TNPSC BITS

- ❖ TN Chief Minister inaugurated a mini-Tidel Park in Milavittan in Thoothukudi.

- ❖ Tamil Nadu state government extended the Pudhumai Penn scheme to aid 75,028 students who studied from Class VI to Class XII at government-aided schools.

- ❖ The 18th edition of Joint Military Exercise SURYA KIRAN is being held between the Indian army and Nepal army in Nepal.

- ❖ The Andhra Pradesh government has declared the Ratha Saptami as a State festival.

- ❖ The GSI Geoscience Museum was inaugurated at the Victoria Market Building in Gwalior, Madhya Pradesh.

- ❖ India's Koneru Humpy regained the women's World rapid chess championship after a gap of five years, held at Newyork, USA.

- ❖ ISRO has successfully carried out the sea level hot test of its CE20 Cryogenic Engine featuring a nozzle area ratio of 100 at the ISRO Propulsion Complex, Mahendragiri.

- ❖ The INS Nirdeshak, the second ship of Survey Vessel (Large) project, was commissioned into the Indian Navy.

- ❖ The Karnataka government has revealed the plan to develop a SWIFT (Startups, Workspaces, Innovation, Finance and Technology) city near Bengaluru.

TAMIL NADU

25th anniversary of Thiruvalluvar statue

- ❖ The silver jubilee celebrations of the Thiruvalluvar statue at Kanyakumari Triveni Sangamam are being held on the 31st December and 1st of January.

- ❖ CM declared this statue in Kanyakumari will be known as 'Statue of Wisdom'.

- ❖ It was dedicated to the people on January 1, 2000 by the then Chief Minister of Tamil Nadu M. Karunanidhi.

- ❖ The total height of the statue and the pedestal combined is 133 feet (41 metres).

- ❖ It denotes the 133 chapters of the Thirukkural.

- ❖ The sculpture of Thiruvalluvar is 95 feet (29 metres) and it stands on a 38 feet (12 metres) pedestal.

- ❖ The pedestal represents the 38 chapters of virtue, the first of three books of the Kural text.

❖ The second and third books – wealth and love respectively – are represented by the statue itself.

❖ TN Chief Minister also inaugurated the Glass bridge connecting Vivekananda Rock and Thiruvalluvar statue during the event.

❖ It is India's first glass bridge on sea.
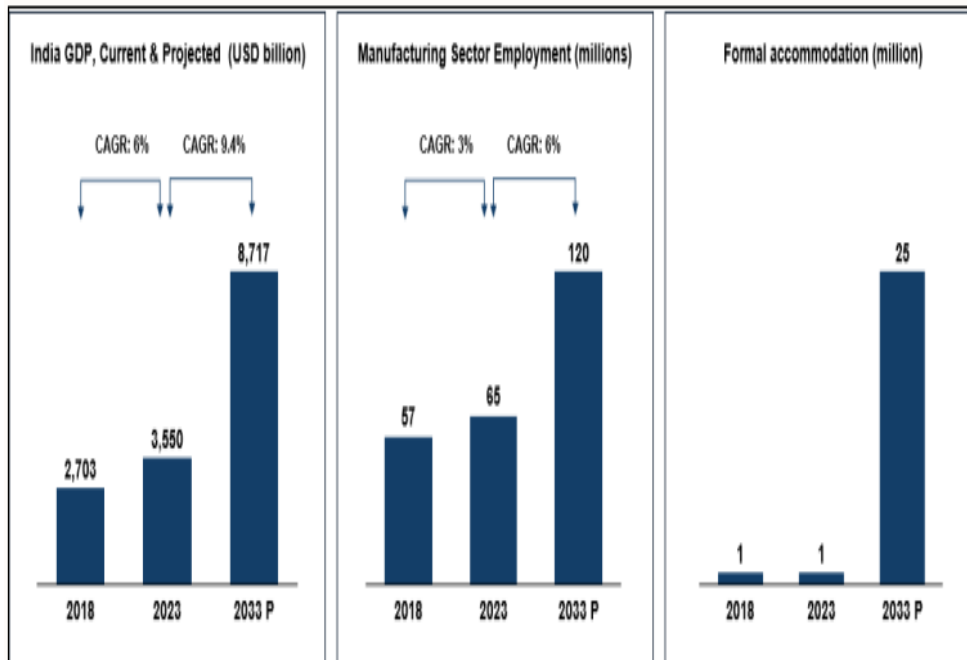

Chola-era Tamil inscription - Bengaluru

❖ The Epigraphy division is taking steps to copy a fragmented Chola-era Tamil inscription engraved on a stone.

