

# 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  $\pi$  (**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  $\pi$  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  $\pi$**  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 pi ( $\pi$ ) with advanced theories describing critical phenomena

■ While reworking string theory problems, they unexpectedly discovered infinitely many new formulae for computing  $\pi$

■ 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.