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Daily Current Affairs

To The Point

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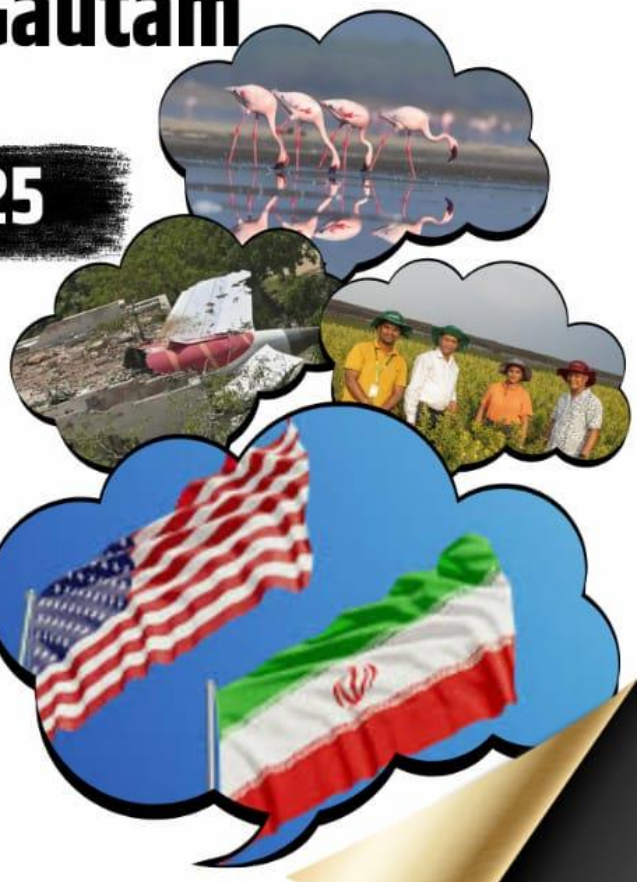

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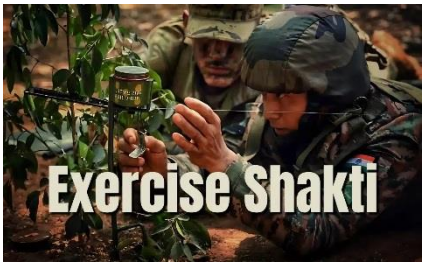
GS Paper 3 – Defence & Security

1 Exercise Shakti 2025: Strengthening India-France Defence Ties



Context: Exercise Shakti, the **bilateral military exercise** between **India and France**, is all set to return for its **8th edition** in **La Cavalerie, France**, beginning **June 18, 2025**. This biennial military engagement is aimed at reinforcing mutual trust, enhancing **interoperability**, and boosting cooperation in conducting **multi-domain operations**, particularly in **sub-conventional warfare scenarios**.

A Tradition of Shared Excellence:

- **Exercise Shakti** is held **every two years**, alternating between **India** and **France**.
- The **previous edition** was conducted in **India**, making the 2025 edition a return visit by Indian troops to French soil.
- The exercise includes a series of **joint drills**, **tactical exercises**, and **combat simulations**, focusing on modern warfare strategies and counter-insurgency operations.

Core Objectives of Exercise Shakti:

- **Enhance joint operational capability** of both nations' armed forces.
- Develop **shared understanding** of tactics, **techniques**, and **procedures** in combat.
- Foster **military camaraderie**, **mutual trust**, and **team spirit**.
- Promote cultural exchange and deepen **strategic partnership**.

Part of a Wider Strategic Partnership:

Apart from **Exercise Shakti**, India and France also collaborate through:

- **Exercise Varuna** – A **naval exercise** focusing on maritime security in the Indo-Pacific region.
- **Exercise Garuda** – An **air force-level drill** emphasizing aerial coordination and defense.
- **Exercise Desert Knight** – A **joint air force exercise**, highlighting **air superiority** and **tactical planning**.

Additional Insight: India-France Defence Ties

- India and France have a **long-standing defence relationship**, with France being one of India's key strategic partners in Europe.
- The collaboration spans across **defence procurement**, **technology transfer**, and **joint military training**.
- France has been instrumental in supplying advanced military hardware to India, such as the **Rafale fighter jets**.

Looking Ahead: The 2025 edition of **Exercise Shakti** not only reflects the deepening **military cooperation** between two great democracies but also underscores their **shared commitment** to global peace, stability, and **rules-based international order**. As geopolitical dynamics evolve, such exercises become vital in preparing armed forces for the **complex security challenges** of the future.