❖ It is found near Someshwara temple at Kammasandra village in Bengaluru rural district.

❖ The inscription in Tamil language dates back to the 11th Century Chola period.

❖ It seems to have a record of 12 kandagam (a measure of land) gifted to the Someshwara temple for conducting pujas

NATIONAL

S.A.F.E Accommodation Report

❖ NITI Aayog released a report on "S.A.F.E. Accommodation - Worker Housing for manufacturing growth".

❖ This report explores the crucial role of secure, affordable, flexible, and efficient (S.A.F.E.) accommodations for the industrial workers in boosting of India's manufacturing sector.

❖ It identifies key challenges, offers actionable solutions, and highlights the pivotal interventions required to scale up such housing facilities across the country.

India's Coal Production in 2023-24

❖ The country has witnessed the highest ever coal production in the Year 2023-24.

❖ The all-India coal production in the year 2023-24 was 997.826 million Tonne (mT).

❖ It was 893.191 mT in the year 2022-23 and is increased about 11.71%.

❖ During Calendar Year 2024 (up to 15th December, 2024 from January 2024), the country has produced about 988.32 mT (Provisional) of coal.

❖ It was about 918.02 mT (Provisional) coal during the same period of last year with a growth of about 7.66%.

Significant Achievements in Coal Sector in 2023-24

- Highest Ever Coal Production: 997.83 MT (2023-24) vs. **893.19 MT (2022-23), a growth of 11.71%**
- Coal Supply: **963.11 MT (up to 15th December 2024, provisional)**
- **Key Initiatives:** SHAKTI Policy, Mine Closure Portal, and Coal Mines Safety Report Portal launched.
- **13,341 appointment letters** issued (CIL: 9,384, NLCIL: 3,957).
- **54.06 lakh saplings planted on 2,380 hectares** by Coal/Lignite PSUs.

Internet shutdown in India 2024

No connectivity: The most shutdowns happened in 2020 after the abrogation of special status of J&K under Article 370.

❖ India saw the fewest number of mobile internet shutdowns in eight years in 2024.

❖ There have been 60 shutdowns so far this year as against 96 last year.

❖ The most internet shutdowns -132 happened in 2020, following the abrogation of Article 370 of the Constitution.

- In 2017, the law was amended and the Government promulgated the Temporary Suspension of Telecom Services (Public Emergency or Public Safety) Rule 2017.
- The States and Union Territories can impose an internet shutdown only in case of a "public emergency" or in the interest of "public safety", according to the Indian Telegraph Act.

India's First Multimodal AI Initiative

- BharatGen is an initiative to make generative AI available to citizens in different Indian languages.
- It aims to develop advanced AI models tailored to India's multifaceted languages and cultures.
- BharatGen has launched the Bharat Data Sagar initiative to collect primary data, focusing on languages that lack sufficient representation.

New SAMARTH Centers

- The Ministry of Heavy Industries (MHI) has established four Smart Advanced Manufacturing and Rapid Transformation Hub (SAMARTH) Centres.
- It aims to enhance competitiveness in the Indian capital goods sector.
- The 4 Centres are:
  - Centre for Industry 4.0 (C4i4) Lab, Pune;

- o IITD-AIA Foundation for Smart Manufacturing, IIT Delhi;
- o I-4.0 India @ IISc, Bengaluru; and
- o Smart Manufacturing Demo & Development Cell, CMTI, Bengaluru.

'Jalvahak' Scheme

- ❖ The Union Ministry for Ports, Shipping & Waterways launched the 'Jalvahak' scheme to promote inland waterways and cargo movement.
- ❖ It aims to unlock the trade potential of inland waterways, reduce logistics costs, and alleviate congestion in road and rail networks.
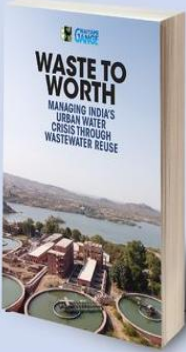
❖ It incentivises long-haul cargo movement on National Waterways (NW) 1 (Ganga), 2 (Brahmaputra), and 16 (Barak).

