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National & International News

Naegleria fowleri: The "Brain-Eating Amoeba"	**Context:** ● **Primary Amebic Meningoencephalitis (PAM)** is a rare and fatal brain infection caused by the **amoeba Naegleria fowleri.** ● This **single-celled organism** thrives in warm freshwater and soil and can survive in temperatures up to 115°F (46°C). **Recent Case in Kerala:** ● A recent tragic incident in **Kerala** saw a five-year-old girl succumb to PAM at the Government Medical College Hospital in Kozhikode. ● The suspected **source of infection was a local river** where the girl, along with four other children, had been swimming. The other children did not develop symptoms. **Infection and Spread:** ● **Naegleria fowleri** enters the body through the **nose,** typically when individuals are swimming in warm **freshwater bodies such as lakes, rivers, and poorly maintained swimming pools**. ● Once inside the body, the amoeba travels to the brain, causing significant tissue destruction and swelling. **Symptoms of PAM:** ● The initial symptoms of PAM include headache, fever, nausea, and vomiting. ● As the infection progresses, the patient may experience a **stiff neck, confusion, seizures, hallucinations, and eventually fall into a coma**. ● Most patients with PAM die within 1 to 18 days after the onset of symptoms. **Treatment:** ● There is no **definitive treatment for PAM.** ● Currently, doctors use a combination of drugs, including amphotericin B, azithromycin, fluconazole, rifampin, miltefosine, and dexamethasone, to manage the infection.

Travel & Tourism Development Index	**Context:** ● **India ranks 39th in the World Economic Forum's Travel & Tourism Development Index 2024.** ● This is a significant rise from the **54th position in 2021.** **Global Rankings:** ● The top countries in the index are the **United States, Spain, Japan, France, Australia, Germany, the United Kingdom, China, Italy, and Switzerland.** **Key points:** ● This new ranking places India as the **highest in South Asia and among other lower-middle-income economies**. ● However, direct comparisons with 2021 are challenging **due to changes in index parameters.** ● India's improved ranking can be **attributed to its rich cultural heritage, diverse landscapes, increased investments in tourism** infrastructure, and efforts to enhance travel and tourism sustainability and safety. ● India ranks **18th in price competitiveness**, **26th in air transport, and 25th in ground and port infrastructure**. ● Additionally, India scores in the **top 10 across all resource pillars,** with its Natural Resources ranked 6th, and both Cultural and Non-Leisure Resources ranked 9th. ● Despite these achievements, **India's overall Travel and Tourism Development Index (TTDI) score is 2.1% lower than in 2019,** primarily due to global inflation and supply chain issues affecting price competition, air transport, and tourist services.
eVTOL	**Context:** ● In India, the ePlane Company, **incubated by the Indian Institute of Technology, Madras**, plans to launch its **e-flying taxis in Bengaluru**. ● In India, however, the government has yet to establish clear policies regarding eVTOL flying taxis. ● Globally, the United Kingdom may witness its first eVTOL flying taxi by **2026.** **About:** ● eVTOLs operate on electric power, allowing them to reach speeds of up to **200 kilometers per hour.** ● They can take off, hover, and land **vertically, similar to helicopters.**

	• However, unlike helicopters, eVTOLs **do not require high fuel and maintenance costs** or elaborate infrastructure like helipads. • They can function on any open ground or rooftop, offering great flexibility in their operations. **Applications:** • **Daily Commute & Cargo Delivery:** Potential to reduce road traffic. • **Military Use:** Can be adapted for military applications. • **Close Proximity Flights:** Operates closer to the ground compared to traditional aircraft.
RBI Approves Record Surplus Transfer to Government	**Context:** • The Reserve Bank of India's (RBI) Central Board of Directors has approved a record surplus transfer of Rs **2.11 lakh crore to the government for the financial year 2023-24.** • **This transfer is the highest yearly surplus ever transferred by the Indian central bank.** **Key points:** • The surplus transfer is based on the **Economic Capital Framework (ECF) adopted by the RBI on August 26, 2019, following recommendations from the Bimal Jalan committee.** • The increase in surplus is attributed to higher income from the RBI's forex holdings, among other factors. • **Impact: The higher-than-expected surplus will support the central government's liquidity and expenditure.** • **Contingent Risk Buffer (CRB):** The announcement included an increase in the CRB to 6.50% for FY24, as recommended by the committee. The CRB range is maintained between 5.5% and 6.5% of the RBI's balance sheet.
SPECULOOS-3 b	**Context:** • Astronomers have recently made a groundbreaking discovery, detecting a new **Earth-sized planet named SPECULOOS-3 b.** **About:** • Situated a mere 55 light years away, **this planet orbits an ultra-cool red dwarf star, marking only the second of its kind found around such a star.**

	• The star itself is **notably colder, less massive, and a hundred times less luminous than our sun**, making it an intriguing celestial body to study. • SPECULOOS-3 b exhibits some unique characteristics, **taking around 17 hours to complete a single orbit around its star.** • One of the most striking features of this planet is its likely state of tidal locking, similar to the relationship between the moon and Earth. • This phenomenon suggests that one side of the planet, the **"dayside," always faces the star, leading to endless days and nights on SPECULOOS-3 b.**