APTI PLUS OAS GAZETTE

FEBRUARY 2025

APTI PLUS
Academy for Civil Services Pvt. Ltd.
CREATING CIVIL SERVANTS FOR THE NATION

22ND EDITION

Utkarsh Odisha Summit

Bikashita Gaon Bikashita Odisha

Odisha wins 14th Hockey India Sr. Men National Championship 2024

8th Pay Commission

Ratnagiri Buddhist Heritage Site

COMPREHENSIVE COVERAGE OF CURRENT AFFAIRS FOR ODISHA STATE CIVIL SERVICES EXAMS

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FEBRUARY 2025

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RANK 9 — KAPIL K. MOHANTY — IGP
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SATYA S. PANIGRAHI — RANK 12 — IGP
NOORIE PARVEEN — RANK 13 — IGP
BIKASH RANJAN SAHU — RANK 15 — TSP & IGP
RAJIB LOCHAN DIKSHIT — RANK 18 — IGP
SIDDHANT NAYAK — RANK 20 — CLASSROOM PROGRAM

AMBIKA BHUYAN — RANK 21 — IGP
PRITISH BHOL — RANK 24 — CLASSROOM PROGRAM
SUBHA K.MAHAPATRA — RANK 25 — CLASSROOM PROGRAM
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Odisha Current Affairs

SCHEMES IN NEWS

Bikashita Gaon Bikashita Odisha (BGBO)

Context

- The Odisha government has issued guidelines for the recently announced scheme—'Bikashita Gaon Bikashita Odisha' (BGBO) for taking up various sustainable developmental projects for inclusive growth in rural Odisha.

BGBO Scheme

- The **BGBO scheme** replaces the **'Ama Odisha Nabin Odisha' (AONO)**.
- It is a **transformative umbrella scheme** launched by the **Odisha government** with a **budgetary provision of ₹5,000 crore** to bridge critical **development gaps in villages**.
- The government has allocated **₹1,000 crore** for the scheme in **FY 2024-25**.

Key Features:

Focus Areas:

- **Road Connectivity** – Development of **inter and intra-village roads**, including unconnected villages and PVTG habitations.
- **Civic amenities, education, sports and micro tourism** development.
- **Enhancing rural infrastructure** and **improving quality of life** in villages.

Fund Allocation:

- **40**% for blocks under the **Integrated Tribal Development Agency (ITDA)**.
- **35**% for **construction of roads, bridges and culverts**.
- **5**% for **new innovative projects** for community use.
- **Projects below ₹3 lakh** will **not be considered** under the scheme.

Implementation Process:

- **Participatory approach** with Gram Sabhas preparing a **five-year perspective plan**.
- Plans will be submitted to blocks and an **annual action plan** will be created accordingly.
- **Technical committee** at block level will scrutinize projects for feasibility and financial viability.
- **Final approval** by the **district collector** based on recommendations from the **panchayat samiti**.
- PR&DW department will have the authority to **modify guidelines** if needed.

Convergence with Other Schemes:

- Similar projects under **PR&DW and other departments** will be integrated.

- **Incomplete projects** under **'Ama Odisha Nabin Odisha' (AONO)** with **at least 20% expenditure incurred** will be **completed under BGBO**.

Subhadra Scheme

Context

- The Subhadra Scheme, a flagship initiative of the Odisha Government's Women and Child Development Department, is transforming the lives of women across the state.

All about Subhadra Scheme

- The **Subhadra Scheme** is a **welfare programme** launched by the **Odisha government** to provide **direct cash support** to women from **economically weaker sections**.

Naming and Cultural Significance

- The scheme is named after **Goddess Subhadra**, the sister of **Lord Jagannath**, making it culturally significant for the people of Odisha.

Objective

- It aims to **financially empower women** through **direct cash transfers**, ensuring economic support for those in need.

Financial Assistance

- Each beneficiary will receive **₹10,000 annually**, disbursed in **two installments** of ₹5,000 on **Rakhi Purnima (August)** and **International Women's Day (March 8)**.

Mode of Payment

- The amount will be transferred through **Direct Benefit Transfer (DBT)** to **Aadhaar-linked bank accounts**. **e-KYC is mandatory** to maintain transparency and prevent fraud.

Subhadra Debit Card and Digital Incentive

- Beneficiaries will receive a **Subhadra Debit Card** for withdrawals and digital transactions.
- Additionally, the **top 100 women in each gram panchayat/urban local body** with the highest digital transactions will get a **₹500 incentive** to promote digital literacy.

Eligibility Criteria

- Women aged **21-60 years** from **economically weaker sections** are eligible. However, **government employees, income tax payees and those receiving ₹1,500 or more monthly from other government schemes** are excluded.

Implementation and Target

- The scheme will run for **five years (2024-25 to 2028-29)**, aiming to benefit **over 1 crore women** across Odisha by **2028-29**.

Odisha launches 'Shahid Madho Singh Haath Kharcha Yojana' at Adivasi Mela

Context

- Odisha **Chief Minister Mohan Charan Majhi** inaugurated the annual **'Adivasi Mela'** and launched the **'Shahid Madho Singh HaathKharcha Yojana'** to reduce dropout rates among **tribal students**.

Key Highlights of the Scheme:

- **Financial Assistance**: Rs 5,000 per student for **classes 9 and 11** in government and aided schools across Odisha.
- **Targeted Students**: Initially, Rs **80 crore** has been disbursed to **1.6 lakh tribal students**.
- **Annual Support**: Scheme aims to provide financial assistance to **2 lakh tribal students** every year.

Objectives:

- **Prevent Dropouts**: Addressing tribal students dropping out to support their families.
- **Tribal Development**: Focus on bringing tribal communities into the mainstream of society.
- **Regional Imbalance**: Development councils to be formed for the northern and southern regions, where many tribals reside.

ODISHA OTHERS

Utkarsh Odisha Summit

Context

- Prime Minister **Narendra Modi** inaugurated the **'Utkarsh Odisha, Make-in-Odisha Conclave'** in **Bhubaneswar** on **27th January 2025**, marking a significant step towards **Odisha's industrial and economic transformation**.

Details

Objective

- The summit aims to position Odisha as a **leading investment hub** under the **Purvodaya vision**, accelerating the development of **Eastern India**.

Investment & Job Creation

- The Odisha government targets **₹5 lakh crore in investments**, with an estimated **3.5 lakh job opportunities** expected from the two-day conclave.

Economic Growth Vision

- Odisha aspires to be among **India's top five economic states by 2036**, focusing on **industrial infrastructure** and **policy reforms** to drive growth.

Global Participation

- The event witnessed participation from **over 7,000 delegates**, including representatives from **12 countries**, highlighting international interest in Odisha's industrial potential.

Sujeet Kumar elected to Rajya Sabha

Context:

- **BJP candidate Sujeet Kumar** has been elected **unopposed** to the **Rajya Sabha from Odisha**.

About Rajya Sabha

- **Upper house** of **India's bicameral Parliament**.
- Maximum strength: **250 members**.
- **238 members** elected by **state legislatures & UTs**.
- **12 members** nominated by the **President** for their expertise in fields like **arts, science, literature and social services**.

Sickle Cell Anemia

Context:

- The **Haematology Department at SCB Medical College, Cuttack**, is being developed as a **one-stop center** for managing **sickle cell anemia**, offering **comprehensive care and treatment**.

About Sickle Cell Anemia

- **Genetic blood disorder** caused by a mutation in the **HBB gene**.
- Commonly affects populations of **African, Indian and Mediterranean descent**.
- **Red blood cells** become **rigid and crescent-shaped** instead of **disc-shaped**.
- These **abnormal cells break down easily**, leading to **anemia (low RBC count)**.
- Can cause **pain crises, organ damage and increased risk of infections**.

National Institute of Pharmaceutical Education and Research

Context:

- Union Education Minister **Dharmendra Pradhan** has urged Union Health Minister **JP Nadda** to establish a **NIPER** in **Odisha** to enhance **research,**

development and educational opportunities in the pharmaceutical sector.

About NIPER:

- The **National Institute of Pharmaceutical Education and Research (NIPERs)** are a group of **national-level institutes** in **India** focused on **pharmaceutical sciences**. They are recognized as **Institutes of National Importance** by the **Government of India**.

Key Features:

- **Autonomous Bodies:** NIPERs operate independently under the **Department of Pharmaceuticals**, **Ministry of Chemicals and Fertilizers**.
- **Mission:** To provide **high-quality education** and conduct **cutting-edge research** in pharmaceutical sciences, contributing to advancements in **drug discovery**, **medicinal chemistry** and **biotechnology**.
- **National Significance:** These institutes are pivotal to India's **pharmaceutical industry** and **healthcare development**.

Odisha proposes change in definition of "Homesteadless"

Context:

- The **Odisha government** has proposed a revision to the definition of **"homesteadless"** individuals as part of its effort to identify and assist those who lack land for housing.
- This initiative is aligned with the state's broader strategy to ensure that every citizen has access to a **homestead plot** and **housing** within the next five years.

Key Proposals:

- **New Definition:** Individuals will be considered **homesteadless** if they own less than **one-twenty-fifth of an acre** of homestead land.
- **Land Allocation:** The government plans to allocate **four decimals of land** to eligible families living on government land, excluding **pasture**, **wetlands**, or **cremation grounds**.
- **Slum Dwellers:** People living in slums will also be eligible for land, provided they meet **specific criteria**.

DD Odia commences news broadcast in Santali Language

Context:

- **Doordarshan Odia** has started broadcasting news in the **Santali language**, a milestone in promoting media inclusivity.

