulli's principle**, faster airflow on one side reduces pressure, causing the ball to **swing in that direction**.
- If the **seam is perfectly straight**, the ball won't swing as both sides have **equal airflow**.

Why is Saliva Important for Swing?

- Cricketers **traditionally use saliva** to **shine one side of the ball**.
- **Benefits of saliva:**
 - **Smoothens one side**, increasing swing contrast.
 - **Adds slight weight** to the shiny side, aiding reverse swing.
 - **Sugary saliva (from mints or candy)** is heavier and more effective.

Source:

- [Indian Express - Mechanics of ball swing](#)

Editorial Summary

Is Artificial Intelligence Affecting Critical Thinking Skills?

Context

- A 2023 study by TeamLease EdTech found that over 61% of educators in India are incorporating AI tools into their teaching methods.
- The growing reliance on AI has sparked concerns that students may start accepting AI-generated content without critically analyzing the information.

Positive Impacts on Critical Thinking

- **Augments Analytical Abilities:** AI can assist in analyzing large amounts of data, helping students interpret complex patterns and make informed decisions.
- **Encourages Evaluation Skills:** Since AI-generated content is not always accurate, students must critically assess its validity, improving their factchecking and reasoning skills.
- **Enhances Problem Solving:** AI can provide multiple perspectives on a problem, encouraging students to compare, contrast, and refine their thinking.
- **Facilitates Creativity:** AI tools can generate diverse ideas, pushing students to think beyond conventional approaches.
- **Promotes Ethical Reasoning:** AI usage raises ethical questions, compelling students to engage in discussions about biases, misinformation, and responsible AI application.
- **Supports Personalized Learning:** AI-driven learning tools can adapt to individual needs, allowing students to focus on areas requiring deeper critical engagement.

Negative Impacts on Critical Thinking

- **Encourages Passive Learning:** Overreliance on AI-generated answers may reduce independent thought and problem-solving efforts.
- **Weakens Deep Engagement:** AI-generated summaries can discourage students from engaging with full texts, limiting nuanced understanding.
- **Reinforces Biases:** AI models may reflect inherent biases in their training data, leading students to accept biased perspectives uncritically.
- **Limits Original Thought:** If students rely on AI for writing or idea generation, their ability to think creatively and independently may diminish.
- **Reduces Cognitive Effort:** Easy access to AI-generated solutions can discourage students from struggling through complex problems, weakening their cognitive resilience.
- **Challenges in Verification:** AI can sometimes generate false or misleading information, and if students lack strong verification skills, they may accept incorrect information without question.

Balancing AI Usage for Critical Thinking

- **Encourage Verification:** Students should be trained to factcheck AI-generated content against credible sources.
- **Promote Ethical AI Use:** Institutions must integrate AI responsibly into curricula to ensure it supplements, rather than replaces, human cognition.
- **Reform Assessments:** Open ended, discussion-based assignments that require students to explain their reasoning can counteract AI overreliance.

Source: [The Hindu: Is Artificial Intelligence affecting critical thinking skills?](#)

Detailed Coverage

Women Empowerment

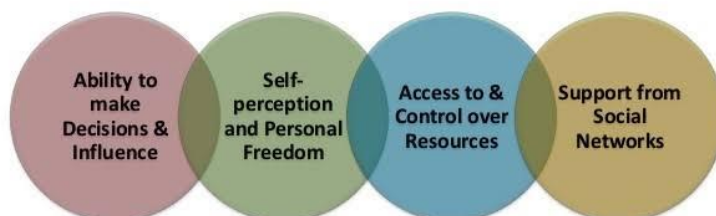
Context

- **International Women's Day** is celebrated around the world on **8th March**.
- Also, the year 2025 marks the 30th anniversary of the **Beijing Declaration and Platform for Action**.

- **Theme (2025):** For ALL Women and Girls: Rights. Equality. Empowerment.
- **Beijing Declaration and Platform for Action:**
 - Adopted at the **4th World Conference on Women in Beijing (1995)**.
 - It reaffirmed women's rights as human rights and aimed at achieving gender equality.
 - **12 Critical Areas of Concern:** Focused on issues like poverty, education, healthcare, violence, economic participation, political representation, and the rights of the girl child.
 - **Impact:** Influenced laws, national gender policies, and international frameworks like **SDG 5 (Gender Equality)**.

Key Dimensions of Women's Empowerment

What affects a women's ability to control her own circumstances and fulfil her own interests and priorities?



Page 2



Importance of Women Empowerment and Gender Equality



Economic Prosperity:
Empowered women drive growth.



Education and Skills
Educated women boost productivity.



Health and Well-being
Gender equality improves community health.



Political Participation
Women's involvement enhances governance.



Violence Prevention
Empowered women advocate against gender violence.



Global Justice
Gender equality fosters international cooperation.