❖ Under the scheme, the cargo owners transporting goods over distances exceeding 300 km via waterways will receive up to 35 per cent reimbursement on operating costs.

Report on Managing Waste 2024

❖ The report "Waste to Worth: Managing India's Urban Water Crisis through Wastewater Reuse" was released jointly by the Centre for Science and Environment (CSE) and the National Mission for Clean Ganga (NMCG).

❖ India currently treats only 28 per cent of the 72,000 million litres of wastewater generated daily.

❖ The Ministry of Jal Shakti mandates that cities recycle at least 20 per cent of the water they consume.

❖ Uttar Pradesh leads in untreated wastewater volumes, followed by Maharashtra, Karnataka, Rajasthan, Tamil Nadu, Delhi and Haryana.

❖ However, several states have implemented progressive policies.

❖ Tamil Nadu has prioritised industrial and urban greening applications.

- ❖ Cities such as Nagpur, Bengaluru and Chennai offer successful examples of the wastewater reuse.

- ❖ Nagpur supplies the treated wastewater to power plants, reducing the freshwater consumption.

INTERNATIONAL

Gadhimai Mahotsav

- ❖ It is celebrated every five years; this year's edition will take place at the Gadhimai Temple in Bara District, Nepal.

- ❖ The festival, famous for animal sacrifice, is one of the largest and most controversial slaughter events.

- ❖ It ranks as one of the world's largest animal sacrifice festivals, drawing thousands of devotees from Nepal, India, and beyond.

- ❖ The sacrificial animals include water buffalo, pigs, goats and birds.

Scale Of The Suffering

Every 5 years, the Gadhimai festival in Nepal, hosts the world's largest animal sacrifice, with hundreds of thousands of animals, including buffaloes, goats, and pigeons slaughtered.
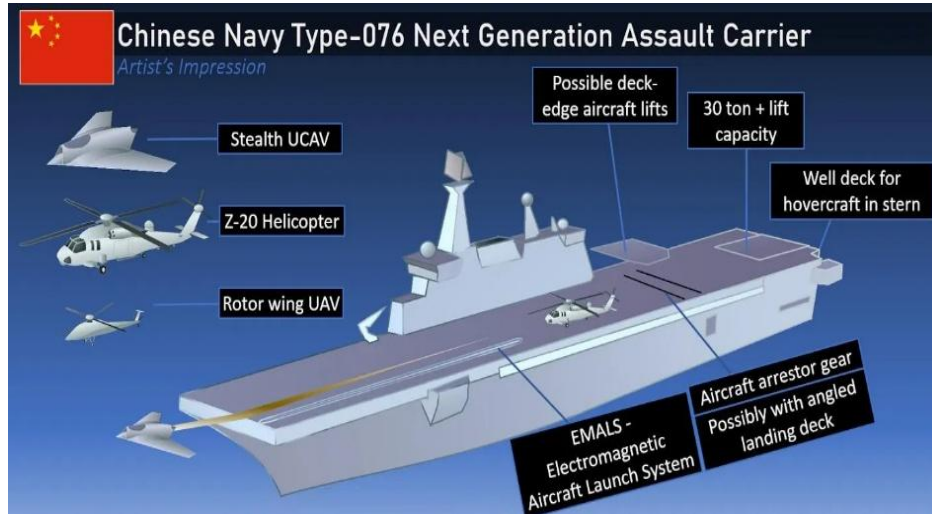
Type 076 Amphibious Assault Ship – China

- ❖ China has launched its first next-generation Type 076 amphibious assault ship - Sichuan.

- ❖ The Type 076 ranks among the world's largest amphibious assault ships.

- ❖ Sichuan is the first amphibious assault ship in the world to incorporate the electromagnetic launch technology.
- ❖ This allows it to carry helicopters and fighter jets such as the J-15.