- The initiative, launched on **December 11, 2024**, received support and enthusiasm from various sectors, including **President Droupadi Murmu**.

About Doordarshan:

- **Doordarshan (DD)** is India's state-owned public television broadcaster.
- Established on **September 15, 1959**, it has played a pivotal role in influencing the country's **cultural** and **social landscape**.
- **Santali** was added to the **Eighth Schedule** of the Indian Constitution in **2003** under the **92nd Amendment**, recognizing it as an official language.

Seven Renewable Energy Projects approved in Odisha

Context:

- **The** Odisha government **has approved** seven renewable energy projects**totaling**₹1,386 crore**, with a combined capacity of** 192.41 MW**. These projects received in-principle approval at the** 8th meeting of the Single Window Committee (SWC) **under the** Odisha Renewable Energy Policy-2022**.

Key Points:

- The approved projects include:
  o **99 MW wind power project**
  o **Five ground-based solar projects**totaling**91.77 MW**
  o **One rooftop solar project** of **1.64 MW**

About Odisha Renewable Energy Policy-2022:

The policy aims to:

- Accelerate the adoption of **renewable energy** in Odisha.
- Leverage the state's abundant resources, including **solar**, **wind**, **hydro** and **biomass**, to foster sustainable energy development.

Dhirendra Sambhaji Kutey appointed as IG of BSF

Context:

- **Dhirendra Sambhaji Kutey**, a 1997-batch **IPS officer** from the **Odisha cadre**, has been appointed as the **Inspector General (IG)** of the **Border Security Force (BSF)**. His appointment is effective immediately and will continue until his **superannuation** on **February 29, 2028**.
- This decision was communicated through an official letter from the **Union Government** to **Odisha's Chief Secretary**.

Key Points:

- Kutey's appointment follows a period of **controversy** and **reassignment** within the **Odisha**

Police, where he served as an **Officer on Special Duty (OSD)** in the **Home Department**.

- This marks a significant return for Kutey to a key position in **national security**.

Odisha's Forest Management initiative
Context

- The Odisha government is launching an initiative to empower local communities for forest management under the **Forest Rights Act**. **100 villages** will receive direct funding for forest protection and management, with **gram sabhas** (village councils) playing a key role.

Funding Approval and Allocation

- The **Project Appraisal Committee (PAC)** has approved **Community Forest Resource (CFR) plans** for 100 villages. **Rupees 16 crore** has been allocated for this project.
- Each village will get **Rupees 15 lakh annually**, directly deposited into the **gram sabha's** bank account.

Empowering Gram Sabhas

- The gram sabhas will handle activities like tree plantation and forest management. This replaces the previous model where the Forest Department managed funds.
- The new approach strengthens local governance and promotes **community participation**.

Targeted Districts

- The initiative covers **10 districts**, including Mayurbhanj, Balasore and Keonjhar, known for their rich forest resources. The **Forest Rights Act** gives communities the right to manage and protect forests.

Challenges in Implementation

- Challenges include **delays**, eligibility issues and conflicts with **conservation laws**. Resistance from industries dependent on forest resources could also hinder progress.

CFR Titles in India

- As of late 2024, **Maharashtra** leads with **8,661 CFR titles**, followed by **Chhattisgarh** (4,328) and **Odisha** (3,659).

3rd National Mines Ministers' Conference in Konark, Odisha
Context

- The Ministry of Mines, in collaboration with the Government of Odisha, is hosting the **3rd National Mines Ministers' Conference** from **January 20-21, 2025**, in Konark.

- The event aligns with the vision of **"Vikasit Bharat 2047"** and will bring together **16+ State Mining Ministers** and senior officials from Central and State Governments.

Key Highlights

- **Release of Best Practices Report**: Showcasing innovative mining governance models to improve efficiency and transparency.
- **Launch of Mining Tenement System (MTS) Module**: A step towards digital governance to streamline operations and boost accountability.
- **Sanction Letters to Startups**: Promoting sustainable mining practices through innovation.
- **Handing Over Geological Memoranda and Reports**: Providing data to support exploration activities.
- **Transfer of Critical Mineral Block GRs**: Aiding India's self-reliance in critical minerals.
- **Awards for Best-Performing States**: Recognizing states excelling in mining reforms and mineral auctions.
- **Launch of 5th Tranche of Critical Mineral Blocks**: Accelerating exploration and attracting investment.

Focus Areas

- The conference will address critical mining sector issues like **safety**, **sustainability**, **environmental concerns** and **transportation**.
- The event underscores the commitment to a **transparent, sustainable** and **efficient mining ecosystem** for the nation's development under **"Vikasit Bharat 2047."**

Odisha signs 8 MoUs with Singapore in key sectors
Context

- On **January 17, 2025**, **Odisha** signed **eight Memoranda of Understanding (MoUs)** with the **Singapore government.**

Details

- **MoUs** were signed in sectors like **green hydrogen**, **semiconductors**, **fintech**, **petrochemicals** and **skill development**. These MoUs were signed ahead of the **Odisha Investor Summit**, where **Singapore** will be the **first partner country**.
- During the visit, **Singapore's President Tharman Shanmugaratnam** praised Odisha's progress in **skill development** and innovation, particularly highlighting the **World Skill Center** and **Vertical Transportation Lab** in Bhubaneswar.

'Compendium of Regenerative Agriculture'

Context

- The **'Compendium of Regenerative Agriculture'** was launched on **10 November 2024** during the **International Symposium on Shree Anna and Forgotten Foods** in Bhubaneswar.

Details

- This publication was developed by **ICRISAT** in partnership with the **Government of Odisha**, aiming to foster sustainable agricultural transformation through **regenerative agriculture practices**.
- The compendium supports **sustainable farming practices**, focusing on crops such as **millets, pulses and oilseeds**.
- It aims at **enhancing soil health, increasing carbon sequestration** and building resilience to **climate change**.

Five Key Principles of Regenerative Agriculture:

1. **Minimizing soil disturbance**
2. **Maximizing crop diversity**
3. **Maintaining soil cover**
4. **Keeping living roots year-round**
5. **Integrating livestock**

These principles are explored in depth, underscoring their role in nurturing ecosystems and improving **carbon sequestration**.

International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

- **The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)** is a globally recognized organization dedicated to agricultural research aimed at improving rural development. It was founded in **1972** through a partnership of organizations led by the **Ford Foundation** and the **Rockefeller Foundation**.
- Headquartered in **Patancheru, Hyderabad, Telangana, India**, ICRISAT operates **regional centres** in **Bamako (Mali)** and **Nairobi (Kenya)**, along with several research stations in **Niamey (Niger)**, **Kano (Nigeria)**, **Lilongwe (Malawi)**, **Addis Ababa (Ethiopia)** and **Bulawayo (Zimbabwe)**.
- ICRISAT's work focuses on crops that thrive in **semi-arid regions** and its mission is to **enhance agricultural productivity** to combat food insecurity in these areas. The institute also addresses challenges such as **climate change**, **soil fertility** and **sustainable farming techniques**.
- **ICRISAT's Special Status in India:** India, as the host country, has granted ICRISAT a **special status** as a **UN Organization** operating within its territory. This status entitles ICRISAT to **special immunities** and **tax privileges**, underscoring its importance in advancing global agricultural research.

Odisha's historic victory in the 14th Hockey India Senior Men National Championship 2024

Context

- **Odisha** clinched its **first-ever title** at the **14th Hockey India Senior Men National Championship 2024**, defeating two-time champions **Haryana 5-1** in a thrilling final.

Notable Contributions:

- **Shilanand Lakra**, a key player with **over 30 international caps**, was the **player of the match** in both the semifinal and final, scoring a **hat-trick** in the final. He attributed much of his success to the **local tournaments** played in the villages, which instill a never-give-up attitude.
- **Coach Bijay Kumar Lakra**, a veteran of Odisha hockey, dedicated the victory to the **state's unwavering support** for the sport and the **love for hockey** ingrained in the tribal communities.

Odisha Government plans to construct 15,000 Km of Roads annually

Context

- The **Odisha government** aims to construct **15,000 km of roads annually** over the next five years, totaling **75,000 km**.

Details

- The initiative includes plans to address road safety, reduce accidents and improve infrastructure.
- Special **utility corridors** will be created to avoid road disruptions from services like water, electricity and internet.

Ratnagiri Buddhist Heritage Site

Context

- The recent discovery of three colossal Buddha heads, a giant palm, an ancient wall and some inscriptions have underlined the significance of Ratnagiri in Odisha's Jajpur district as a prominent Buddhist historical site.

What is the Ratnagiri Buddhist Heritage Site and its significance?

- Ratnagiri, also known as the "Hill of Jewels," is a prominent Buddhist heritage site in Odisha's Jajpur district.

- It is part of the "**Diamond Triangle**" along with **Udaygiri and Lalitgiri**, forming a significant Buddhist cultural zone in south eastern Odisha.
- The **site is famous for its Vajrayana Buddhism connections and its monastery, unique for its curvilinear roof, was home to around 500 monks.**

What is the history of Buddhism in Odisha?

- Buddhism in Odisha **flourished between the 5th and 13th centuries, especially under the Bhauma-Kara dynasty.**
- Odisha, a key player in the spread of Buddhism across Southeast Asia, saw significant Buddhist patronage during the 8th to 10th centuries, with Ratnagiri being a central hub for Tantric practices.

