

## Current Affairs - 31 January 2025

### INDIA TO DEVELOP INDIGENOUS LARGE LANGUAGE MODEL UNDER INDIAAI MISSION

- **Building India's AI Model**
  - Union IT Minister **Ashwini Vaishnaw** confirmed that the government has been actively engaging with **startups, researchers, and academic institutions** over the past 1.5 years to develop a **world-class foundational AI model**.
  - The initiative is expected to take **4-8 months** for completion.
  - The government is currently in discussions with **six AI developers** to work on the project, though specific details about costs and involved companies remain undisclosed.
- **Hardware Support: 18,693 GPUs Approved**
  - To facilitate AI model training and research, the government has selected **10 companies** to supply a total of **18,693 high-end Graphics Processing Units (GPUs)**, which are crucial for developing **machine learning and AI models**.

#### Companies Selected for GPU Supply:

- Yotta (Hiranandani Group-backed) – 9,216 GPUs (largest contributor), Jio Platforms, Tata Communications, E2E Networks, CMS Computers, Ctrls Datacenters, Locuz Enterprise Solutions, NxtGen Datacenter, Orient Technologies, Vensysco Technologies
- According to Minister **Ashwini Vaishnaw**, **10,000 GPUs are ready for immediate installation** to support AI projects.

#### Affordable Compute Power for AI Developers:

- The government plans to launch a **common compute facility** to provide startups and researchers with **affordable access** to GPU resources.
- **Pricing for Compute Access:**
  - **High-end GPUs:** ₹150 per hour
  - **Lower-end GPUs:** ₹115.85 per hour
- **Government Subsidy:** 40% discount for startups and research institutions

## Current Affairs - 31 January 2025

- **Competitive Pricing:** Post-subsidy rates will be around **\$1 per hour**, significantly lower than global GPU access costs of **\$2.5-\$3 per hour**.

### Application-Level AI Development:

- Under the **IndiaAI Mission**, the government has selected **18 AI-based applications** for funding in its first phase.
- These applications focus on **agriculture, learning disabilities, and climate change**—key sectors where AI can drive **social and economic impact**.

### Reasons for India Investing in AI Development:

- **Reduce dependency on foreign AI models** and promote indigenous AI research.
- **Support multilingual AI capabilities** to cater to India's diverse linguistic and cultural landscape.
- **Enhance computational capabilities** to strengthen AI startups and research institutions.
- **Compete with global AI advancements**, ensuring India remains a major player in AI development.

### Challenges and Future Outlook:

- While India's AI mission is ambitious, certain challenges remain:
  - **Infrastructure Development:** Ensuring seamless GPU availability and processing capacity.
  - **Skilled Workforce:** Training researchers and developers to build high-quality AI models.
  - **Regulatory Frameworks:** Establishing AI ethics, data privacy, and security guidelines.
- The government's proactive approach in setting up **funding, compute infrastructure, and industry collaborations** positions India strongly in the global AI race.
- If successfully executed, the IndiaAI Mission could transform India into a **major AI hub**, reducing reliance on foreign AI systems while driving technological progress across sectors.

## Current Affairs - 31 January 2025

### AN OPPORTUNITY TO SETTLE SRI LANKA'S ETHNIC PROBLEM

- India's decision to name the Jaffna Cultural Centre after the Tamil poet-philosopher Thiruvalluvar is a symbolic move that **underscores its deep historical and cultural ties with Sri Lanka.**
- This gesture **not only acknowledges the Tamil heritage but also serves as a diplomatic tool to reinforce India's influence in Sri Lanka,** particularly among the Tamil-speaking population.
- However, beyond the cultural significance, **the relationship between the two nations has been shaped by decades of political complexities,** particularly regarding the Tamil issue and the implementation of the **13th Amendment (13A) to Sri Lanka's Constitution.**

