UPSC Daily Current Affairs| One Liners 21-04-2026

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History, Art and Culture

First Battle of Panipat

On April 21, 1526, the invading forces of Babur faced the large army of Ibrahim Lodi, the Sultan of Delhi, on the fields of Panipat.

• **Mughal Innovation -** Babur utilized *Tulughma* (circling maneuvers) and the *Araba (cart*) strategy to trap Lodi's superior numbers. This tactical brilliance neutralized the Sultan's massive elephant cavalry.
• **Gunpowder Advantage -** This battle marked one of the earliest uses of *field artillery* and firearms in India. The deafening cannons terrified Lodi's elephants, causing them to trample their own soldiers.
• **The Outcome -** Despite being outnumbered, Babur's disciplined troops crushed the Delhi forces. Ibrahim Lodi was killed in action, marking the end of the *Lodi Dynasty*.
• **Mughal Empire Begins -** Babur's victory laid the foundation for the *Mughal Empire*, which would dominate the Indian subcontinent for more than two centuries.

Rise of Bahlul Lodi

April 21, 1451, *Bahlul Khan Lodi* ascended the throne of Delhi.
• **Founder of** - the Lodi Dynasty, the first Afghan lineage to rule the Sultanate.
• **New Leadership -** Bahlul replaced the weak Sayyid dynasty. Unlike previous autocrats, he treated his Afghan nobles as *equals,* often sitting on the floor with them to gain their loyalty.
• **Expanding Borders -** His reign was marked by constant warfare to reclaim lost territories. His greatest achievement was the conquest of the *Sharqi Kingdom* of Jaunpur.
• **Administrative Shift** - He introduced the *Bahloli coin*, which remained a standard currency for decades after his death.
• **Architectural Innovations:** Double Dome, Octagonal Tombs, Lodi Gardens" (Delhi)

Sikandar Lodi 2nd Ruler

• Introduced a standardized system for land measurement:
• **Gazz-i-Sikandari** - A 32-digit (roughly 30-inch) measurement unit used for calculating land revenue. This system remained in use for centuries, even during the reign of Akbar.
• **Price Controls** - He worked to lower the prices of essential commodities to help the common people.
• ***1504 -*** *Sikandar Lodi founded the city of Agra.*
• *Sikandar Lodi was a poet himself (writing under the pen name Gulrukhi).*

Geography

Hussain Sagar Lake

As summer temperatures rise, the lake is releasing a strong, foul smell. This is caused by a heavy ***algal bloom*** *triggered by the heat and existing pollution.*

• **History and Origins** - Built in 1562 during the **Qutb Shahi dynasty**, it was designed by Hussain Shah Wali. It was originally created to supply drinking and irrigation water to Hyderabad.
• **Heart of the World** - The lake is famous for its unique **heart shape**. It is one of the largest man-made lakes in Asia and was named the "Heart of the World" by the UN.
• **Iconic Landmarks** - A massive, 350-tonne **monolith of Lord Buddha** stands in the center. The lake is also surrounded by beautiful spaces like Lumbini Park and Sanjeevaiah Park.
• **Connecting Cities** - Historically, the lake served as a vital link between the twin cities of *Hyderabad and Secunderabad*, helping the region grow and stay connected.

Polity & Governance

Pradhan Mantri Gram Sadak Yojana-III (PMGSY -III)

Indian government has extended the *PMGSY -III* until **March 2028**. This ensures the completion of vital rural road projects beyond the original 2025 deadline.

• **Updated Budget -** Project cost has been increased to **Rs. 83,977 crore**.
• Fund coverage - Road upgrades, pending tenders, and the construction of *161 long bridges*.
• **New Timelines -** Projects in plain areas must be finished by *March 2028*. Bridges in difficult hilly regions have an extended deadline until *March 2029*.
• **Goal -** Scheme focuses on connecting villages to *hospitals, schools, and local markets (GrAMs)* to improve essential service delivery.
• **Vision for 2047 -** This expansion aims to bridge the rural-urban gap, supporting the long-term goal of a developed **Viksit Bharat**.