Odisha Apartment Ownership and Management (OAOM) Act

Context

- All the apartments that were completed before February 25, 2017, can be registered under the Odisha Apartment Ownership and Management Act.

What is the significance of the Odisha Apartment Ownership and Management (OAOM) Act for apartment registration?

- The **Odisha Apartment Ownership and Management (OAOM) Act** now allows apartments completed before February 25, 2017, to be registered, even if they were not covered by the RERA (Real Estate Regulation and Development Act) provisions in the state.
- Registration authorities are instructed not to deny registration of such apartments, ensuring smoother transactions for these properties.

How does these impact apartment transactions in Odisha?

- This move resolves the challenge of registering older apartments that were completed before the commencement of RERA in Odisha, facilitating easier buying and selling.
- It also **aims to curb revenue losses for the government due to previous registration issues and ensure that pending appeals are resolved swiftly.**

Odisha's Cold Store Policy

Context

- **Retail inflation** was the highest in **Odisha** at **7.05 per cent** in **March 2024** compared to **4.85 pc** in the country.

What is Odisha's Cold Store Policy and its significance?

- **Odisha's Cold Store Policy** aims to address the challenges of **food inflation**, particularly in the context of rising **vegetable** and **food prices**.
- The state government has approved a **Rs 252 crore financial assistance scheme** (2025-26 to 2029-30) to construct new **cold storage units** and restore non-functional ones across **58 sub-divisions** of the state.
- This policy targets reducing **post-harvest losses**, moderating **food prices** and improving **per capita availability** of **fruits and vegetables**, especially in an **agriculture-dependent state** like **Odisha**.

How will the Cold Store Policy impact Odisha's farmers and consumers?

- The policy offers a significant boost to **farmers** by increasing **storage capacity** for perishable produce and ensuring better **financial viability** for **cold storage units**.
- The support includes a **60% capital investment subsidy** for **SC/ST/transgender/women entrepreneurs** and **50%** for others, as well as a **50% electricity tariff subsidy** for **seven years**.
- This will help reduce risks associated with **post-harvest losses**, encourage **private entrepreneurship** and improve **storage infrastructure**.

What role does the policy play in addressing food inflation?

- With the **retail inflation** in **Odisha** hitting a high of **7.05%** in **March 2024**, largely due to soaring **vegetable** and **food prices**, the **Cold Store Policy** aims to mitigate such price increases by ensuring that **food items** are better preserved, reducing the need to source products from neighboring states at higher prices.
- The policy also aligns with **Odisha's growth ambitions** and national goals like **Viksit Bharat @ 2047** by enhancing **agro-processing industries**, improving **farmers' income** and creating new **market access** for **local produce**.

How will the Cold Store Policy contribute to Odisha's long-term development?

- The **Cold Store Policy** not only addresses immediate concerns regarding **food inflation** and **post-harvest losses** but also lays the foundation for long-term **economic growth** by fostering **agro-processing plants** in the **MSME sector**.
- This will help create stronger **agro-manufacturing linkages**, improve **food safety** and enhance **market access**. Additionally, leveraging **Odisha's coastline** could potentially turn it into a **global**

seafood processing hub, further contributing to **economic development**.

Odisha's Green Economy Potential: Key Insights from CEEW Study

Context

- **According to a** study by the Council on Energy, Environment and Water (CEEW)**,** Odisha **has the potential to create** 10 lakh new full-time equivalent (FTE) jobs **across three green sectors by** 2030**:** energy transition**,** circular economy **and** bio-economy and nature-based solutions**. This could attract** Rs 3.5 lakh crore **in investments and contribute** Rs 2 lakh crore **to the state's** GDP**, boosting it by** 23%**.**

Key Sectors Identified:

- **Energy Transition**: Includes **solar**, **wind**, **battery storage** and **electric vehicle manufacturing**. This could attract **Rs 1.5 lakh crore** in investments and create **4 lakh jobs**.
- **Bio-economy and Nature-Based Solutions**: Includes **sustainable packaging**, **bio inputs for agriculture**, **mangrove restoration** and **seaweed cultivation**, generating over **5 lakh jobs** and contributing **Rs 26,000 crore** to Odisha's economy.
- **Circular Economy**: Initiatives like **recycling** and **reuse** could generate over **30,000 jobs** and contribute **Rs 10,000 crore** by **2030**.

Green Odisha Initiative:

- The **Green Odisha Initiative** aims to integrate policies, investments and actions across sectors to realize these opportunities. It also focuses on leveraging **Odisha's natural diversity** and **mineral resources** to make it a hub for **green industries** like **solar** and **seaweed**, setting a benchmark for aligning **economic growth** with **climate resilience**.

Notable Insights:

- Odisha has become the first state to secure **global climate funding** and adopt **climate budgeting**, positioning itself as a leader in India's green growth.
- The **study** emphasizes the need for a **whole-of-government approach** to unlock green opportunities, offering a roadmap for job-intensive growth in sustainable sectors.

This vision positions Odisha at the forefront of India's **green economy**, advancing both **sustainability** and **inclusive development**.

Odisha's first Automated Testing Station (ATS) operational in Cuttack

Context

- In a significant move towards enhancing **road safety** and ensuring **transparency** in **vehicle fitness testing**, Odisha has launched its first **Automated Testing Station (ATS)** in **Cuttack**. 4

Details

- This station is the first of its kind in the country to be **completely owned and operated by the state government**. The ATS utilizes **advanced technology** to perform **automated fitness tests** for vehicles, eliminating the need for manual evaluations and ensuring **unbiased** assessments.

Key Features of the ATS:

- The ATS complies with the **Central Motor Vehicles Rules** and follows the standards set by the **Centre** for vehicle fitness tests.
- It aims to ensure **transparent, technology-driven** evaluations, reducing human errors and increasing the accuracy of **fitness assessments**.
- This system also helps in removing **unfit vehicles** from the roads, which can significantly reduce the risk of **road accidents**.

Future Plans:

- The **Odisha government** plans to set up **21 more ATS facilities** across various **RTOs** in the state, including cities like **Bhubaneswar**, **Rourkela**, **Sambalpur** and **Koraput**, with an additional ATS in **Cuttack** expected by **2026**.

Impact on Road Safety:

- The introduction of this system is a major step towards ensuring **safer transportation** in Odisha, contributing to an overall **safer road ecosystem**.
- Previously, vehicle inspections were manual, but with the implementation of the **Motor Vehicles (Amendment) Act**, **ATS-based inspections** have become mandatory.

Odisha tops in Fiscal Health

Context

- Odisha, Chhattisgarh, Goa, Jharkhand and Gujarat have emerged as the top performing states in the fiscal health index, compiled by govt think tank Niti Aayog.

Details

These states are categorized as **achievers** due to:

- Higher **capital outlay**
- Effective **mobilisation of non-tax revenue**
- Creation of **revenue surpluses**
- Low **interest payments**

In contrast, states like **Punjab**, **Andhra Pradesh**, **West Bengal**, **Kerala** and **Haryana** are ranked at the bottom of the table under the **aspirational** category. These states face challenges such as:

- Struggling to meet **fiscal** and **revenue deficit** targets
- Low **revenue mobilisation**
- Growing **debt burden**
- Concerns about **debt sustainability**

Budget 2025 Updates: Income Tax Slabs

- **Income tax slab changes** have been introduced for **FY 2025-26** with **no income tax up to Rs 12 lakh income**.
- **New vs Old Tax Regime:** For **salaried middle-class taxpayers**, post the **Budget 2025**, the new regime may be more beneficial, depending on the **income tax slabs** and other factors.
- **Income Tax Slabs (Budget 2025):** Changes in income tax rates are expected to provide **relief** to middle-class taxpayers and will be closely watched.

Odisha mandates Six Years as Minimum Age for Class I Admission from 2025-26

Context

- Starting from the **academic year 2025-26**, the Odisha government has mandated that children should be at least **six years old** to be admitted to **Class I** as of **September 1** of the academic year.

Details

- This change aligns with the **National Education Policy (NEP) 2020** and aims to improve **academic outcomes**.

What is the role of 'Sishu Vatika'?

- The government has directed all **primary schools** to open **Sishu Vatikas** from 2025-26, which will serve as **additional pre-school classes** for children in the **age group of 5 to 6 years**.

What is the new education structure under NEP-2020?

- The **NEP-2020** introduces a new education structure of **5+3+3+4** instead of the old **10+2** system. The stages are:
  o **Foundational stage**: Ages 3-6 (Pre-school or Anganwadi)
  o **Preparatory stage**: Class I & II (Ages 6-8)
  o **Middle stage**
  o **Secondary stage**

Why this change?

- The objective is to improve **foundational literacy** and **numeracy** by ensuring that children receive **three years of pre-school education** instead of the current two years.

What is the current trend across other states?

- Over **20 states** have already adopted the rule of **six years** as the minimum age for admission to Class I and **KendriyaVidyalayas** have also implemented this policy.

DO YOU KNOW?

Hari Babu Kambhampati was sworn in as the **27th Governor of Odisha** succeeding **Raghubar Das**. He expressed his commitment to serving Odisha's progress and growth.

Odisha Current Affairs

NATIONAL

8th Pay Commission
Context
- The Union government recently announced the constitution of the **8th Pay Commission** to revise the salaries of central government employees and pensions for retirees.

About Pay Commission
- The Pay Commission reviews and recommends pay scales, allowances and benefits for central government employees, factoring in **inflation** and the cost of living.