GS Paper 3 – Indian Economy

2 Merchant Discount Rate (MDR): A Key Component of Digital Transactions

Context: The **Merchant Discount Rate (MDR)** refers to the **fee charged to merchants** by banks or payment service providers for enabling **digital payments** through methods such as **credit cards**, **debit cards**, **UPI**, and **mobile wallets**. This fee helps maintain the digital payment infrastructure and ensure smooth, secure transactions.

Latest Update: No MDR on UPI Transactions

The **Ministry of Finance** has recently clarified that the **rumors regarding MDR being levied on UPI payments are entirely unfounded**. The government reaffirmed its policy that **UPI transactions remain completely free** for both **consumers and merchants**, in a move to **encourage a cashless economy** and support **digital inclusion**.

How MDR Works: Behind the Scenes of a Swipe or Tap

When a customer makes a digital payment, a small portion of the transaction amount—typically between **1% and 3%**—is deducted as **MDR**. This amount is distributed among:

- The **issuing bank** (which issued the card)
- The **acquiring bank** (which installed the PoS terminal)
- The **payment gateway** or **card network** (such as Visa, Mastercard, or RuPay)

These entities work together to **authenticate, process, and settle** digital payments in **real-time**, ensuring **transaction security** and **system reliability**.

Key Features of MDR:

- **Percentage-based fee**: Generally ranges from **1% to 3%**, depending on several factors.
- **Fee structure** depends on:
  - **Type of card** used (credit/debit)
  - **Volume of transactions** processed by the business
  - **Average ticket size** (average amount per transaction)
- **Pre-setup requirement**: Merchants must **enroll with a payment service provider** and agree to the MDR terms before accepting digital payments.
- **Automatic deduction**: MDR is automatically deducted from the merchant's account during the **settlement process**.
- As per **RBI regulations**, **merchants are prohibited** from passing MDR charges to customers.

Why MDR Matters for Businesses:

Merchants need to treat **MDR as a routine operating cost**, just like rent or utility bills. While it slightly reduces the net revenue from each sale, it also brings:

- **Ease of transaction**
- **Faster payments**
- **Better customer experience**
- **Wider reach**, especially in urban digital environments

Businesses that accept digital payments tend to build **greater customer trust** and enjoy **higher sales volumes**, especially from tech-savvy and cashless consumers.

UPI: India's Game-Changer in Digital Payments

- **UPI (Unified Payments Interface)** is India's fastest-growing digital payment platform, processing over **12 billion transactions per month** (as of 2025).
- UPI is maintained by **NPCI (National Payments Corporation of India)**, with **zero MDR** to ensure accessibility for **small businesses**, **kirana stores**, and **low-income users**.
- Although payment companies have advocated for compensation, **UPI continues to operate under a no-MDR policy**, supported by the **Government of India**.

Final Thoughts:

The **Merchant Discount Rate** is an essential element of India's expanding **digital economy**, helping maintain the vast infrastructure that powers instant, secure, and seamless electronic transactions. While MDR may appear as a small fee, it is a vital cog in the wheel that supports **cashless commerce** and enhances the **overall efficiency of the payment ecosystem**.

In a world moving rapidly toward digital, understanding how **MDR** works helps merchants make **informed financial decisions**, improve **pricing strategies**, and prepare for a **digitally connected future**.

GS Paper 3 – Science and Technology

3 Black Box: The Silent Witness in Aviation Disasters

Context: A **black box** is a crucial piece of technology installed on aircraft to **record flight data and cockpit audio**, providing vital clues in the event of an **aviation accident or incident**. Despite its name, the black box is typically **bright orange or yellow**, making it easier to locate after a crash.

Latest Update: Search for Black Box in AI171 Crash

In the aftermath of the **Air India AI171 flight crash** en route to **Gatwick**, authorities are continuing their urgent search for the **aircraft's black box**. This device is critical for reconstructing the final moments before the disaster and determining the **exact cause of the crash**.