ECONOMY

RBI's State Finances: A Study of Budgets 2024-25

		Table 1: Revenue Receipts of All State Combined relative to GSDP				
Year	**Own Tax Revenue**	**Own Tax Revenue without SGST**	**Own Non-Tax Revenue**	**Tax Devolution**	**Grants-in-Aid**	**Revenue Receipts**
2019-20	6.4 (45.8)	3.8 (27.7)	1.4 (9.8)	3.4 (24.4)	2.8 (20.0)	13.9 (100.0)
2020-21	6.1 (45.3)	3.8 (28.0)	0.9 (6.8)	3.1 (23.0)	3.4 (24.9)	13.5 (100.0)
2021-22	6.2 (45.6)	3.7 (27.0)	1.0 (7.6)	3.9 (28.4)	2.5 (18.2)	13.7 (100.0)
2022-23 RE	6.7 (46.3)	3.8 (26.5)	1.0 (7.2)	3.6 (25.3)	3.0 (21.2)	14.4 (100.0)
2023-24 BE	7.0 (49.5)	4.0 (28.1)	1.2 (8.3)	3.5 (24.7)	2.5 (17.7)	14.1 (100.0)

Note: Figures in parentheses are percentage shares of total revenue receipts
Source: State Finances: A Study of Budgets 2023-24, RBI

- ❖ The Reserve Bank of India (RBI) released the Report "State Finances: A Study of Budgets of 2024-25".
- ❖ State governments contained their consolidated gross fiscal deficit (GFD) within 3% of gross domestic product (GDP).
- ❖ Their revenue deficit stands at 0.2% of GDP during 2022-23 and 2023-24.
- ❖ In 2024-25, States have budgeted a GFD of 3.2% of GDP.

❖ Their Capital expenditure rose from 2.4% of GDP in 2021-22 to 2.8% in 2023-24 and budgeted at 3.1% of GDP in 2024-25.

❖ States' total outstanding liabilities declined from 31.0% of GDP 2021 to 28.5% in 2024 but remain above the pre-pandemic level.

❖ In 2020-21, the combined fiscal deficit of all states had edged up to 4.1 per cent of GDP and their debt-to-GDP ratio had risen to 31 per cent.

SCIENCE AND TECHNOLOGY

ISRO's LVM3 Rocket - Multi-Orbit Capability

LAUNCH VEHICLE MARK 3 (LVM3)

LVM3 is the heavy lift launcher of ISRO with a successful track record of 6 successive launches so far.

VEHICLE SPECIFICATIONS
- Height: 43.5 m
- Vehicle Diameter: 4.0 m
- Number of Stages : 3
- Lift Off Mass : 640 tonnes

TECHNICAL SPECIFICATION
- Payload to GTO: 4,000 kg
- Payload to LEO (Low Earth Orbit): 8,000 kg

STAGES : 3
- Stage 1: Cryogenic Upper Stage : C25
  - The C25 is powered by CE-20, India's largest cryogenic engine.
- Stage 2: Solid Rocket Boosters: S200
  - GSLV Mk III uses two S200 solid rocket boosters to provide the huge amount of thrust required for lift off.
- Stage: 3Core Stage : L110 Liquid Stage
  - The L110 liquid stage is powered by two Vikas engines.

❖ ISRO has successfully conducted a crucial test that will enable its largest rocket LVM3 to inject satellites into orbits at different altitudes, all in a single mission.

❖ This restart capability is made possible due to the development of a 'multi-element ignitor'.

❖ It can help restart the 'CE-20' Cryogenic engine that sits atop the LVM3 rocket.