Objective:
To propose formulas for **Dearness Allowance (DA)** and **Dearness Relief (DR)** to offset inflation.
- Constituted every 10 years by the Department of Expenditure, Ministry of Finance.
- Chaired by a retired Supreme Court judge.
- Recommendations are **not binding** on the government.

The **7th Pay Commission**, chaired by Justice A.K. Mathur, was implemented in 2016.

Svamitva Scheme
Context
- The Prime Minister recently distributed **SVAMITVA Property Cards** to property owners under the **SVAMITVA Scheme**.

SVAMITVA Scheme:
- **Full Form**: Survey of Villages Abadi and Mapping with Improvised Technology in Village Areas.
- **Launch**: 24th April 2020, on National Panchayati Raj Day.
- **Nodal Ministry**: Ministry of Panchayati Raj (MoPR).
- **Objective**: To provide legal ownership records to rural property owners through legal ownership cards, fostering **economic growth** and **financial inclusion** in rural areas.

Implementation
- **Accurate Land Demarcation**: Uses drones to demarcate land boundaries and prepares GIS-based village maps.
- **Property Ownership Rights**: Issues **Record of Rights (RoR)** through SVAMITVA Property Cards, offering legal recognition to rural property owners.

Republic Day Parade 2025
Context
- The **76th Republic Day Parade** showcased India's defense capabilities, technological advancements and commitment to gender empowerment, with several remarkable firsts marking the event.

Key Debuts at Republic Day Parade 2025
Tri-Services Tableau
- Debuting with the theme **'Shashakt aur Surakshit Bharat' (Empowered and Secure India)**, it symbolized jointness among the **Army, Navy and Air Force**.
- Featured platforms included:
- **Arjun Main Battle Tank**
- **Tejas MK-II Fighter Aircraft**
- **INS Visakhapatnam**
- **Advanced Light Helicopter**
- **Remotely Piloted Aircraft (RPA)**

DRDO's Tableau: Raksha Kavach Debut
- **Battle Surveillance System 'Sanjay'**: Enhanced battlefield monitoring with real-time data.
- **Raksha Kavach**: Multi-layered protection against multi-domain threats, showcasing India's advanced defensive systems.
- Included a new-generation **short-range ballistic missile** for high-precision, rapid deployment missions.

NOTE: The **Defence Research and Development Organisation (DRDO)**, established in **1958**, operates under the **Ministry of Defence** to advance India's military R&D. Headquartered in **Delhi**, it specializes in areas like aeronautics, missiles and naval systems. It is India's largest defence research body,

Indian Coast Guard Tableau
- Led by Commandants **Soniya Singh** and **Sadhana Singh**, it highlighted India's maritime strength.
- Theme: **'Swarnim Bharat: Heritage and Progress'**, emphasizing a self-reliant defense ecosystem.

NOTE: The **Indian Coast Guard (ICG)**, established in **1977**, under the **Coast Guard Act, 1978**, is India's maritime law enforcement and search-and-rescue agency. Operating under the **Ministry of Defence**, it safeguards territorial waters, the contiguous zone and the exclusive economic zone. Headquartered in **New Delhi**, its motto, **"वयमरक्षामः" (VayamRakshamah)**, means **"We Protect"**. The ICG's creation was recommended by the **Rustamji Committee** in **1975**.

61 Cavalry Regiment

- The **61 Cavalry**, the <u>world's only mounted horsed cavalry regiment</u>, led the mounted column, adding a touch of historical elegance to the parade.

ARJUN MAIN BATTLE TANK

- Arjun is a **third-generation main battle tank.** Developed by DRDO with the Combat Vehicles Research and Development Establishment (CVRDE), it was **launched in 1972. Equipped with FSAPDS ammunition, a 120-mm rifled gun and an advanced fire control system operable** in all lighting conditions, Arjun also features a co-axial 7.62-mm machine gun for anti-personnel use and a 12.7-mm machine gun for anti-aircraft and ground targets.

HAL TEJAS MARK 2

- The **HAL Tejas Mark 2** is a **single-engine, canard delta-wing multirole fighter.** Designed for enhanced manoeuvrability with a **compound delta-wing and relaxed static stability**, it features improved range, onboard oxygen generation and the ability to carry **6,500 kg payload**, compared to the 3,500 kg of earlier variants. Equipped to integrate heavy weapons like **Scalp, Crystal Maze and Spice-2000**, it is more capable than its predecessors.

THE NEW TEJAS

The long-awaited indigenous fighter Tejas Mk II, which will be manufactured by HAL, will go into production by 2025-2026

17.5 ton
Tejas Mark II will be the same weight as the Mirage, Jaguar and Grippen

ADDITIONS THE NEW GEN
- Heavier stand-off weapon capacity
- State-of-the-art AESA radar
- Indigenously developed air-to-air missile Astra (with a range of 70km)

WHEN: Set to go into production after the Tejas LCA order of 123 aircraft to replace the IAF's ageing MiG-21s is completed

ALSO IN THE WORKS
Advanced medium combat aircraft (AMCA) given a go-ahead by IAF late last year

25-ton fighter will be powered by two engines capable of super-cruise speeds

Will have advanced tech to ensure minimum radar signatures

Fiscal Health Index (FHI) 2025

Context

- On **January 24, 2025**, NITI Aayog unveiled the inaugural **Fiscal Health Index (FHI) 2025** in New Delhi.
- This report assesses the fiscal health of **18 major Indian states**, aiming to guide policy reforms for sustainable economic growth.

Key Highlights of the Fiscal Health Index 2025

Top-Ranked States:

- **Odisha** leads with a score of **67.8**.
- **Chhattisgarh** follows with **55.2** and **Goa** with **53.6**. These states excel in **revenue mobilization**, **expenditure management** and **debt sustainability**.

Areas of Improvement:

- **Jharkhand** has made progress in **fiscal prudence** and **debt sustainability**.
- **Karnataka** faces challenges due to weaker **expenditure quality** and **debt management**.

Conclusion

- The **FHI** aligns with India's vision of a **"Viksit Bharat @2047"**, underlining the role of **fiscal discipline** in the nation's economic transformation. It encourages states to align their fiscal strategies with national objectives, fostering **healthy competition** among them.

Indian Sustainable Natural Rubber (iSNR)

Context

- The **Indian Sustainable Natural Rubber (iSNR)** initiative was launched in **Kottayam, Kerala**.
- It aims to set global standards for sustainable rubber production.

Key Objectives of iSNR

- **Preventing Deforestation**: iSNR ensures that all rubber sourced under this framework adheres to **zero-deforestation** commitments, supporting both **biodiversity** and **carbon sequestration** goals.
- **Empowering Farmers**: The initiative provides **free certification** and **training** to smallholder farmers, promoting **sustainable farming practices** that enhance **yields** and reduce environmental impact.
- **Traceability Across the Supply Chain**: With an emphasis on **transparency**, the iSNR framework guarantees that all rubber is traceable from **farm to factory**, ensuring ethical and **sustainable sourcing**.

- **Alignment with Global Sustainability Goals**: The initiative contributes to **India's commitment** to the **United Nations Sustainable Development Goals (SDGs)** and the **Paris Climate Agreement**.

TRST01: Empowering iSNR Through Technology

- TRST01 stands for Digital Monitoring, Reporting and Verification. It's a technology platform that helps organizations monitor and report on their sustainability efforts.
- As the **official technology partner**, **TRST01** plays a crucial role in implementing and managing the **iSNR** framework. Selected through a rigorous evaluation process, TRST01 brings advanced **digital solutions** to ensure the **integrity** and **efficiency** of the initiative.

A Milestone in Global Rubber Sustainability

- The **iSNR initiative** sets a global benchmark for **sustainable rubber production**, prioritizing **environmental preservation**, **farmer welfare** and **global compliance**. This initiative ensures that India remains **competitive** in the rubber industry while contributing to a **greener planet**.

Indus Waters Treaty (IWT)

Context

- The Neutral Expert, **appointed by the World Bank** under the Indus Waters Treaty (IWT) deemed himself "competent" to adjudicate the technical differences between India and Pakistan.

What is the Indus Waters Treaty (IWT)?

- The **Indus Waters Treaty**, signed on **September 19, 1960**, is a water-sharing agreement between **India** and **Pakistan**, brokered by the **World Bank**. It is widely regarded as one of the most successful examples of **conflict resolution** between the two nations.

Key Features of the Treaty
Distribution of Rivers

- **Eastern Rivers (Beas, Ravi, Sutlej)**: These are allocated to **India** for **unrestricted use**.
- **Western Rivers (Indus, Chenab, Jhelum)**: These are reserved for **Pakistan**, with **limited use** allowed for **India**, including for **irrigation**, **navigation** and **hydroelectric projects**.

Water Allocation

- **India** controls about **30%** of the total **Indus River System Water**. **Pakistan** controls the remaining **70%**.

Obligation on India

- According to **Article III (1)** of the Treaty, **India** must allow the waters of the **Western Rivers** to flow **unrestricted** to **Pakistan**, except for specific uses permitted under the Treaty, such as for **hydroelectric projects**.

Employees' Provident Fund Organisation (EPFO) Changes and Updates

Context

- The **Employees' Provident Fund Organisation** (EPFO) has introduced key changes in 2025.