### Historical and Political Context of 13<sup>th</sup> Amendment and India's Stance

- **Historical and Political Context of 13<sup>th</sup> Amendment**
  - India's involvement in Sri Lanka's Tamil issue dates back to the **1983 anti-Tamil pogrom,** which led to its role as a mediator and later as an active player in resolving the ethnic conflict.
  - This culminated in the **Indo-Lanka Accord of 1987, which resulted in the 13th Amendment,** introducing **Provincial Councils with limited autonomy.**
  - However, the **amendment has remained a contentious issue,** facing resistance from both Sinhalese nationalist groups and Tamil separatist forces.
  - **The Janatha Vimukthi Peramuna (JVP),** the party of Sri Lankan President Anura Kumara Dissanayake, has **traditionally opposed 13A, viewing it as an imposition by India.**
  - **Similarly, the Liberation Tigers of Tamil Eelam (LTTE),** though advocating Tamil autonomy, **rejected the amendment as inadequate.**

## Current Affairs - 31 January 2025

### India's Stance on the 13th Amendment

- Despite over 35 years since its introduction, the full implementation of 13A remains elusive, especially in Tamil-majority areas.
- Successive Indian governments have consistently urged Sri Lanka to implement the amendment fully.
- However, recent developments, such as Indian Prime Minister Narendra Modi's omission of any direct mention of 13A during Sri Lankan President Dissanayake's visit in December 2024, have raised questions about whether India is shifting its stance.
- While Foreign Minister S. Jaishankar reiterated India's call for devolution, Modi's silence suggests a possible recalibration of India's approach, potentially influenced by Sri Lanka's evolving domestic politics.

### Conclusion

- India's decision to rename the Jaffna Cultural Centre after Thiruvalluvar symbolises its commitment to cultural diplomacy and its historical ties with Sri Lanka, however, the deeper issue of Tamil political rights remains unresolved.
- The 13th Amendment, despite its flaws, remains the most viable framework for addressing Tamil aspirations within a united Sri Lanka.
- While India's stance on the issue may be evolving, Sri Lanka's leadership must recognise that meaningful devolution is not merely a diplomatic obligation but a necessity for national harmony.

### HOUSEHOLD CONSUMPTION EXPENDITURE SURVEY



- It is designed to collect information on the consumption and expenditure of households on goods and services.
- The survey provides data required to assess trends in economic well-being and to determine and update the basket of consumer goods and services and weights used for the

## Current Affairs - 31 January 2025

calculation of the Consumer Price Index. Data collected in HCES is also used to **measure poverty, inequality and social exclusion.**

- The **Monthly Per Capita Consumption Expenditure (MPCE)** compiled from HCES is the primary indicator used for **most analytical purposes.**

### Key Highlights of the Survey

- There is a persistent **decline in urban-rural consumption difference** across India's major States continues in 2023-24.
- The **average MPCE is on the rise** across all Household types in rural and urban Areas.
- Among 18 major states, the difference between urban and rural average monthly per capita expenditure (MPCE) of households is the lowest in Kerala, followed by Punjab, Andhra Pradesh (AP) and Bihar.
- **Consumption inequality**, both in rural and urban areas, for almost all the 18 major states **has declined** in 2023-24 from the level of 2022-23.
- At the all-India level, the **Gini coefficient of consumption expenditure** has **declined** to 0.237 in 2023-24 from 0.266 in 2022-23 for rural areas and to 0.284 in 2023-24 from 0.314 in 2022-23 for urban areas.

### WHAT IS A GRAPHICS PROCESSING UNIT (GPU)?



- A GPU is an **electronic circuit board** that can **quickly perform many mathematical calculations.**
- Like a Central Processing Unit (CPU), a GPU is also a **chip component in computing devices.**
- The technology was **originally designed to speed up 3-D graphics rendering.**
- Since its introduction in the 1990s, the GPU has transformed computer software and video games, allowing programmers to produce vivid and realistic images on screens.



## Current Affairs - 31 January 2025

- More recently, GPUs have been used beyond computer graphics in areas including **high-performance computing, machine learning, Artificial Intelligence (AI), weather forecasting and cryptocurrency mining.**

### CPU vs. GPU:

- CPUs are designed to handle general-purpose tasks such as **running applications and managing system resources.**
- On the other hand, **GPUs** are optimized for specific tasks such as **rendering 3D graphics and video decoding.**
- CPUs have fewer cores than GPUs, but each core is capable of handling more complex instructions.
- This means that CPUs can handle sequential tasks more efficiently than GPUs, but GPUs outperform CPUs when it comes to parallel tasks like image rendering or video encoding/decoding.