The scheme prioritizes roads that link rural habitations to:

• **Gramin Agricultural Markets (GrAMs):** To help farmers get better prices for their produce.
• **Education:** Connecting villages to Higher Secondary Schools.
• **Healthcare:** Ensuring faster access to Hospitals.

Environment

Claude Mythos

Anthropic has introduced **Claude Mythos**, a powerful AI designed to find hidden security flaws in software that humans have missed for decades.

• **Part of Project Glasswing -** This system helps defenders find and fix "zero-day" vulnerabilities before hackers can exploit them.
• **How it Works -** Unlike basic scanners, Mythos uses **autonomous reasoning** to understand complex logic.
• It can analyze millions of lines of code in seconds to simulate potential attacks.
• **Features -** It is 10 times faster than previous tools and works across browsers and operating systems. It offers a massive leap in technical problem-solving.
• **Restricted Access -** Because it could be dangerous if misused, Anthropic keeps the model away from the public, allowing only vetted security agencies to use it.
• **Security -** Mythos marks a shift toward **autonomous cyber defense**, where AI speed makes traditional, slow manual patching a thing of the past.

Science

Foot-and-Mouth Disease (FMD)

It is a highly contagious virus affecting animals with divided hooves, such as cows, pigs, and goats.

• **Affects** - While rarely fatal to adults, it disrupts farming and global trade.
• **Spreads -** Through direct contact with infected fluids, contaminated farm equipment, or even wind. Humans often accidentally carry it on clothes and shoes.
• **SAT 1 Crisis -** Current global surge of the **SAT 1** strain is driven by illegal animal trade and crowded livestock markets where different groups mix.
• **Common Symptoms -** Infected animals develop painful blisters in the mouth and on feet, causing lameness, heavy drooling, and a sharp drop in milk production.
• **Serotypes or FMD -** There are 7 types of FMD *(O, A, C, SAT 1, SAT 2, SAT 3, and Asia 1)*. Crucially, a vaccine or recovery from one Serotype type does **not** protect an animal against the others.
• **Prevention -** Since there is no cure, farmers must use strict quarantine, specific vaccinations, and thorough disinfection to stop the virus from spreading.

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Indian Space Report 2025

Year 2025 was busy, with **315 successful launches** placing over 4,000 satellites into orbit. This highlights a massive global surge in space activity.

• **Private Moon Mission -** Interest in Moon shifted toward private companies. Notably, the *Blue Ghost Mission 1* became the first privately owned spacecraft to achieve a soft landing on the lunar surface.
• **Orbit Congestion -** Low-Earth orbit is becoming crowded. ISRO reported roughly *160,000 alerts* for close approaches between objects, signalling a high risk of space collisions.
• **India's Space Fleet -** By the end of 2025, India operated *144 spacecraft.*
• The government maintained 22 satellites in low orbits and 31 in higher, stationary orbits.
• **Major Milestones -** The *GSLV-F15* mission marked the 100th launch from Sriharikota. Additionally, the *SpaDeX* mission and deep-space projects like Aditya-L1 remained highly active.
• **Human Spaceflight -** In a proud moment, *Group Captain Shubhanshu Shukla* commanded the private Axiom 4 mission, leading a crew to the International Space Station.

Miscellaneous

India's First Water-Neutral Railway Depot

***Kankaria Coaching Depot** in Ahmedabad is India's first railway facility to achieve "water neutrality." It recycles nearly all the water used to clean and maintain trains.*

• **Eco-Friendly Cleaning -** Instead of harsh chemicals, the depot uses *phytoremediation*. This process uses specific plants to naturally absorb dirt and pollutants from the water.
• **Purification -** The wastewater goes through a multi-step cleaning process, *including natural wetlands, sand filters*, and *UV disinfection* to ensure it is safe for reuse.
• **Massive Savings -** The system saves *1.60 lakh litres* of water every day. Annually, this adds up to over 5.84 crore litres of fresh water saved.
• **Lower Costs -** By reusing water, the railway reduces its dependence on city supplies, which lowers operational costs and protects local water sources.

Quick Facts

• *Phytoremediation i*s a green technology using living plants to decontaminate soil, water, and air.
• These plants naturally absorb, filter, or break down pollutants like heavy metals and toxins, providing a cost-effective, sustainable alternative to traditional mechanical or chemical cleaning methods.

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