Major Changes

- **ATM Withdrawals for PF**: Starting FY 2025-26, members can withdraw PF balances via ATMs.
- **No Contribution Limit**: The ₹15,000 cap on contributions is removed, allowing employees to contribute based on actual salary.
- **Equity Investment Option**: Direct equity investments may soon be available, potentially offering higher returns.
- **Job Creation Data**: October 2024 saw 1.34 million new EPFO members, with female membership rising and Maharashtra, Karnataka and Tamil Nadu leading the growth.
- **Pension Withdrawal Flexibility**: Pensioners can now withdraw pensions from any bank without extra verification.
- **IT System Upgrade**: EPFO's IT system upgrade, due by June 2025, will speed up claim settlements and improve transparency.
- **Centralized Pension Payment System (CPPS)**: Launched on **January 1, 2025**, the **CPPS** enables pension disbursements through **National Payments Corporation of India (NPCI)**, allowing payments to any scheduled commercial bank in India. This eliminates the need for **Pension Payment Orders (PPO)** transfers across regions.
- **Simplified Provident Fund (PF) Transfer**: Members can transfer funds between accounts linked with the same or different **UANs** if **Aadhaar** is verified.

Uttarakhand's Uniform Civil Code (UCC) implementation

Context

- Uttarakhand is set to be the **first state in India to implement the Uniform Civil Code (UCC),** with the state government approving the **UCC rules manual**.

Key Provisions of UCC's Rules

- **Scope of UCC**: Unifies laws for marriage, divorce, inheritance and maintenance across all communities in the state.

- **Online Portal and App**: A dedicated portal and mobile app for easy access to registration and services.

Key Services for Registration
- **Marriage Registration**: Registers marriages and acknowledges them.
- **Divorce Registration**: Allows registration and annulment of divorces.
- **Live-in Relationships**: Registers live-in relationships and terminations.
- **Inheritance**: Registers legal heirs and wills.
- **Appeals**: A procedure for appealing decisions.
- **Grievances**: A complaint tracking mechanism.
- **Access to Information**: Public access to data and registered services.

Equality Provisions
- **Women's Rights**: Equal rights for inheritance, adoption, divorce and bans on polygamy.
- **Marriageable Age**: Standard marriageable age of 18 for women and 21 for men.
- **Registration Requirements**: Mandatory registration for marriages and live-in relationships.

Digital and Physical Access
- **Common Service Centres (CSC)**: Assists those lacking digital literacy, particularly in remote areas.
- **Helpline**: Dedicated support for legal queries and portal issues.

Training and Implementation
- **Officials' Training**: Ongoing training for officials on portal use and procedures.
- **Mock Drill**: A statewide mock drill scheduled for January 21, 2025.
- **Implementation Timeline**: UCC implementation will be announced after training completion.

Key Objectives
- **Inclusivity**: Equal access to legal services for all citizens.
- **Ease of Access**: Simplified legal processes through digital and offline channels.
- **Fostering Transparency**: Digital integration to minimize bureaucracy and streamline processes.

National Broadband Mission 2.0 and Sanchar Saathi Mobile Application
Context
- On **January 17, 2025**, the **Department of Telecommunications (DoT)** introduced two major initiatives aimed at strengthening **India's digital connectivity** and **telecom security**: the **National Broadband Mission 2.0 (NBM 2.0)** and the **Sanchar Saathi mobile application**.

Background
- The National Broadband Mission, under the National Digital Communications Policy, 2018, **aimed to provide universal and equitable broadband access across India,** with a special focus on rural and remote areas.
- Guided by the **principles of universality, affordability and quality**, the mission targeted broadband access to all villages by 2022 and seeks to **enhance the quality of mobile and internet services nationwide**.

National Broadband Mission 2.0 (NBM 2.0)
- Following the success of **NBM 1.0**, which established over **8 lakh towers** and boosted broadband subscriptions from **66 crore to 94 crore**, NBM 2.0 targets connecting the remaining **1.7 lakh villages** in India. **The mission includes the following goals:**
  o Ensuring **60 out of every 100 rural households** have access to broadband.
  o Guaranteeing a minimum **fixed broadband download speed** of **100 Mbps**.
  o Reducing the **digital divide** and fostering **inclusive growth**.

Sanchar Saathi Mobile Application
- The **Sanchar Saathi** app is designed to improve **telecom security** and empower users to safeguard their mobile resources. Key features include:
  o **Reporting Fraudulent Communications (SFC)**: Users can directly report suspected fraudulent calls and SMS from their phone logs.
  o **Managing Mobile Connections**: The app helps users identify and manage all mobile connections registered in their name, preventing unauthorized use.
  o **Blocking Lost or Stolen Devices**: It allows users to block, trace and recover lost or stolen mobile devices quickly.
  o **Verifying Device Authenticity**: The app provides an easy way to check the authenticity of mobile handsets to avoid counterfeit purchases.
  o Available for both **Android** and **iOS** platforms, the app is designed to boost telecom security.

Lokpal Foundation Day
Context
- On **January 16, 2025**, the **Lokpal of India** celebrated its first **Foundation Day** at the **Manekshaw Centre, New Delhi**, marking **11 years**

since its establishment on **January 16, 2014**, under the **Lokpal and Lokayuktas Act, 2013**.

Key Highlights

- **Chairperson**: Justice A.M. Khanwilkar
- **Notable Attendees**: Chief Justice of India Justice **Sanjiv Khanna**, former Lokayukta Justice **N. Santosh Hegde** and social activist **Anna Hazare** (via virtual participation).
- **Purpose**: Serving as an **anti-corruption ombudsman**, the Lokpal ensures **transparency** and **accountability** in governance.

Strategies Emphasized

- **Simplifying Complaint Processes** to make grievance redressal more accessible.
- Adoption of **advanced technologies**, including **AI** and **forensic tools**, for effective investigations.
- Enhanced collaboration with agencies like the **CBI**, **CVC** and the **judiciary** for robust anti-corruption measures.

Key Agencies Involved

- **Central Bureau of Investigation (CBI)**
- **Central Vigilance Commission (CVC)**
- **Comptroller and Auditor General (CAG)**

INTERNATIONAL

Gulf Of Mexico Renamed As Gulf Of America

Context

- The decision by the Trump administration to rename the Gulf of Mexico to the Gulf of America marks a highly symbolic move.

Details

- The Gulf of Mexico, or **Golfo de México** in Spanish, is a significant ocean basin located within the **Atlantic Ocean**.
- It is bordered by the **United States**, **Mexico** and **Cuba**.
- Formed roughly **300 million years ago** by plate tectonics, the Gulf connects to the Atlantic Ocean through the **Straits of Florida** and to the Caribbean Sea via the **Yucatán Channel**.
- The Gulf is a crucial area for **offshore petroleum production**, accounting for **14%** of the U.S.'s total output.
- The **Mississippi River** watershed is the largest contributor to the Gulf's drainage system.

BRICS Group

Context

- Nigeria has officially become a partner state of the **BRICS** group.

All about BRICS

- **BRICS** is an intergovernmental organization consisting of **Brazil**, **Russia**, **India**, **China**, **South Africa**, **Egypt**, **Ethiopia**, **Indonesia**, **Iran** and the **United Arab Emirates**. It is considered an alternative to the **G7** bloc of the world's largest economies and collectively represents nearly half of the world's population.
- Since the first summit in **Russia** in 2009, the founding countries — **Brazil**, **Russia**, **India** and **China** — have met annually to coordinate policies.
- **Indonesia** officially joined as a member in early 2025, marking the group's first Southeast Asian member. As new members join, the term **BRICS+** has been used informally.

- BRICS has launched significant initiatives, such as the **New Development Bank**, **BRICS Contingent Reserve Arrangement** and the **BRICS basket reserve currency**.

US withdrew from Paris Agreement

Context

- **President Donald Trump** has begun the process of withdrawing the United States from the **Paris Agreement** once again.

Details

- Trump has consistently argued that the accord imposes **unfair burdens** on the U.S. economy. He first withdrew the U.S. from the agreement during his presidency, but the U.S. officially rejoined under **President Joe Biden** in 2021. Now, as Trump takes office again, he has restarted the withdrawal process.
- While **China** is the largest emitter of greenhouse gases, it is also a leader in deploying **renewable**

energy. The U.S. has seen a decrease in emissions since the mid-2000s but remains the **largest historical contributor** of carbon dioxide.

Paris Agreement

- The **Paris Agreement** is an international treaty on **climate change** that was signed in **2016**. The treaty covers key areas such as **climate change mitigation**, **adaptation** and **finance**. Negotiated by 196 parties at the **2015 United Nations Climate Change Conference** near Paris, the agreement was adopted by 195 members of the **United Nations Framework Convention on Climate Change (UNFCCC)**.
- Iran, a major emitter, is one of the few countries that has not ratified it. The **United States**, the second-largest emitter, withdrew in **2020**, rejoined in **2021** and announced its exit again in **2025**.
- The long-term goal of the Paris Agreement is to limit global temperature rise to **well below 2°C** above pre-industrial levels and ideally to **1.5°C**.
- The lower the temperature increase, the less severe the impact of **climate change**. To achieve this, **greenhouse gas emissions** must be reduced to **net zero** by mid-century, with a target of halving emissions by **2030** to meet the 1.5°C goal. However, despite the signing of the agreement, global emissions have continued to rise and **2024** was recorded as the hottest year on record, with the global temperature surpassing the **1.5°C** threshold.
- Under the Paris Agreement, countries must determine and report their **climate contributions**, but there are <u>no binding emission targets</u>. Unlike the **Kyoto Protocol** (1997), the Paris Agreement treats **developed and developing countries** equally, requiring all nations to submit plans for **emission reductions**.