Components of a Black Box:

Modern aircraft are equipped with **two separate recording systems**:

1. **Cockpit Voice Recorder (CVR)**
    - Captures **audio conversations** between the pilots
    - Records **radio communications**, **alarm sounds**, and **engine noises** inside the cockpit
2. **Flight Data Recorder (FDR)**
    - Stores more than **80 parameters** including:
        - **Altitude**
        - **Airspeed**
        - **Flight heading**
        - **Vertical acceleration**
        - **Pitch and roll**
        - **Autopilot activity**
        - And many more dynamic performance metrics

These recordings offer **critical evidence** that helps investigators **reconstruct the flight's timeline**, identify technical faults, and understand **pilot decision-making** under pressure.

Designed for Survival:

Black boxes are engineered to endure some of the **harshest crash conditions**. Each unit is:

- **Encased in heat-resistant and pressure-proof housing**, often made of **steel or titanium**
- **Insulated** to withstand extreme temperatures, water immersion, and forceful impacts
- Positioned toward the **rear of the aircraft**, where the damage from crashes is statistically **less severe**
- Capable of transmitting **underwater locator beacon signals** for up to **30 days**, aiding search teams

A Revolutionary Invention: The black box was invented by **Australian scientist Dr. David Warren** in the 1950s following a tragic plane crash. His idea stemmed from the need to understand what pilots were

experiencing **moments before an accident**. Today, these devices are **mandatory in most commercial aircraft** around the world and have revolutionized **air safety investigations**.

Additional Insight: Black Boxes Beyond Aviation

- Similar technology is now being used in **trains**, **cars**, and even **space missions** to monitor system performance and provide data for post-incident analysis.
- In aviation, upcoming developments aim to introduce **real-time data streaming**, allowing ground control to access flight data **mid-air**, potentially preventing disasters before they happen.

Final Thought:

The **black box** is not just a recorder—it is a **lifesaving tool** that speaks for pilots and passengers when they can't. By unlocking the truth behind aviation accidents, it has become an essential element in making **air travel safer than ever before**.

GS Paper 2 – International Relation

4 Middle East on Edge: Rising Tensions Between Iran, Israel, and the US Over Nuclear Talks

Context: Tensions in the **Middle East have reached a critical point**, as the long-standing nuclear dispute between **Iran**, **Israel**, and the **United States** intensifies. A recent report by **CBS News** reveals that **Israel is fully prepared to launch a military strike on Iran**, prompting the **U.S. to issue regional travel advisories** for its personnel stationed in **Iraq, Israel**, and neighboring nations.

Amid escalating threats and failed diplomacy, the risk of a **wider regional conflict** is growing, renewing fears of a potential **military confrontation** in an already volatile region.

Flashpoint: IAEA Resolution Fuels Israeli Pressure

- Israel has always viewed Iran's nuclear program as an existential threat and remains opposed to any form of **Iran–US nuclear negotiations**. The situation escalated sharply following a recent **IAEA Board of Governors resolution**, which for the **first time in two decades**, officially deemed **Iran non-compliant** with its nuclear commitments.

The resolution followed an alarming **IAEA report** that accused Iran of conducting **undisclosed nuclear activities** at three secret sites. Moreover, Iran's stockpile of enriched uranium, particularly at **60% purity**, is growing—putting it dangerously close to the **90% weapons-grade threshold**.

There are now discussions about potentially referring Iran's case to the **United Nations Security Council**, raising the specter of **international sanctions** and **diplomatic isolation**.

The JCPOA in Jeopardy: Deal Nearing Collapse

- The **Joint Comprehensive Plan of Action (JCPOA)**—commonly known as the **Iran nuclear deal**—was signed in **2015** between Iran and six world powers (**US, UK, France, Russia, China, and Germany**). It aimed to restrict Iran's nuclear capabilities in exchange for lifting economic sanctions.

Though the **U.S. withdrew from the deal in 2018** under President Trump, the JCPOA remains technically active. However, with the agreement **set to expire in October**, there's a growing push from **European signatories** (UK, France, Germany) to invoke **snapback sanctions**, a clause allowing for the **reimposition of UN penalties** if Iran is found in breach.

Iran's Firm Response: Sovereignty Over Concessions

- Iran has **rejected the IAEA's resolution**, denouncing it as **"politically biased"**, and in defiance, announced plans to **build a new uranium enrichment facility** in a heavily protected location.

Tehran has also **threatened to withdraw from the Nuclear Non-Proliferation Treaty (NPT)** — a move that would **strip international inspectors of access** and could spell the **complete breakdown of global nuclear diplomacy**.

Iranian leaders, including **Supreme Leader Ayatollah Khamenei** and **Foreign Minister Araghchi**, have reiterated their commitment to **nuclear transparency**, but emphasize that **sovereign control over uranium enrichment** is a **non-negotiable red line**.

