

CURRENT AFFAIRS

UPSC CSE 2026



DAILY CURRENT
AFFAIRS NOTES

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Wanted sons, unwanted daughters

- Sex determination and selection are illegal under the Pre-Conception and Pre-Natal Diagnostic Techniques (PNDT) Act, 1994, enacted amid concerns over a declining sex ratio (929 females per 1,000 males in Census 1991), yet son preference persists socially.
- While overt demands for sex determination have reduced, the bias has shifted online, with lakhs of women consuming and commenting on social media content claiming to predict foetal sex.
- In 2025, the Ministry of Health and Family Welfare asked States/UTs to identify URLs promoting sex determination; Delhi flagged 45 links, mostly YouTube videos and e-commerce listings.
- Officials and activists warn that such content can encourage unsafe abortions and reinforce gender bias, even as platforms often deflect responsibility onto content creators.
- Data show a worsening sex ratio in Delhi, falling from 933 (2020) to 922 (2023), highlighting limits of legal prohibition without social change.
- Experts emphasise that family pressure (husbands, in-laws) sustains the practice, while legal action, court directives (2017), awareness, and slow generational attitudinal shifts offer cautious hope.

Firm threatens to pull out of power project in J&K

- Megha Engineering and Infrastructures Ltd. (MEIL) has warned it may withdraw from the 850-MW Ratle Hydroelectric Project in Jammu and Kashmir due to threats, political pressure, and interference affecting work conditions.
- The Ratle Hydroelectric Project is a run-of-the-river scheme on the Chenab in Kishtwar, approved in 2021 with commissioning targeted for May 2026.
- The issue highlights challenges in executing strategic infrastructure projects in sensitive regions, including local employment demands, political interference, and law-and-order concerns, with implications for power sector capacity addition.

No opt-out option in APAAR ID consent forms: Odisha HC

- The Orissa High Court ruled that consent forms for the Education Ministry's APAAR ID scheme do not provide parents an option to opt out of giving consent.
- The APAAR ID scheme issues unique identities linked to Aadhaar to each student.
- A Bench directed the government to consider amending the consent forms to provide an opt-out option.
- The petitioners said the consent forms distributed by the school did not allow declining sharing Aadhaar details at the outset. The petitioners noted a clause allowing withdrawal of consent, but argued it required consent to be first given.
- The Court said withdrawal of consent cannot be treated as an effective right to protect privacy once consent is already given.
- The Court noted the Union Education Ministry's submission that consent was "entirely voluntary". It observed that the consent forms were not worded in line with making the scheme voluntary.
- The Court said a voluntary act requires clear provisions allowing parents to refuse consent or opt out entirely.

'We want BRIDGE to be the Davos for media'

- As the United Arab Emirates accelerates diversification away from oil, media, culture and technology are emerging as a strategic frontier. This ambition was showcased when Abu Dhabi hosted the BRIDGE Summit billed as the largest debut media event.
- The three-day summit, held by the BRIDGE Alliance under the aegis of the UAE government, brought together voices from journalism, cinema, music, technology and communications.
- The idea for BRIDGE emerged from growing fragmentation of media conversations amid shared global pressures. Misinformation, fact-checking challenges, and uncertainty about truth were described as global problems.
- This led to the creation of BRIDGE Alliance as a firm, not a government initiative.
- Abu Dhabi will be the permanent home of the annual summit, with pop-up engagements in the U.S., Europe, Asia and Africa.
- BRIDGE reflects an ambition to reclaim narrative ownership and expand the UAE's media economy and soft power.

How mangroves' cells help plants survive in saltwater

- International researchers in a paper in **Current Biology** studied **mangrove cells** to explain their **salt tolerance**.
- Saltwater** would kill most plants, but **ancient mangroves** with **giant stilt roots** survive on **brine**.
- Scientists identified **cell traits** critical to tolerating **saltwater surges** as **sea levels rise**. The findings could help create **plants**, especially **agricultural crops**, that survive in **salty water**.
- Mangroves** have evolved **30 times** over the last **200 million years** adapting to **saltwater**. Analysis showed no increase in **stomata** for higher **photosynthesis**.
- Mangroves have **small leaf epidermal pavement cells** and **thicker cell walls**, giving **mechanical strength** under **low osmotic potentials**. **Different mangroves use varied mechanisms to manage salt**.
- Some species **exclude salt** using **waxy root layers** that **filter salt**. Other species **accumulate salt** and **secrete it through leaves** via **specialised tissues**.
- Mangroves tolerate **high salinity**, protect coasts from **erosion**, and provide **habitats** for sea animals and birds. These functions **benefit humans**, especially along **coasts**.

