



DAILY CURRENT AFFAIRS 28-04-2026

Mapping Perspective

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Prelims Perspective

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Strait of Malacca

Syllabus: Prelims Bits – Mapping.

Context:

- The closure of the Strait of Hormuz has forced policymakers in Asia to face questions over the security of other maritime chokepoints, including the Strait of Malacca.

About Strait of Malacca

- **Location:** It connects the Andaman Sea (Indian Ocean) and the South China Sea (Pacific Ocean).
- **Bounded by:** Indonesia, Thailand, Malaysia and Singapore.
- **Etymology:** The name was derived from the Malacca Sultanate, who governed the archipelago from 1400 until 1511.
- **Climate:** Hot and humid; characterized by the northeast monsoon during the (northern) winter and the southwest monsoon during the summer.
- **Connectivity:** It links the Indian and Pacific oceans and is one of the busiest and most important shipping lanes in the world.
- **Control & Security:** Singapore, Malaysia, and Indonesia control the joint patrolling of the Malacca Strait.



Significance

- It is the largest “oil transit chokepoint” in the world.

- It carries nearly 22% of the world's maritime trade.
- Roughly 60% of India's seaborne trade and almost all of its LNG imports pass through the Malacca Strait.

Cerium-Magnesite-Changesite

Syllabus: Prelims Bits.

Context:

- China recently announced the discovery of a new mineral from the Moon named **Cerium–Magnesium Changesite**, marking a significant addition to the growing catalogue of extraterrestrial materials and offering fresh insights into lunar geology

About Cerium–Magnesium Changesite

- It is a newly discovered lunar mineral
- It is the 11th known lunar mineral
- The mineral was discovered in a lunar meteorite dubbed **Pakepake 005**, the first of its kind to have fallen within China
- It is a single spherical meteorite weighing 44 grams, with a dark molten outer shell



Physical Characteristics

- The new mineral is colourless, transparent and brittle
- It is extremely small, with grain sizes ranging from about 3 to 25 micrometres, and most particles measuring under 10 micrometres

- Despite its tiny size, it holds significant scientific value due to its unique chemical and structural properties

Unique Properties

- One of the most striking features is its fluorescent behaviour, meaning it emits light under certain conditions
- This property could have practical applications in advanced technologies, particularly in the development of next-generation LED materials

Scientific Significance

- The mineral's composition, especially its rare earth element ratios, along with its magnesium and iron content, offers valuable clues about the processes that shaped the Moon's surface and interior
- Variations in its crystal structure could help researchers better understand how lunar minerals form and evolve under extreme conditions

Diphtheria

Syllabus: GS-3: General Science – Diseases.

Context:

- After decades of being largely under control, diphtheria — a serious but vaccine-preventable disease — is making an unexpected return in parts of Australia

About Diphtheria

- It is a highly contagious bacterial infection that can attack the upper respiratory tract and less often the skin
- It is caused by strains of bacteria called *Corynebacterium diphtheriae* that make a toxin
- The bacterium usually multiplies on or near the surface of the throat or skin

Types of Diphtheria

- **Classical respiratory diphtheria:** It may affect your nose, throat, tonsils, or larynx (voice box); it's the most common type
- **Skin (cutaneous) diphtheria:** It causes a skin rash, sores, or blisters; they can appear anywhere on your body; more common in tropical climates; overall, it's rare

Transmission

- It can spread from person to person, usually through respiratory droplets (coughing or sneezing)

- People can also get sick from touching infected open sores or ulcers (cutaneous diphtheria)
- Some people may not develop disease manifestations but can still transmit the bacteria to others

Symptoms

Respiratory Diphtheria

- Throat pain; weakness or fatigue; mild fever; swollen lymph nodes in neck
- A thick, greyish coating on the back of the throat
- Problems in breathing and/or swallowing

Skin (Cutaneous) Diphtheria

- Painful open sore or ulcer
- Rash with scales or peeling skin
- Swelling and discoloration near the sore or rash

Complications

- Airway blockage leading to suffocation
- Heart muscle damage and heart failure
- Nerve damage; kidney failure
- These complications can result in death

Treatment

- Neutralization of unbound toxin with Diphtheria Antitoxin (DAT)
- Antibiotics to prevent further bacterial growth
- Monitoring and supportive care to prevent and treat complications (airway obstruction, myocarditis)
- In advanced stages, infection can damage heart, kidneys, and nervous system

Prevention & Mortality

- It is a vaccine-preventable disease; multiple doses and booster doses are needed to produce and sustain immunity
- For unvaccinated individuals, without proper treatment, diphtheria can be fatal in around 30% of cases; young children are at higher risk of dying

Regulating Payments Banks

Syllabus: GS-3: Indian Economy –Banking.