The Core Dispute: Uranium Enrichment Rights

Since **April**, five rounds of nuclear negotiations between the **U.S. and Iran** have taken place, the most recent in **Rome on May 23**. The core issue isn't whether Iran can use nuclear energy for peaceful purposes (which the U.S. accepts), but rather **where and how uranium is enriched**.

The U.S. proposed allowing Iran **limited enrichment**, followed by fuel supply from a **multinational consortium** involving Arab states and the U.S. Iran rejected the offer, viewing it as a **violation of its sovereignty and self-reliance**.

Regional Dynamics: Arab Endorsement, Israeli Rejection

- **Arab states** support continued diplomacy, aiming to prevent another regional war.
- **Israel**, however, remains a vocal critic of any deal that allows Iran to maintain its nuclear infrastructure.

Prime Minister Benjamin Netanyahu has consistently warned that any agreement short of **total dismantling** of Iran's nuclear capabilities is a **serious security threat**. Although **not a direct party to the JCPOA**, Israel's **military actions**, **covert operations**, and **intelligence leaks** have had an **outsized influence** on the negotiating atmosphere.

High Stkes: Potential Fallout from NPT Withdrawal

If Iran follows through on its **threat to exit the NPT**, the implications will be far-reaching:

- The **IAEA would lose oversight**, eliminating a critical safeguard.
- The **U.S. would be legally barred** from offering Iran any future concessions, under the **Nuclear Proliferation Prevention Act (1978)**.
- Global trust in the **non-proliferation framework** could erode, setting a precedent for other nations.

This would mark a **point of no return**, dramatically narrowing the path for diplomacy and raising the possibility of **military conflict**.

Countdown to Confrontation: A Fragile Diplomatic Window

The geopolitical situation is **extremely volatile**, with several flashpoints that could ignite a crisis:

- A **preemptive Israeli military strike** on Iran
- The activation of **European snapback sanctions**
- **Iran's potential exit** from the NPT
- A **formal U.S. withdrawal** from ongoing negotiations

Each scenario threatens to destabilize not just the region but **global energy markets**, **diplomatic alliances**, and **non-proliferation efforts**.

Final Thought: Can Diplomacy Prevail?

As the clock ticks down on the **JCPOA's final months**, the world watches with growing concern. The balance between **diplomacy and confrontation** has never been more delicate. Whether this moment leads to **renewed negotiation or irreversible escalation** will depend on the choices made in the days ahead by leaders in **Tehran**, **Washington**, and **Jerusalem**.

GS Paper 3 – Agriculture, Science and Technology

5 Revolutionizing Agriculture: Heat-Resistant Pigeonpea Variety Boosts India's Pulse Production

Context: Scientists have successfully developed a **heat-tolerant pigeonpea variety** named **ICPV 25444** using an advanced technique called **speed breeding**. This innovation promises to transform **fallow lands** and significantly reduce India's dependency on pigeonpea imports, which currently cost the country nearly **USD 800 million annually**.

Key Advantages of ICPV 25444:

- **Heat Resilience:** This variety thrives in extreme heat, withstanding temperatures as high as **45°C**, making it perfect for India's **hot and semi-arid regions**.
- **Utilizing Uncultivated Lands:** It can be grown on nearly **12 million hectares of rice fallows** left idle after the kharif season due to heat and water shortages.
- **Faster Crop Cycles:** Thanks to **speed breeding**, the crop can be harvested **4 times a year**, slashing the development period from **15 years to just 5 years**.
- **Higher Productivity:** Yields have nearly doubled from **1.1–1.2 tonnes per hectare** to an impressive **2 tonnes per hectare**.
- **Reduced Harvest Time:** The crop matures in **4 months instead of 6–7 months**, enabling better crop rotation and increased farmer income.

Economic and Agricultural Impact:

This breakthrough has the potential to bridge the **1.5 million tonne gap** in domestic pigeonpea production, paving the way for **self-reliance** and saving India millions in import costs. It aligns perfectly with the **Union Budget 2025–26's Mission for Self-Reliance in Pulses**, a six-year plan aimed at making India **self-sufficient** in vital pulses like **Tur (Pigeonpea), Urad, and Masur**.