Aims of the Paris Agreement include:

- **Limiting the global temperature increase** to well below 2°C and pursuing efforts to limit it to 1.5°C.
- **Enhancing climate resilience** and low **greenhouse gas emissions development** while safeguarding **food production**.
- **Aligning finance flows** with a pathway toward low-emission, **climate-resilient development**.

World's Longest Expressway Tunnel
Context

- China has completed the construction of the **world's longest expressway tunnel**, the **Tianshan Shengli Tunnel.**

Details

- **The Tunnel is** located through the **Tianshan Mountains** in the **Xinjiang Uygur Autonomous Region**.
- The **Tianshan Shengli Tunnel** is a key element in China's **Silk Road Economic Belt** initiative, which aims to boost **trade** and **economic connectivity** across **Asia**, **Europe** and beyond through **infrastructure development** and investment in **transportation networks**.

'Dual Year' between India and Spain
Context

- **2026** will be celebrated as a **'dual year'** between **India** and **Spain**, with a focus on **culture, tourism** and **advancements in artificial intelligence (AI)**.

India-Spain Bilateral Relations

- India and Spain currently have an annual **trade worth USD 10 billion**, with collaborations in sectors such as **railways, clean technology, drones** and **space exploration**.
- India's top exports to Spain includes **RMG cotton**, **iron and steel** and **telecom instruments**.
- Major imports from Spain were **petroleum products** and **industrial machinery**. India's exports saw significant growth in **bulk drugs**, **telecom instruments** and **RMG cotton**.
- However, imports declined in **machine tools**, **iron and steel** and **organic chemicals**. This trend highlights stronger export performance and a decrease in imports from Spain.

India to sign Mining Pact with Mongolia Soon
Context

- India is set to sign a preliminary agreement with **Mongolia** in the field of **geology** and **exploration**.

Details

- The deal comes amid growing demand in India for **copper** and **coking coal**, which landlocked Mongolia has in abundance. These resources are vital for **power generation**, **construction** and the **steel industry**.
- Coking coal is a key steel-making feedstock, with India — **the world's second largest crude steel-maker** — being a major importer.
- Mongolia is one of the major copper exporters globally; while coking coal exports from it are mostly to China.

Pakistan's Non-Permanent Membership in the UNSC
Context

- Pakistan has officially begun its two-year tenure as a **non-permanent member** of the **United Nations Security Council (UNSC)** for the 2025-26 term, starting from **January 2025**.
- This marks the **eighth time** Pakistan has served on the UNSC, a key body for maintaining global peace and security.

About UNSC

- The **United Nations Security Council (UNSC)** is one of the six principal organs of the **United Nations (UN)**. Its primary responsibilities include ensuring **international peace and security**, recommending the admission of new members to the **General Assembly** and approving any changes to the **UN Charter**.
- The UNSC is the only UN body with the authority to issue **binding resolutions** on **member states**.

Composition of the UNSC

The UNSC comprises **15 members**:

1. **Five permanent members** (P5): **China**, **France**, **Russia**, **United States** and **United Kingdom**.
2. **Ten non-permanent members**, elected by the **UN General Assembly (UNGA)** for **two-year terms**.

Each non-permanent member gets the opportunity to serve as the **UNSC president** during their term. These 10 non-permanent seats are distributed as follows:

- **Five seats for African and Asian countries** (with three for Africa and two for Asia).
- **One seat for Eastern European countries**.
- **Two seats for Latin American and Caribbean countries**.
- **Two seats for Western European and other countries**.

The **Africa and Asia Pacific group** alternates every two years to nominate an **Arab candidate** for one of the non-permanent seats.

Veto Power in the UNSC

- The **veto power** is a special voting privilege that is exclusive to the **permanent members (P5)** of the UNSC. If any one of these five members casts a **negative vote**, the resolution or decision is not approved, regardless of the votes of other members.
- **Article 27 of the UN Charter** stipulates that each member of the UNSC has one vote. Decisions on **procedural matters** require the affirmative vote of at least **nine out of the 15 members**. However, decisions on other matters need the affirmative votes of **nine members**, including the concurring votes of all **P5 members**. Non-permanent members of the UNSC do not hold veto power.

CR450 Prototype: World's Fastest High-Speed Train

Context

- **China unveiled** an updated model of its high-speed bullet train, the **CR450 prototype.**

Details

- **CR450 prototype**, which achieved **450 kmph** during test runs, making it the world's fastest high-speed train.
- The new model aims to **shorten travel time** and enhance **connectivity**, improving the convenience and efficiency of travel for China's passengers.
- **Key performance indicators** of the CR450 prototype, including **operational speed**, **energy consumption**, **interior noise** and **braking distance**, set a new **international benchmark**.
- The CR450 is significantly **faster** than the **CR400 Fuxing** high-speed rail currently in service, which operates at **350 kmph**.

Mount Ibu erupted

Context

- A volcano in eastern Indonesia, **Mount Ibu**, erupted, releasing **lava** and a **column of smoke and ash** 4 kilometres into the air.

Details

- The eruption occurred on **Halmahera Island** in **North Maluku** province.
- **Mount Ibu** is among Indonesia's most active volcanoes, erupting over **2,000 times** last year. **Halmahera Island**, home to **700,000+ people**, is prone to volcanic activity due to Indonesia's position on the **Pacific "Ring of Fire"**.
- **Note:** The Pacific Ring of Fire is a horseshoe-shaped region around the Pacific Ocean that experiences frequent earthquakes and volcanic activity.

SCIENCE & TECHNOLOGY

PRSC-E01
Context
- Pakistan's Space and Upper Atmosphere Research Commission (SUPARCO) successfully launched its first **indigenous electro-optical satellite**, PRSC-EO1, from the **Jiuquan Satellite Launch Center in China**.

Details
- China played a crucial role in this achievement by using its **Long March-2D rocket** to launch the PRSC-EO1 satellite. This collaboration highlights the ongoing partnership between **Pakistan and China** in the field of space technology and exploration.
- The PRSC-EO1 satellite is equipped with **electro-optical sensors** that can collect **data and images** of the Earth's surface. The technology works by detecting and measuring **reflected sunlight** or **emitted radiation**.
- It will be used for monitoring **natural resources**, managing **disasters** and aiding in **urban planning**.
- This development will significantly enhance Pakistan's capabilities in **socio-economic management** and **disaster response**.

NVS-02 Satellite
Context
- **ISRO** created history with its **100th launch** from the **Sriharikota spaceport** in Andhra Pradesh.
- The **GSLV-F15 rocket**, carrying the **NVS-02 satellite**, successfully lifted off, marking a significant milestone in India's space journey.

Key Highlights of the Launch
- **Launch Date**: January 29, 2025
- **Rocket**: GSLV-F15
- **Payload**: **NVS-02 Satellite**
- **Orbit**: Geosynchronous Transfer Orbit (GTO)
- **Launch Time**: 6:23 AM
- **Location**: **Sriharikota, Andhra Pradesh**
- **Mission Duration**: 27-hour countdown

Historical Context
- **First Launch**: ISRO's first mission from Sriharikota took place on **August 10, 1979**, when the **SLV-3 E10 rocket** carried the **Rohini Technology Payload**.
- **Notable Achievement**: The first major success from Sriharikota was the launch of the **Rohini satellite (RS-1)** on **July 18, 1980**.

NVS-02 and NavIC System
- The **NVS-02 satellite** will enhance India's **NavIC system**, increasing the number of operational satellites from **four to five**.
- **NavIC (Navigation with Indian Constellation)** is India's regional navigation satellite system, similar to **GPS** and provides services not just in India but also up to **1,500 km beyond** its borders.

Applications of NavIC
The **NVS-02 satellite** will support various applications, including:
- **Terrestrial, Aerial and Maritime Navigation**
- **Precision Agriculture**
- **Fleet Management**
- **Location-Based Services** (mobile devices)
- **Orbit Determination for Satellites**
- **IoT Applications**
- **Emergency & Timing Services**

About GSLV-F15 and NVS-02
- **GSLV-F15** is the **17th flight** of the GSLV type and the **eighth operational flight** with a **domestic cryogenic stage engine**.
- The **NVS-02 satellite** was designed, developed and integrated at the **U.R. Satellite Centre (URSC)**.

India's Deep Ocean Mission (DOM)
Context
- India's **Deep Ocean Mission (DOM)** is a significant step towards **blue economy** and technological self-reliance. It aims to explore **deep-sea resources**, enhance **marine biodiversity conservation** and boost **economic growth** through indigenous technology.

Mission Overview
- India's first **human underwater submersible** will be launched later this year, capable of reaching a depth of **6,000 meters**. The mission is part of India's growing focus on **deep-sea exploration** for **minerals**, **energy** and **biodiversity**.

Key Objectives
- **Deep-sea mining** and resource exploration
- **Marine biodiversity** conservation
- **Energy and freshwater extraction** from the ocean
- **Climate change advisory services**
- **Ocean survey and exploration**
- **Ocean biology research stations**

Technological Innovations

- **Matsyayaan 6000**: A submersible for **6,000-meter** dives
- **Titanium hull** and **self-floatation** systems for safety and durability
- Collaboration with **ISRO** for **advanced sensors** and **data analysis**

Strategic and Economic Benefits

- **Mineral resources** like rare earth metals for industrial use
- **Blue economy growth**, creating new jobs and industries
- **Sustainable ocean resource management** for environmental preservation

Way Forward

- India plans to develop more advanced technologies, expand **autonomous deep-sea exploration** and promote **sustainable practices** in **marine resource management**.
- This mission enhances India's scientific capabilities, global positioning and economic resilience through sustainable **deep-sea exploration**.