❖ The final stage of the LVM3 rocket has the Cryogenic engine that is responsible for placing satellites into different designated orbits (altitudes) in space.
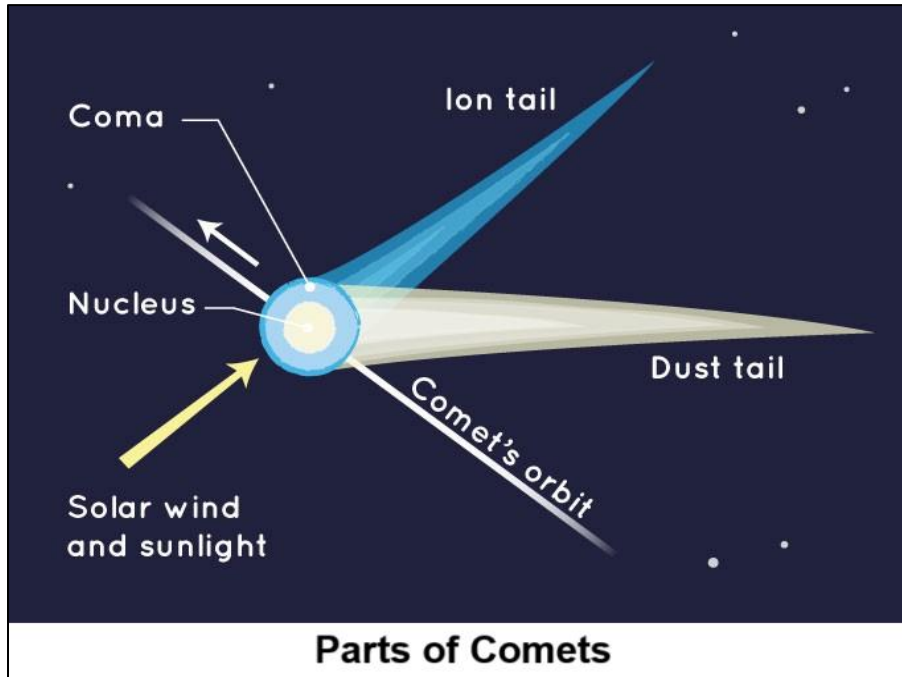
IRIS^2 satellites

❖ The IRIS^2 constellation stands for Infrastructure for Resilience, Interconnectivity and Security by Satellite.

❖ It is a multi-orbit constellation of about 300 satellites.

❖ They will deliver resilient, secure and fast communications for EU governments, European companies and citizens.

❖ It will ensure uninterrupted access to secure governmental connectivity services and provide high-end commercial services.
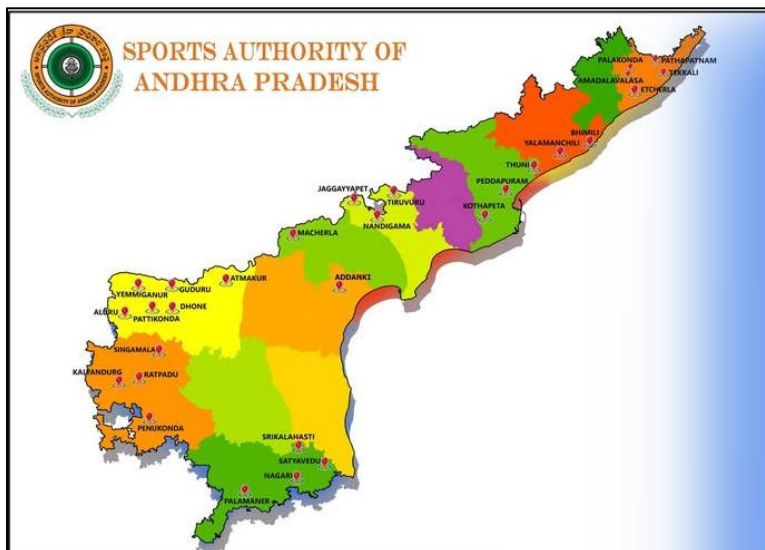
Dark Comet

❖ The Dark Comets are celestial bodies which lack the glowing tails and resemble asteroids.

❖ In 2017, NASA discovered and later confirmed the first interstellar object to enter our Solar System.

❖ Dark comets are often small, just a few metres to a few hundred metres wide.

❖ They are categorised into "outer dark comets", which have eccentric orbits and are larger, and "inner dark comets.

❖ They follow elongated, elliptical paths that bring them close to the Sun before sweeping back out to the farthest reaches of the Solar System.

Parts of Comets

STATES

Kreeda App - first sports app

❖ The Sports Authority of Andhra Pradesh (SAAP) introduced 'Kreeda App', a first-of-its-kind mobile application in India.

❖ It is designed to modernise and streamline sports management across the state.

❖ The app aims to eliminate the malpractices in the issuance of sports quota certificates while providing a unified platform for managing comprehensive sports data.

❖ It ensures transparency in player registration, performance tracking, tournament applications, and equipment distribution.

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