Mains Topics

Common Anti-Terrorism Squad (ATS) Structure across India

Context

Indian Home Minister Amit Shah has called for a common Anti-Terrorism Squad (ATS) structure across India and directed State DGPs to implement it at the earliest at the Anti-Terrorism Conference-2025

What are its Significances?

- **Uniform counter-terror preparedness:** A common ATS structure ensures **standardised training, protocols, and response mechanisms** across states.
- **Faster coordination:** Improves **inter-state and centre–state coordination** during terror investigations and crises.
- **Technology-ready policing:** Addresses evolving terror methods involving **digital tools, encrypted communication, and modern explosives**.
- **Stronger national security grid:** Helps build an **integrated and impenetrable anti-terror framework** for long-term security.
- **Institutional strengthening:** Reinforces the role of NIA as a **central coordinating agency** for counter-terrorism.

What are the Challenges Associated

- **Federal concerns:** Policing is a **State subject**, and states may resist uniform structures fearing erosion of autonomy.
- **Capacity gaps among states:** Variations in **infrastructure, manpower, training, and funding** can affect uniform implementation.
- **Technology & intelligence integration:** Ensuring seamless data-sharing across agencies while maintaining **cybersecurity and privacy**.
- **Human resource constraints:** Shortage of **specialised counter-terror experts** and frequent personnel transfers.
- **Legal and procedural differences:** Differences in state-level procedures may delay standardisation.

Way forward

- **Centre–State consensus building:** Implement the common ATS framework through **consultation, incentives, and flexibility**.
- **Capacity building:** Invest in **training, modern equipment, cyber-forensics, and intelligence analysis** at the state level.
- **Technology-driven integration:** Strengthen **real-time databases**, secure communication platforms, and AI-based threat analysis.
- **Regular audits & simulations:** Conduct **joint mock drills, audits, and reviews** to test preparedness.

- **Legal and policy harmonisation:** Align **standard operating procedures (SOPs)** while respecting federal principles.

Source: Newsonair

Prelims Topics

INSV Kaundinya

Context

INSV Kaudinya sailed off for Oman from India.

About it

- A stitched sail ship **recreated by the Indian Navy** based on **5th-century Ajanta cave paintings**
- Named after Kaundinya**, a legendary Indian mariner** known for ancient sea voyages.
- Part of a heritage initiative under a **tripartite agreement** (July 2023) between:
    - Indian Navy
    - Union Culture Ministry
    - Hodi Innovations
- **Construction Technique:** Traditional **"stitched ship" method** using:
    - Wooden planks stitched with **coir rope, coconut fiber, and natural resin**
    - **No use of nails or metal fasteners.**
    - Design extrapolated from **2D Ajanta cave art** (no blueprints/remnants survived).

Source: The Hindu

Pinaka Long Range Guided Rocket

Context

DRDO successfully conducts maiden flight test of Pinaka Long Range Guided Rocket.

About Pinaka Long Range Rocket

- It is the latest long-range guided rocket variant of India's indigenous **Pinaka Multi-Barrel Rocket Launcher (MBRL) system.**
- **Developed by: Armament Research and Development Establishment (ARDE), Pune** in collaboration with
    - High Energy Materials Research Laboratory (HEMRL)
    - Defence Research and Development Laboratory (DRDL), Hyderabad.
    - Research Centre Imarat (RCI), Hyderabad.
- **Variants:**
    - **Pinaka Mk-I:** Initial version with a range of 40 km.
    - **Pinaka Mk-I Enhanced**: Range up to 60 km.
    - **Pinaka Mk-II:** Range upto 90 km.
    - **Pinaka Mk-III:** Range upto 120 km.

Source: PIB

Makarvilakku Festival

Context

Sabarimala Ayyappa Temple has opened for the Makaravilakku festival.

About Makarvilakku Festival

- **Makaravilakku** is a major annual festival at the **Sabarimala Ayyappa Temple**, held

in **mid-January** during **Makara Sankranti**.