Indian Space Startups Pixxel and Digantara Launch Satellites with SpaceX

Context

- Two Indian space start-ups, Pixxel and Digantara, announced the launch of their satellites onboard a SpaceX rocket, marking a significant leap in India's private space sector.

Pixxel's Groundbreaking Hyperspectral Satellite Technology

- Pixxel has become the first private Indian company to deploy a constellation of satellites with **hyperspectral frequency technology**, enabling detailed observation of Earth across over **150 spectral bands**. This technology benefits various sectors, including **agriculture**, **defence** and **environmental monitoring**. The **Firefly satellites** are the world's highest-resolution commercial-grade hyperspectral satellites, offering six times sharper images than traditional systems.

Key Features of Firefly Satellites:

- **Resolution**: 5-meter hyperspectral imaging
- **Applications**: Detects chemical compositions, vegetation health, water quality and atmospheric conditions
- **Clientele**: Pixxel serves over 60 clients, including **US National Reconnaissance Organization**, **BP**, **Rio Tinto** and **India's Ministry of Agriculture**

- Pixxel plans to launch three additional **Firefly satellites** soon and expand to 18 more, marking a transformative step in **hyperspectral satellite imaging**, especially for defence applications.

Digantara's SCOT Satellite for Space Safety

- **Digantara Aerospace** launched the world's first commercial satellite for **object tracking**, the **Space Camera for Object Tracking (SCOT)**, designed to enhance **space situational awareness (SSA)**. With increasing space debris and artificial satellites, spacecraft safety is a growing concern.

SCOT's Capabilities:

- Tracks objects as small as 5 cm in **Low Earth Orbit (LEO)**
- Continuous monitoring, unaffected by weather or geographical limitations
- Part of Digantara's mission to create a hybrid surveillance network to ensure space safety and sustainability

The **SCOT satellite** plays a crucial role in managing **space debris**, contributing to long-term space safety and national security.

Significance of These Developments

- **Hyperspectral Imaging (Pixxel)**: The **Firefly satellites** will drive innovations in agriculture, defence and climate action.
- **Space Safety (Digantara)**: The **SCOT satellite** will improve monitoring of **Resident Space Objects (RSOs)**, addressing space debris concerns and enhancing space traffic management.

ISRO Spadex Docking Mission

Context

- On **January 16**, the **Indian Space Research Organisation (ISRO)** successfully demonstrated **space docking**, where two fast-moving satellites were brought within 3 meters of each other in orbit and joined together. This achievement positions **India** as the fourth country in the world, after the **United States**, **Russia** and **China**, to accomplish this complex task.

What is "Docking" and Its Importance?

- **Docking** refers to the process of bringing two spacecraft into the same orbit and connecting them, either manually or autonomously. This capability is vital for missions requiring large spacecraft that a single launch vehicle cannot carry, such as space station assembly or transporting crew and supplies.

Historical Context of Space Docking

- **United States**: The first docking occurred in **1966** when NASA's **Gemini VIII** docked with the **Agena** vehicle.
- **USSR**: In **1967**, the **Soviet Union** demonstrated the first uncrewed docking with **Kosmos 186** and **Kosmos 188**.
- **China**: In **2011**, China achieved docking with the **Shenzhou 8** and **Tiangong 1** space laboratory, followed by the first crewed docking in **2012**.

Why Did India Conduct This Docking Experiment?

- ISRO's docking mission is a key step towards its **vision of a space station** by **2035** and a **human mission to the Moon** by **2040**. The docking capability will be crucial for assembling the **Bharatiya Antariksh Station** and the upcoming **Chandrayaan-4** lunar mission, which involves sending multiple modules that need to be docked in space.

The Docking Experiment Process

- ISRO carried out a series of maneuvers to bring two satellites, **SDX01 (Chaser)** and **SDX02 (Target)**, progressively closer, first holding them at **5 km**, then reducing the distance step-by-step to **3 meters**before successfully joining them. Commands were given to treat the two satellites as a single composite object.

The Bharatiya Docking System

- India's docking system is **androgynous**, meaning both satellites are equipped with identical systems. Unlike the **International Docking System Standard (IDSS)**, it uses two motors instead of 24, along with advanced sensors like the **Laser Range**

Finder and **Rendezvous Sensor** to ensure precise docking.

- This success sets the stage for ISRO's future missions, including the **Chandrayaan-4** and **Gaganyaan**, advancing India's capabilities in autonomous space operations.

DRDO's Himkavach: A Cold-Weather Clothing System for Soldiers

Context

- The **Defence Research and Development Organisation (DRDO)** has developed the **HimKavach** clothing system to enhance the protection of soldiers operating in extreme cold conditions.

Details

- This innovative system is designed to function in temperatures ranging from **20°C to -60°C**, making it suitable for the harsh environments of the **Himalayas**, where temperatures can plummet drastically.

Features and Benefits of HimKavach

- The **HimKavach** system is made up of **multiple layers**, each crafted for **insulation**, **breathability** and **comfort**. Its **modular design** allows soldiers to add or remove layers based on weather conditions, ensuring versatility and adaptability in changing environments. This flexibility is crucial for **high-altitude operations**, where temperature fluctuations can be severe.

ChatGPT VS DeepSeek

CATEGORY — ChatGPT vs DeepSeek

ChatGPT	Category	DeepSeek
Developed by OpenAI, based on GPT-3.5 and GPT-4. A general-purpose conversational AI.	**Overview**	Developed by DeepSeek AI, tailored for enterprise-level applications and industry-specific solutions.
Built on GPT architecture using transformer-based neural networks.	**Architecture & Technology**	Uses a hybrid architecture combining NLP, ML, and DL for domain-specific tasks.
Trained on a diverse dataset, suitable for general topics but lacks specialization.	**Training Data & Specialization**	Trained on industry-specific datasets with deep expertise in sectors like finance, healthcare, and logistics.
Customer support, content creation, education, personal assistants.	**Key Use Cases & Applications**	Financial analysis, healthcare, logistics, legal applications.
Limited customization, fine-tunable for some tasks but not deeply specialized.	**Customization & Adaptability**	Highly customizable for industry-specific needs, integrated with enterprise systems.
Great at generating human-like text but can produce inaccurate or irrelevant responses.	**Performance & Accuracy**	High accuracy and relevant responses, especially in specialized domains with structured data.
Scalable for general-purpose tasks across various platforms.	**Scalability & Deployment**	Optimized for large-scale enterprise deployments, integrates with ERP systems.
Versatile across multiple topics.- User-friendly and accessible.-Fast development with pre-trained models.	**Strengths**	Expertise in specialized industries.- Highly accurate responses.- Customizable for enterprise needs.
May struggle with technical or domain-specific queries.- Can generate incorrect responses.	**Weaknesses**	Complex deployment and integration.-Higher development and deployment costs.
General-purpose AI tasks.- When domain expertise is not critical.- Cost-effective, easy deployment.	**Ideal For**	Specialized industries like finance, healthcare, or logistics.-Applications needing high accuracy & domain knowledge.- Businesses with the resources for customization.
Larger datasets and advanced models like GPT-4.- Focus on reducing inaccuracies & enhancing domain-specific features.	**Future Trends**	Complex deployment and integration.-Higher development and deployment costs.

BIOLOGY & ENVIRONMENT

2024's Climate Record

Context

- 2024 has officially been declared the **warmest year on record**, with global temperatures exceeding **1.5°C above pre-industrial levels** for the first time, according to the **Copernicus Climate Change Service (C3S)**.

Details

- The year saw unprecedented temperature anomalies and extreme weather events, further exacerbated by **human-induced climate change** and the influence of **El Niño**.

Global Temperature and Climate Anomalies

- The **global average temperature** in 2024 reached **15.10°C**, marking a **0.72°C** increase from the **1991–2020 average**. Each of the past ten years has been among the warmest on record. Monthly temperatures consistently exceeded the **1.5°C threshold** above pre-industrial levels, with **July 2024** setting a new record for the highest global average temperature.

Ocean and Regional Highlights

- The **ocean surface temperature** in 2024 also hit a record high, with **extra-polar oceans** averaging **20.87°C**. In Europe, 2024 was the **warmest year on record**, with a temperature rise of **1.47°C** above the long-term average, surpassing previous records.

Extreme Weather and Impacts

- The year saw severe heatwaves, **high humidity** and **increased heat stress** across the Northern Hemisphere, affecting about **44%** of the globe in July. The **Arctic** and **Antarctic** experienced record-

low sea ice extents, further indicating the ongoing effects of climate change.

Rising Greenhouse Gas Concentrations

- Concentrations of **carbon dioxide** and **methane** reached **record levels** in 2024, at **422 ppm** and **1897 ppb**, respectively, further contributing to global warming.

Ocean Anoxic Event 1A (OAE 1A)

Context

- A recent study in *Science Advances* sheds light on the **timing** and **duration** of **Ocean Anoxic Event 1a (OAE 1a)**.

- Researchers analyzed **fossils** and **rocks** from **Mount Ashibetsu, Japan**, revealing the **causes** and **timeline** of this event, which led to widespread **oxygen depletion** in Earth's oceans.

What is OAE 1a?

- OAE 1a occurred during the **Cretaceous Period**, causing oceanic oxygen depletion and disrupting marine life.
- **Cause**: Triggered by **volcanic eruptions**, releasing CO_2, leading to **global warming** and the formation of **anoxic marine basins**.
- **Impact**: Increased CO_2 formed **carbonic acid**, dissolving **shells** and further reducing **oxygen levels**, contributing to the **extinction** of marine species like **plankton** and creating **black shales**.