About Pulses in India:

- India is the **largest producer, consumer, and importer of pulses worldwide**.
- The **top three pulse-producing states** are **Madhya Pradesh, Maharashtra, and Rajasthan**.
- Pigeonpea (Tur Dal) is a crucial **protein-rich legume**, highly suited to tropical and semi-arid climates.
- The government supports farmers through the **Price Support Scheme (PSS)**, ensuring procurement at the **Minimum Support Price (MSP)** to protect them from price fluctuations.

Speed Breeding: Accelerating Agricultural Innovation

Speed breeding is a cutting-edge method that manipulates **light, temperature, and humidity** to accelerate plant growth. This allows breeders to grow **multiple crop generations per year**, speeding up the development of improved varieties like ICPV 25444 and fast-tracking their benefits to farmers.

Additional Insights:

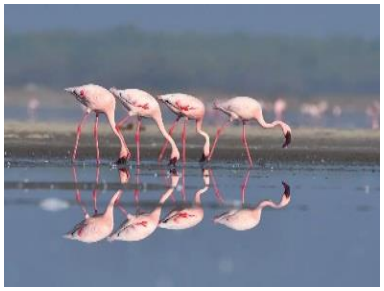
- The ability to grow multiple crops annually on previously unused lands could **boost rural livelihoods** and **strengthen food security** in climate-vulnerable regions.

- With climate change intensifying heat stress and water scarcity, **heat-tolerant crops like ICPV 25444** are essential for sustainable agriculture.
- The success of this variety could serve as a model for developing other **climate-resilient pulse crops**, helping India maintain its leadership in pulse production while reducing imports.

India's agricultural future looks promising with innovations like the **heat-tolerant pigeonpea**, merging science and sustainability to empower farmers and enhance national food security.

GS Paper 3 – Environment and Ecology

6 Lesser Flamingos Make a Spectacular Arrival in Gujarat: A Glimpse into Their Journey and Ecology



Context: A **large flock of Lesser Flamingos** has recently been spotted at **Chhaya Pond in Porbandar, Gujarat**. These vibrant birds are preparing to migrate soon to the **Great Rann of Kutch**, near the **India-Pakistan border**, where they will begin their breeding season.

Understanding the Lesser Flamingo (Phoeniconaias minor):

- The **Lesser Flamingo** is the **smallest flamingo species** globally.
- It is native to **sub-Saharan Africa**, with populations also found in parts of **India, Pakistan, and the Arabian Gulf**.
- In India, these flamingos primarily inhabit **brackish and coastal wetlands**.
- The species is classified as **Near Threatened** by the **IUCN**.
- It is protected under **CITES Appendix II** and listed in **Schedule IV of the Wildlife Protection Act, 1972**.

Flamingos: Elegant and Social Water Birds

- Flamingos are renowned for their **long, graceful S-shaped necks** and **slender legs**.
- They are **highly social birds**, often seen in **large, noisy flocks**.
- Their preferred habitats include **shallow, nutrient-rich waters** like saline lagoons, saltpans, and alkaline lakes, where food is abundant.
- There are **six species of flamingos worldwide**, thriving mostly in tropical and subtropical regions.
- India is home to only **two species**: the **Greater Flamingo** and the **Lesser Flamingo**.

Other Flamingo Species Worldwide:

- **Chilean Flamingo (Phoenicopterus chilensis)**
- **American or Caribbean Flamingo (Phoenicopterus ruber)**
- **Andean Flamingo (Phoenicoparrus andinus)**
- **James's or Puna Flamingo (Phoenicoparrus jamesi)**

Diet and Distinctive Coloration:

- Flamingos feed mainly on **algae, small molluscs, and crustaceans** found in their watery habitats.
- Their iconic **pink, orange, or white plumage** results from **carotenoid pigments** in their diet, particularly from the algae and crustaceans they consume.
- The intensity of their color often indicates the bird's health and breeding readiness.

Additional Insights:

- The **Great Rann of Kutch** serves as a crucial breeding ground, offering a safe and nutrient-rich environment for flamingos.

- Lesser Flamingos play an important ecological role by maintaining the health of wetland ecosystems through their feeding habits.
- Conservation efforts for these birds are critical as habitat loss, water pollution, and climate change threaten their populations.
- Flamingos are also indicators of **wetland ecosystem health**, and their presence signals a thriving habitat.

The recent gathering of **Lesser Flamingos at Chhaya Pond** not only offers a breathtaking natural spectacle but also highlights the importance of protecting India's delicate wetland ecosystems to preserve these elegant and ecologically significant birds.