- The festival marks the **culmination of the Sabarimala pilgrimage season**.
- Its central ritual is the **sighting of the 'Makaravilakku'**, a sacred celestial light appearing on the **Ponnambalamedu hill**.
- Pilgrims are allowed to **climb the 18 holy steps (Pathinettampadi)** after the lighting of the sacred fire (**Aazhi**).
- The festival commemorates **Lord Ayyappa's victory over demon Mahishi**.
- **Historically, the Makaravilakku festival was observed by the Malayaraya tribe**, who are traditionally regarded as **descendants of the Malaiyaman kingdom that ruled the Ponnambalamedu region**.

Source: The Hindu

Narasapuram Lace Craft

Context

PM Modi mentioned lace craft of Narasapuram district in Andhra Pradesh in 'Mann ki Baat'.

About Naraspuram Lace Craft

- **Origin:** Began in **1844** in **Narsapur, Andhra Pradesh**.
- **Historical resilience:** Survived major disruptions like the **Indian famine (1899)** and the **Great Depression (1929)**.
  Cultural significance: By the **early 1900s**, over **2,000 women** in the Godavari region were engaged in lace-making.
- **Key Features:**
  - **Techniques:** Fine **cotton threads** are crafted into intricate designs using **delicate crochet needles**.
  - **Method:** Artisans use a **single crochet hook** to form loops and interlocking stitches.
  - **Products:** Garments, home furnishings, and accessories—**doilies, pillow & cushion covers, bedspreads, table runners/cloths, handbags, caps, tops, stoles, lampshades, wall hangings**.

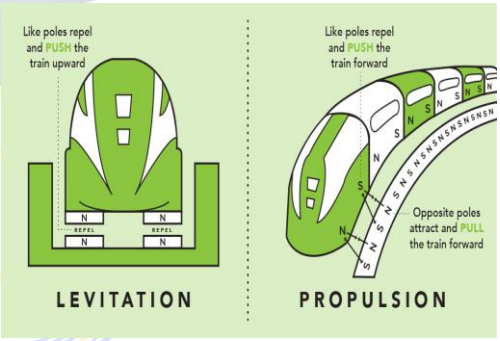
Source: DD News

Magnetic Levitation Technology

Context

Chinese scientists at the National University of Defence Technology set a world record by accelerating a one-tonne superconducting maglev vehicle to 700 km/h in just 2 seconds.

About Magnetic Levitation (Manglev)Technology



- **Magnetic levitation (Maglev)** is a transport technology where **vehicles float above a guideway** using magnetic forces, eliminating wheel–rail contact.
- **How it works:**
  - Powerful **electromagnets or superconducting magnets** generate lift and guidance forces.
  - **Linear motors** propel the vehicle forward instead of conventional engines.
- **Types of Maglev Systems**
  - **Electromagnetic Suspension (EMS):** Uses electromagnets to attract the vehicle to the guideway from below. Operates at small air

gaps; requires continuous electronic control.

- **Electrodynamic Suspension (EDS):** Uses **superconducting magnets**; repulsive forces lift the vehicle at high speeds. More stable at very high velocities.
- **Superconducting Maglev:** Advanced EDS variant enabling **ultra-high speeds and rapid acceleration**.

- **Key Advantages:**
  - **Very high speeds** (500–600+ km/h potential).
  - **Low friction & wear**, leading to reduced maintenance.
  - **High energy efficiency** at cruising speeds.
  - **Smooth, quiet travel** with minimal vibration.

Source: TOI

Industrial Hemp

Context

Himachal Pradesh has legalised and initiated regulated cultivation of industrial hemp under the **'Green to Gold' initiative.**

About Industrial Hemp

- **Industrial hemp** is a variety of the **Cannabis sativa** plant cultivated for **industrial and commercial uses**, not for intoxication.
- It contains **very low levels of THC** (generally $\leq$0.3%), making it **non-psychoactive**.
- **Uses:**
  - **Fibre:** textiles, ropes, paper, biodegradable plastics, construction material (hempcrete).
  - **Seeds:** food products, protein supplements, edible oil.
  - **Oil & extracts:** cosmetics, pharmaceuticals, nutraceuticals.