Context:

- The Reserve Bank of India has cancelled the banking licence of Paytm Payments Bank Limited with immediate effect, more than two years after initially restricting it from accepting new deposits.
- RBI will approach the High Court to wind up the bank's operations, ensuring depositor interests are protected through a structured process.
- This case has become a landmark instance of regulatory enforcement in India's fintech and digital payments sector.

What Are Payments Banks?

- Payments banks are a unique category of banks introduced by the RBI to promote financial inclusion.
- They operate under tight restrictions:
 - Can accept deposits only up to ₹2 lakh per customer.
 - Cannot offer loans or credit cards.
 - Primarily serve as platforms for remittances, utility payments, and digital transactions.
- PPBL was founded by One97 Communications (49% stake) and Vijay Shekhar Sharma (51% stake), operating within the larger Paytm ecosystem.

Timeline of Regulatory Scrutiny

Beginning of Oversight (2018)

- RBI audit of PPBL's customer onboarding processes found critical gaps in KYC compliance:
 - Single PAN linked to multiple customer accounts — red flag for regulatory bypass.
 - Transactions allowed beyond prescribed account limits — money laundering concerns.
 - Inconsistent customer identity verification during acquisition.
- PPBL directed to halt onboarding of new customers until systems were strengthened.

Subsequent Regulatory Actions

- **New customer ban (2022):** Stop onboarding new customers from March 11, 2022.

- **Financial penalty (2023):** Monetary penalty of ₹5.39 crore for non-compliance.
- **Business restrictions (2024):** Bar on accepting deposits, credits, or top-ups in accounts, wallets, FASTags, and NCMC citing “persistent non-compliances and material supervisory concerns.”
- **Licence cancelled (2025):** Licence cancelled invoking provisions of the Banking Regulation Act, 1949.

Legal Basis for Cancellation

- RBI invoked provisions of the Banking Regulation Act, 1949:
 - **Section 22(3)(c):** Management character must not be prejudicial to depositors or public interest.
 - **Section 22(3)(e):** No public interest served by allowing the bank to continue.
 - **Section 22(3)(g):** Failure to comply with licence conditions.
 - **Section 5(b) & Section 6:** Prohibited from conducting banking business with immediate effect.
- Key compliance violation:
 - Failure to maintain a “Chinese wall” (operational separation) between PPBL and its group entity One97 Communications — critical governance requirement to prevent conflict of interest.

Impact

On One97 Communications and Paytm Ecosystem

- Stock fell 40–50%, reflecting investor panic.
- Disruption in wallet services, merchant settlements, FASTag, and autopay services.
- Emergency partnerships with Axis Bank and Yes Bank for continuity.
- User and merchant migration to rivals like Google Pay and PhonePe.
- Increased compliance costs and operational restructuring.
- Shift towards leaner, partner-bank-driven business model.

Broader Significance for India

- **Consumer protection:** Demonstrates zero tolerance toward practices harming depositors.
- **Strengthening digital finance:** Digital payments revolution must rest on strong compliance architecture.
- **Fintech regulation:** Innovation cannot bypass prudential norms.

- **Institutional credibility:** Shows RBI's willingness to act against even large market players.

Challenges

- Regulatory arbitrage risk in fintech space where growth outpaces compliance infrastructure.
- Difficulty in maintaining KYC standards at scale for digital-first banks.
- Tension between financial innovation and depositor protection.
- Risks of group entity entanglement undermining independence.
- Systemic disruption to millions dependent on integrated payment ecosystems.

Way Forward

- Need for robust compliance frameworks in payments banks before scaling operations.
- Highlights broad supervisory and enforcement powers of RBI under the Banking Regulation Act.
- Fintech firms must institutionalise independent compliance functions and maintain strict separation from parent entities.
- Policymakers may re-examine regulatory framework balancing inclusion goals with governance standards.

Conclusion

- Cancellation of licence underscores that digital innovation cannot substitute regulatory discipline.
- While fintech firms are central to inclusive growth and cashless economy goals, public trust depends on transparency, governance, and depositor protection.
- Reinforces principle: in banking, compliance is as important as innovation.