Ramanujan's old formulae for pi echo in modern cosmology

- Researchers from **Indian Institute of Science** have linked **Srinivasa Ramanujan's** fast-converging formulae for **π (pi)** with modern theoretical physics.
- Ramanujan's century-old discoveries of **rapidly converging series for $1/\pi$** underpin powerful methods like the **Chudnovsky algorithm**, used today to compute π to trillions of digits.
- The new study shows that the **mathematical structures in Ramanujan's modular equations** closely resemble those in **conformal field theories (CFTs)**, which describe **critical phenomena** in physics.
 - These CFTs are central to understanding systems at **phase-transition critical points**, such as turbulent fluids and conditions analogous to the **expanding universe**.
- The work builds a **conceptual bridge between pure mathematics and physics**, suggesting Ramanujan's intuition mirrors frameworks used in **string theory and modern cosmology**.
- Though not resolving major conjectures yet, the study hints that **other transcendental numbers like π** may have **efficient, physics-based representations**, opening new interdisciplinary research paths.

Bridge of wonder

Ramanujan's equations appear to be analogous to those in certain kinds of conformal field theories

- IISc researchers have found similarities between Ramanujan's speedy methods to estimate π (π) with advanced theories describing critical phenomena
- While reworking string theory problems, they unexpectedly discovered infinitely many new formulae for computing π

- They noticed Ramanujan's mathematics shared the same hidden patterns as equations used to describe turbulent fluids

- The same mathematical pattern also appeared in simple models of an expanding universe, deepening the connection

- Thus far, the work offers a striking bridge between pure number theory and modern physics, rather than solves problems

- Past examples like Riemannian geometry and Fourier transforms show today's abstract maths can transform future technologies



More than a century ago Srinivasa Ramanujan, an accountant in Chennai yet to be admitted to the pantheon of mathematical greats, discovered a set of astonishingly fast-converging formulae to calculate $1/\pi$. ASHLIN (CC BY-SA)

Why are Nvidia chips being sold to China again?

- In **2024**, Trump announced that **Chinese firms can import Nvidia's H200 GPUs**, subject to a **25% revenue surcharge payable to the U.S. government**.
- Nvidia's **H200 GPUs** are used for **AI workloads** such as **training large language models**, and are **one generation behind the Blackwell (B200) chips**, with performance boosted by Nvidia's **CUDA software ecosystem**.
- Since **2018**, the **U.S. and allies (Japan, South Korea, Netherlands)** have restricted advanced chip exports to **China** due to **dual-use (civil–military) concerns** and to preserve **technological and commercial leadership**.
- Despite controls, restrictions have **pushed China to accelerate indigenous R&D**, with firms like **Huawei** developing **domestic chips and operating systems**, though still behind the global frontier.
- Allowing limited H200 sales is seen as a **strategic compromise**: it lets U.S. firms access the **Chinese market**, while **reducing China's urgency to develop cutting-edge alternatives** without threatening U.S. dominance.
- China is expected to **cap imports of H200 chips**, balancing **short-term industry needs** with a **long-term push for self-reliance**, even as gaps persist despite successes like **cost-efficient AI models (e.g., DeepSeek)**.

How will Australia's social media ban work?

- **Australia became the first country to ban social media access for users under 16**, implementing the **Online Safety Amendment (Social Media Minimum Age) Act, 2024** with penalties up to A\$49.5 million for non-compliant platforms.
- The law covers **nearly 10 major platforms** (including Meta, TikTok, X, Snapchat, YouTube) and **removes parental consent as a valid exception**, citing child **mental health, cyberbullying, and online predation** risks.
- Social media firms are required to take “**reasonable steps**” to **block underage users**; Meta has begun warning teenagers and restricting accounts, though implementation challenges remain.
- **Age verification is a key concern**, with government studies showing **high error rates in facial recognition systems**; critics warn of **privacy and surveillance risks** linked to ID- and biometric-based verification.
- Tech companies argue that a **blanket ban may isolate teenagers** and offer inconsistent protection, while the government acknowledges **implementation flaws** but views the law as a necessary first step.
- The move follows **evidence from lawsuits and internal company documents** linking excessive social media use among minors to **anxiety, depression, addiction-like behaviour**, prompting global interest, with several countries considering similar bans.