Green to Gold Initiative aims to **legalise and regulate the cultivation of industrial hemp in India**, repositioning it from an **illicit narcotic association** to a **high-value bio-economy and sustainable industrial resource**.

Source: DD News

Frequency Comb

Context

The use of frequency comb is growing in absolute frequency measurement with extraordinary accuracy.

About Frequency Comb

- A **frequency comb** is a special type of **laser light source** whose spectrum consists of **many discrete, evenly spaced frequencies**, resembling the **teeth of a comb**.
- Instead of emitting a single colour (frequency), it produces **thousands to millions of ultra-precise frequencies**.
- **How it is generated:**
  - Most commonly produced using a **mode-locked laser**
  - The laser emits **extremely short light pulses** at a **fixed repetition rate**.
  - In the frequency domain, these pulses appear as a **regular "comb" of spectral lines**.
- **Major applications:**
  - **Atomic clocks:** Calibration and next-generation optical clocks.
  - **Fundamental physics:** Measuring tiny frequency shifts caused by **gravity (gravitational redshift)**.

- **Precision spectroscopy:** Identifying atomic and molecular transitions.
- **Astronomy:** Calibration of spectrographs to detect **exoplanets**.
- **Telecommunications:** Ultra-precise optical frequency control.
- **Metrology:** Redefining measurement standards.

Source: The Hindu

Kanger Valley NP

Context

The Chhattisgarh government, with support from the Wildlife Institute of India, has initiated biodiversity surveys at Kanger Valley National Park to pursue its recognition as a UNESCO World Heritage Site.

About Kanger Valley National Park

- **Location:** Situated in **Chhattisgarh**, within the **Bastar region**.
- **Established: 1982**.
- Included in **UNESCO's Tentative List of World Heritage Sites.**
- **Flora:** Dominated by **Sal (Shorea robusta)** forests.
  - Also includes teak, bamboo, and medicinal plants.
- **Fauna:** Mammals: **Tiger, leopard, sloth bear, wild dog (dhole), gaur, chital**.
  - **Avifauna:** Rich bird diversity including **hill myna** and **woodpeckers**.
  - Reptiles and amphibians are also well represented.
- **Other Features:**
  - Famous limestone caves such as Kutumsar, Kailash, and Dandak caves.
  - Scenic attractions like Tirathgarh Waterfall.

Source: Deccan Chronicle

PRAGATI Platform

Context

Prime Minister Narendra Modi urged Chief Secretaries to replicate the Centre's PRAGATI platform at the state level to strengthen monitoring and implementation of key infrastructure projects and government schemes.

About PRAGATI (Pro-Active Governance And Timely Implementation)

- It is a multi-purpose and multi-modal platform launched in 2015.
- It is aimed at addressing common man's grievances and simultaneously monitoring and reviewing important programmes and projects of the Government (Both Centre & State).
- The PRAGATI platform uniquely bundles three latest technologies: **Digital data management, video-conferencing and geo-spatial technology.**

Key Features

- It is a three-tier system **(PMO, Union Government Secretaries and Chief Secretaries of the States)**
- Monthly video-conferences led by the Prime Minister are held on the 4th Wednesday of each month (PRAGATI Day) to discuss flagged issues.
- Issues are sourced from public grievances, ongoing programs and pending projects and are uploaded 7 days prior to PRAGATI Day.
- Union Government Secretaries and Chief Secretaries have to put their comments and updates about the flagged issues within 3 days

- The PMO reviews the data again before the next PRAGATI Day meeting.
- The system integrates data from CPGRAMS, PMG, and the Ministry of Statistics and Programme Implementation.
- The design is such that when PM reviews the issue, he should have on his screen the issue as well as the latest updates and visuals regarding the same.

Source: **Indian Express**