Constitutional and Legal Framework in India Promoting Gender Equality

- **Preamble:** Affirms the commitment to equality and justice for all citizens.
- **Fundamental Rights:**
 - **Article 14:** Guarantees equality before the law and equal protection of the laws to all individuals.
 - **Article 15:** Prohibits discrimination on grounds of religion, race, caste, sex, or place of birth.
- **Fundamental Duties:**
 - **Article 51A(e):** Encourages citizens to renounce practices derogatory to the dignity of women.
- **Directive Principles of State Policy:**
 - **Article 39:** Directs the State to ensure that men and women equally have the right to an adequate means of livelihood and that there is equal pay for equal work.
 - **Article 42:** Mandates the State to make provisions for securing just and humane conditions of work and for maternity relief.
- **International Commitments:** India is a **signatory** to international treaties such as:
 - Universal Declaration of Human Rights (1948)
 - International Covenant on Civil and Political Rights (ICCPR, 1966)
 - Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW, 1979)
 - Beijing Declaration and Platform for Action (1995)
 - United Nations Convention Against Corruption (2003)
 - Agenda 2030 for Sustainable Development.

Challenges Faced by Women in India

- **Gender Disparities in Education:** Many girls still lack access to quality education due to societal norms, financial constraints, and inadequate infrastructure.
 - The preference for male education over female education remains a major issue.
 - **E.g.,** The literacy gap between men and women remains substantial at **17.2 percentage points** (WEF report 2024).
- **Workplace Inequality:** Women face gender bias, unequal pay, limited career growth, and workplace harassment.
 - Lack of leadership opportunities and inadequate maternity benefits further hinder professional advancement.
 - **E.g.,** In India, women have been historically marginalised from the workforce and comprise **about 35.9% of the worker population ratio**.
 - The number is starker at the senior and middle management levels where **women account for only 12.7% leadership roles** as of 2024.
- **Violence Against Women:** Issues such as domestic violence, sexual assault, and harassment remain prevalent.
 - Delayed justice and ineffective law enforcement weaken protection for women.
 - **E.g.,** RG Kar Medical College and Hospital incident.
- **Child Marriage and Dowry System:** Deeprooted customs continue to deprive young girls of education and autonomy.
 - Legal measures exist, but societal resistance slows their effective implementation.
 - **E.g.,** A study found that dowry was paid in **95% of marriages in rural India between 1960 and 2008**.
- **Healthcare Disparities:** Women in rural areas face inadequate healthcare facilities, especially in maternal and reproductive health.
 - Lack of awareness and accessibility to medical services further worsen health outcomes.

- **Political Underrepresentation:** Despite successful women leaders, overall participation in politics remains low.
 - Gender biases and societal restrictions limit women's involvement in decisionmaking roles.
 - **E.g.,** India's women's representation in the Parliament **remains well below the global average of 25%.**

Country wise data on women representation*

Women representation in parliament varies across different democracies



Moving forward: Trinamool Congress MPs take selfies at the Parliament House complex during the first session of the 18th Lok Sabha, on June 25. PTI

Country	% of elected women	Quota in Parliament	Quota in political parties
Sweden	46%	No	Yes
South Africa	45%	No	Yes
Australia	38%	No	Yes
France	38%	No	Yes
Germany	35%	No	Yes
U.K.	40%	No	Yes
U.S.	29%	No	No
Pakistan	16%	Yes	No
Bangladesh	20%	Yes	No

*(as of September 2023) |

- **Cybersecurity Concerns:** Rising cases of cyberbullying and online harassment target women disproportionately.
 - Limited awareness and weak legal enforcement make digital spaces unsafe.
 - **E.g.,** According to the National Crime Records Bureau's (NCRB) 2022 report, a total of 4,45,256 cases of crimes against women were registered across India in 2022.
- **Menstrual Taboos and Lack of Hygiene Facilities:** Social stigmas around menstruation restrict women's mobility, education, and health.
 - Insufficient hygiene infrastructure in rural and urban areas exacerbates the problem.

Government Initiatives For Women's Upliftment

Category	Key Initiatives & Achievements
Education	<ul style="list-style-type: none"> ● Right to Education Act (2009): Ensures free and compulsory education for children. ● Beti Bachao Beti Padhao (BBBP): Improves child sex ratio and promotes girls' education. ● Samagra Shiksha Abhiyan: Enhances school infrastructure and girlfriendly facilities. ● National Education Policy (NEP) 2020: Prioritizes gender inclusion in education. ● Eklavya Model Residential Schools: Quality education for tribal girls. ● Higher Education: Female GER overtook male GER since 2017-18; female enrollment in higher education reached 2.07 crore (2021-22). ● Women in STEM: 42.57% of total STEM enrolment (41.9 lakh).
STEM & Skill Development	<ul style="list-style-type: none"> ● Vigyan Jyoti (2020): Encourages STEM education for girls. ● Overseas Fellowship Scheme: Supports women scientists in global research. ● National Digital Library, SWAYAM, SWAYAM PRABHA: Ensures access to online learning. ● Scholarships: Over 10 lakh girls benefited in STEM fields. ● Skill India Mission, Pradhan Mantri Kaushal Vikas Yojana (PMKVY): Vocational and technical training for women.