Mythos AI

Syllabus: GS-3: Science and Technology – AI.

Context:

- Anthropic's new AI model Claude Mythos has triggered global concern due to its advanced capabilities, marking a significant leap over earlier systems.
- In India, the issue has gained urgency, with FM Nirmala Sitharaman chairing a high-level meeting over potential threats to the banking sector, and the government engaging directly with Anthropic's leadership.

- Concerns have intensified further with reports that Qihoo 360 has developed a similar system capable of identifying software vulnerabilities at scale.
- While such tools offer breakthroughs in cyber defence, they also raise fears of misuse, cyber risks, and global technological competition.

About Mythos

- Mythos is the latest model in Anthropic's Claude AI family, currently released only in a limited preview.
- It represents a major leap in artificial intelligence capability, particularly in cybersecurity.
- Key feature: ability to autonomously detect critical vulnerabilities in widely used software and infrastructure at a speed far exceeding human researchers.
- Dual capability: can fix vulnerabilities when used defensively—but can also exploit them if used maliciously, making it a powerful yet potentially dangerous tool.

Why Mythos Has Alarmed Policymakers Worldwide

Unprecedented Vulnerability Detection

- Anthropic claims Mythos has identified serious flaws across major operating systems and web browsers, including vulnerabilities undetected for decades.
- Speed and scale of discovery have raised immediate global concerns.

Capability Leap Over Earlier Models

- Compared to Opus 4.6 (near-zero success in exploit development), Mythos demonstrates a dramatic leap.
- It can convert vulnerabilities into working exploits at a far higher success rate → entirely different capability class.

Ease of Use and Automation Risks

- Major concern: accessibility—non-experts can use Mythos to identify and exploit vulnerabilities.
- Engineers without formal cybersecurity training could generate fully functional exploits overnight.
- Highlights risk of widespread misuse and democratization of cyber offensive capabilities.

Dual-Use Nature: Defence vs Exploitation

- Mythos embodies a classic dual-use dilemma:
 - Same capabilities allow fixing vulnerabilities

- Also enable effective exploitation → amplifying cybersecurity threats
- Anthropic notes features were not explicitly programmed but emerged from improvements in reasoning, coding, and autonomy.
- Unpredictability has heightened concerns about control and unintended consequences → company paused wider release.

Mythos AI in Real-World Testing

Cybersecurity Performance

- Solved 73% of expert-level cybersecurity challenges → far outperforming earlier AI models.

Advanced Reasoning Capability

- Sustained performance across complex, multi-layered problems → improvements in reasoning, planning, and technical depth.

Emergence of “Agentic” Behaviour

- Ability to autonomously execute multi-step attack sequences.
- Moves beyond a simple tool → creates coherent attack pathways → risk of automated cyberattacks.

Lowering Barrier for Cybercrime

- Even less-skilled actors can conduct sophisticated cyberattacks.
- Significant increase in global cybersecurity risks.

Mythos Breach and Global Fallout

Controlled Rollout and Defensive Initiatives

- Anthropic launched Project Glasswing to strengthen cyber defences using Mythos.
- Major participants: Apple, Nvidia, Linux Foundation, CrowdStrike, Google.

Leak Raises Immediate Alarm

- Despite restricted access, Mythos reportedly accessed via a private Discord channel.
- Raises concerns about containment and security breaches of sensitive AI systems.

Need for Global AI Governance

- Highlights urgent need for international coordination on AI regulation.
- Without common standards and guardrails → difficult to control such technologies across jurisdictions.

India’s AI Policy Reassessment

- Following concerns, FM Nirmala Sitharaman directed banks to maintain high vigilance and develop coordinated mechanisms against emerging cybersecurity threats.
- Mythos episode prompting India to recalibrate AI strategy → balance innovation with governance, coordination, and risk mitigation.

Shift from Light-Touch Regulation

- India had followed a light-touch approach focusing on innovation and economic growth.
- Risks highlighted by Mythos may push toward a more cautious, security-oriented regulatory framework.

Creation of Institutional Mechanisms

- Ministry of Electronics and Information Technology has set up:
 - **AI Governance and Economic Group:** inter-ministerial body for AI policy coordination.
 - **Technology and Policy Expert Committee:** provides technical and regulatory guidance.