### WHAT IS THE AXIOM-4 MISSION (AX-4)?



- Ax-4 is the fourth private astronaut mission to the **International Space Station (ISS).**
- It is organized by **Axiom Space** in collaboration with
- The Ax-4 crew will launch aboard a **SpaceX Dragon spacecraft** to the ISS from NASA's Kennedy Space Center in Florida.
- Once docked, the private astronauts plan to **spend up to 14 days aboard the ISS.**
- During their time aboard the ISS, the crew will **conduct scientific experiments, perform technology demonstrations, and engage in educational outreach.**
  - Research areas include materials science, biology, Earth observation and more, with the potential to yield groundbreaking discoveries and innovations.

## Current Affairs - 31 January 2025

- The mission will send the **first Indian astronaut to the station** as part of a joint effort between NASA and the Indian space agency.
- The private mission also carries the **first astronauts from Poland and Hungary to stay aboard the ISS.**

### THE SCIENCE IS CLEAR, CROWD DISASTERS ARE PREVENTABLE

- The **recent disaster at the Maha Kumbh in India**, which claimed 30 lives, is **another reminder of the dangers posed by high-density crowds.**
- Despite scientific research offering clear solutions, **local governments and event organisers often fail to take the necessary precautions.**
- Therefore, **it is important to explore the causes of crowd crushes, examines their global impact, stricter regulations** and better crowd management strategies to prevent future tragedies.

### Key Actions to Prevent Dangerous Crowd Densities

- **Venue Design and Capacity Management**
  - Ensuring that **event spaces are designed to accommodate the expected number of attendees** without creating choke points, bottlenecks, or dead ends.
  - Calculating crowd capacity based on scientifically proven density limits is essential.
- **Sufficient Entry and Exit Points**
  - Having enough **well-spaced entry and exit routes prevents dangerous congestion.**
  - Restricted or blocked exits have been a major factor in past crowd disasters, trapping people in deadly situations.
- **Staggered Arrivals and Departures**
  - Large crowds do not necessarily have to move all at once.

## Current Affairs - 31 January 2025

- Organisers can schedule staggered entry and exit times, reducing the likelihood of mass surges at any given moment.
- **Real-Time Crowd Monitoring**
  - Using surveillance cameras, drones, and other monitoring technologies can help organisers track crowd density and respond to potential dangers before they escalate.
- **Crowd Segmentation Strategies**
  - Dividing large crowds into smaller, controlled sections can significantly reduce the risk of dangerous surges.
  - **New York City's Times Square New Year's Eve celebration is a prime example**, where barriers segment the crowd into smaller groups, making it easier to manage.

### CONTROLLED CANNABIS CULTIVATION



- It is the **regulated cultivation of specific cannabis varieties** having minimal intoxicating properties, along with strict monitoring to prevent misuse. Such varieties are commonly known as
- The **tetrahydrocannabinol (THC)** cannabinoid content (a kind of chemical that has an intoxicating effect) in controlled cannabis should be less than or equal to **3 per cent**.
- Under this, authorities focus on its non-narcotic applications, particularly in the pharmaceutical and industrial sectors.
- **Uses of Hemp:** Hemp's stalks, leaves, and seeds can also be converted into textile, paper, food, cosmetics, biofuel and more. Additionally, **cannabidiol (CBD)** compounds in the plant are effective in **treating chronic pain**.

### Laws related to cannabis cultivation in India

- Cannabis cultivation is **largely prohibited** in India due to its **psychoactive properties**.



## Current Affairs - 31 January 2025

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- Section 2 of the **Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985**, prohibits the production and sale of cannabis resin and flowers.
- It defines charas as the separated resin, in any form (crude or purified), obtained from the cannabis plant. It also includes concentrated preparations such as hashish oil or liquid hashish.

However, it provides exceptions for cannabis cultivation and use for **industrial and medicinal purposes under government regulation**.

- Section 10 of the Act allows state governments to regulate, permit, or prohibit cannabis cultivation for medicinal and scientific purposes.
  - Additionally, **Section 14** grants the Central government the power to authorise and regulate cannabis cultivation for research or other approved purposes.
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