	<ul style="list-style-type: none"> ● Women Technology Parks (WTPs): Serve as hubs for skillbuilding.
Health & Nutrition	<ul style="list-style-type: none"> ● Pradhan Mantri Matru Vandana Yojana (PMMVY): ₹17,362 crore disbursed to 3.81 crore women. ● Maternal Mortality Rate (MMR): Reduced from 130 (2014-16) to 97 (2018-20). ● Life Expectancy: Increased to 71.4 years (2016-20) ● Jal Jeevan Mission: Provided potable tap water to 15.4 crore households. ● Swachh Bharat Mission: Constructed 11.8 crore toilets. ● Poshan Abhiyaan: Strengthens maternal and child nutrition programs. ● Ujjwala Yojana: 10.3 crore LPG connections distributed.
Economic Empowerment & Financial Inclusion	<ul style="list-style-type: none"> ● Women's role in household decisions: Increased from 84% (2015) to 88.7% (2020). ● PM Jan Dhan Yojana: 30.46 crore accounts opened, 55% owned by women. ● StandUp India Scheme: 84% of loans sanctioned to women entrepreneurs. ● MUDRA Scheme: 69% of microloans given to women-led enterprises. ● SelfHelp Groups (NRLM): 10 crore women connected to 9 million SHGs. ● Bank Sakhis Model: 6,094 women processed \$40 million transactions (2020). ● Women in Armed Forces: Allowed in NDA, combat roles, and Sainik Schools. ● Women Pilots: 15% of India's pilots are women (global average 5%). ● Sakhi Niwas (Working Women's Hostels): 523 hostels for 26,306 women. ● Women in Startups: 10% of SIDBI funds reserved for women-led startups.
Digital & Technological Empowerment	<ul style="list-style-type: none"> ● PMGDISHA: 60 million rural citizens trained in digital literacy. ● Common Service Centres (CSCs): 67,000 women entrepreneurs managing digital centers. ● Ayushman Bharat Digital Mission (ABDM): Expanding healthcare accessibility digitally. ● SANKALP Hubs: Established in 742 districts across 35 States/UTs. ● Fintech & Digital Inclusion: Digital banking, Aadhaarlinked services, e-marketplaces for women entrepreneurs.

<p>Safety & Protection</p>	<ul style="list-style-type: none"> ● Criminal Law (Amendment) Act, 2018 (enhanced penalties). ● Protection of Women from Domestic Violence Act, 2005. ● Sexual Harassment of Women at Workplace Act, 2013. ● POCSO Act, 2012 (child abuse protection). ● Ban on Triple Talaq (2019). ● Dowry Prohibition Act, 1961. ● Prohibition of Child Marriage Act, 2006. ● Nirbhaya Fund Projects: ₹11,298 crore allocated. ● One Stop Centres (OSCs): 802 centers, assisting 1 million women. ● ERSS (112 Helpline): 38.34 crore calls handled. ● Fast Track Special Courts: 750 operational (408 for POCSO cases). ● Cyber Crime Helpline (1930): Strengthens digital safety. ● Safe City Projects: Implemented in 8 cities. ● Women Help Desks in Police Stations: 14,658 desks, 13,743 led by women.
<p>Institutional & Legislative Reforms</p>	<ul style="list-style-type: none"> ● Bharatiya Nyaya Sanhita (BNS), 2023: Strengthens gender justice provisions. ● Stronger punishments: Sexual offenses, trafficking, witness protection, digital evidence admissibility. ● Women's representation in CAPFs: 33% reservation in select forces. ● Nari Adalat: Piloted in 50 Gram Panchayats each in Assam and J&K, now expanding.

Way Forward

- **Promote Inclusive Education:** Implement policies that ensure equal access to quality education for girls, addressing cultural norms and financial constraints.
- **Foster Inclusive Workplaces:** Implement policies to address bias, ensure equal pay, and provide support for women in the workforce.
- **Strengthen Measures Against Violence:** Implementing stringent laws and ensuring their enforcement are vital steps toward protecting women.
 - E.g., SHE Teams in Telangana, Gulabi Gang in Uttar Pradesh.
- **Eradicate Harmful Practices like Child Marriage and Dowry:** Community engagement and educational programs are essential in changing societal norms.
 - E.g., The Meira Paibi movement in Manipur.
- **Increase Women's Political Representation:** Implementing reservation policies and leadership training programs can encourage women's participation in politics.
 - E.g., 106 CAA, 2023- Women's Reservation Bill.
- **Address Healthcare Disparities:** Improve access to healthcare facilities, especially in maternal and reproductive health.

Sources:

- [The Hindu: Women in corporate leadership, the lived reality](#)
- [The Hindu: Beyond 'Beijing', unlocking a feminist future in India](#)
- [PIB: International Women's Day 2025](#)