Human Metapneumovirus (HMPV)

Context

- China is now grappling with a surge in cases of Human Metapneumovirus (HMPV), a respiratory virus.

What Is HMPV?

- **Human Metapneumovirus (HMPV)** was discovered in 2001.
- It belongs to the **Pneumoviridae family**, which also includes **Respiratory Syncytial Virus (RSV)**.
- Though identified in 2001, **serological studies** suggest HMPV has been circulating for over **60 years**.
- **Globally distributed**, HMPV causes respiratory diseases in people of all ages.

Symptoms of HMPV

- Cough, Fever, Nasal congestion, Shortness of breath, Transmission and Incubation

Aspect	HMPV	COVID-19
Virus Family	Pneumoviridae	Coronaviridae
Severity	Mild to moderate respiratory symptoms; severe cases less common.	Can cause severe illness, including pneumonia and acute respiratory distress syndrome.
Respiratory Symptoms	Cough, nasal congestion, fever, shortness of breath, wheezing, and sore throat.	Fever, cough, shortness of breath, loss of taste or smell, and fatigue.
Vaccine Availability	No vaccine currently available.	Vaccines are available and widely administered.
Global Impact	Causes seasonal outbreaks, primarily affecting children and the elderly.	Led to a global pandemic with significant morbidity and mortality across all age groups.
Average Recovery Period	Mild cases: 2 to 5 days; Severe cases: 7 to 10 days.	Mild cases: 10 days; Severe cases: Several weeks to months; Long COVID can last 12 weeks or mo
Treatment	Stay hydrated and rest, use OTC medications for pain, congestion, and fever.	Antivirals, monoclonal antibodies, supportive care (hydration, fever management), corticosteroids in severe cases.

Spreads via:

- Respiratory droplets, Direct contact (e.g., handshakes), Contaminated objects, Incubation period: 3 to 5 days

Prevention and Treatment

- **Preventive measures: wearing masks, frequent hand washing, boosting immunity**
- **Antiviral drugs** not recommended, as **no vaccine** exists and symptoms often resemble the **common cold**.

Blue Carbon

Context:

- A groundbreaking report titled "Blue Carbon and its Role in Carbon Sequestration" was published.

Blue carbon

- **Blue carbon** refers to the carbon captured and stored by coastal and marine ecosystems, including **mangroves**, **seabeds** and **salt marshes**. These ecosystems are among the most efficient at storing carbon, sequestering more carbon per unit area than terrestrial forests. Blue carbon plays a crucial role in **climate change mitigation** by absorbing large amounts of carbon dioxide from the atmosphere.

Importance of Blue Carbon Ecosystems

Blue carbon ecosystems provide essential services:

- **Climate Change Mitigation**: They store carbon, which helps reduce the concentration of greenhouse gases in the atmosphere.

- **Coastal Protection**: They act as natural buffers, protecting coastal communities from **erosion**, **storm surges** and **rising sea levels**.
- **Biodiversity Support**: Mangroves and other blue carbon ecosystems are critical habitats for a variety of marine species.

Rabbit Fever in news

- **Rabbit Fever (Tularemia)** is a rare, potentially fatal disease caused by *Francisella tularensis*. It primarily affects humans through **contact with infected animals**, **bites** (e.g., tick or deer fly), or **contaminated water**.

Symptoms:
- **Skin ulcers** (after bites)
- **Eye irritation**
- **Breathing difficulty**
- **Sore throat** and **mouth ulcers**

Transmission:
- **Animal contact** (e.g., rabbits, rodents)
- **Inhalation** of contaminated aerosols
- **Contaminated water** consumption

Treatment:
- **Antibiotics** (no vaccine available in the U.S.)
- Tularemia has seen a 56% rise in incidence from 2011-2022 compared to 2001-2010.
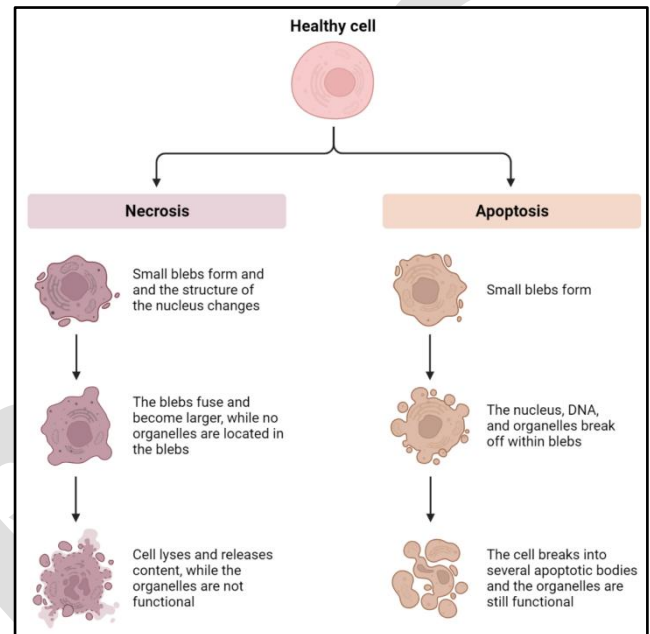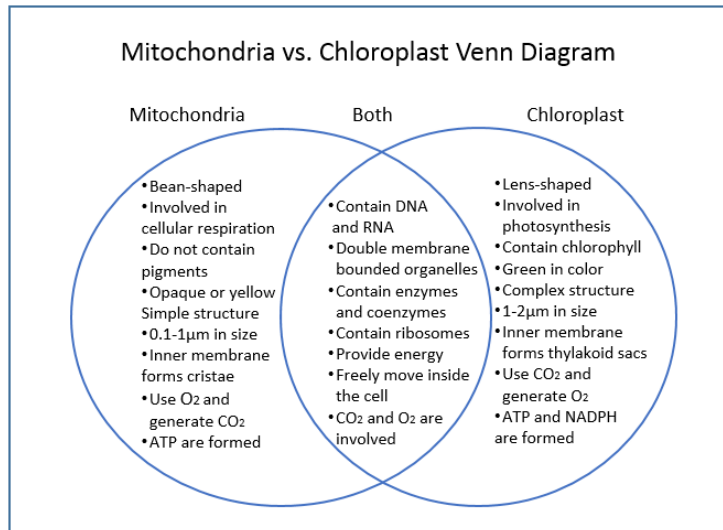
Key Differences

	Somatic mutation	Germline mutation
Definition	Mutation in cells other than germ cells	Mutation in Germ cell either sperm or egg
Heredity	Non-inherited	Inherited to Offsprings
Nature	Acquired	Sporadic
Occurrence	Any body parts	Whole organism
Origin	A stage of person's life	During germ cell division
Occurrence	During Gametogenesis	In regular Cells
Presence	Present in Cells, tissue or organs such as kidney, liver or skin,	Present in all cells of a new organism
Influence	Local	Nearly all body organs
Role in Evolution	Not a definite role in evolution and natural selection	Define role in Evolution and natural selection

	Active Transport	Passive Transport
Energy Requirement	Requires energy expenditure, usually in the form of ATP, to move molecules or ions against their concentration gradient.	Does not require energy input; molecule or ions move along their concentration to areas of lower concentration
Direction of Movement	Moves substances against their Concentration gradient, from areas of lower concentration to areas of higher concentration.	Moves substances down their concentration gradient, from areas of lower concentration.
Transport Proteins	Often involves specific transport proteins, such as pumps, which actively move substances across the membrane	Can occur through various mechanisms including simple diffusion, facilitated diffusion through channel, proteins, or facilitated diffusion through carrier proteins.

	Gene	Allele
Definition	A gene is a portion of DNA that determines a certain trait.	An allele is a specific form of a gene
Function	Genes are responsible for the expression of traits.	Alleles are responsible for the variations in which a given trait can be expressed
Pairing	Genes do not occur in pairs.	Alleles occur in pairs
Examples	Eye colour, hair colour, hairline shape.	Blue eyes, blonde, hair, V-shaped hairline

Gene Flow	Genetic Drift
The movement of genetic material from one group to another is known as gene flow. Gene flow is mediated by reproduction and vertical gene transmission from parent to offspring and may occur between two populations of the	Genetic Drift is an evolutionary process in which a population's allele frequencies shift over generations owing to chance.

same species.	
Alternatively, horizontal gene transfer (HGT, also known as lateral gene transfer) may occur between two distinct species, such as gene transfer from bacteria or viruses to a higher creature or gene transfer from an endosymbiont to the host. Later in this Chapter, We'll Go into HGT in future depth. Gene flow within a group may promote genetic diversity, but gene flow between genetically disparity.	In small populations, where seldom occurring alleles have a higher likelihood of being lost, genetic drift occurs. Genetic drift will persist until the implicated allele is either lost by a population at a certain locus.
Gene flow is generated by organisms migrating into new populations.	Genetic drift is typically caused by population decline or the creation of a new population

Mitochondria vs. Chloroplast Venn Diagram

ISFR Report 2023

Context
- ISFR 2023 Report was recently released.

Details
- The **India State of Forest Report (ISFR) 2023**, released by the **Minister for Environment, Forest and Climate Change (MoEFCC)**, provides a comprehensive assessment of the **country's forest and tree resources**. It is published biennially by the **Forest Survey of India (FSI)** since 1987, relying on **remote sensing satellite data** and **field-based National Forest Inventory (NFI)**. The 2023 report is the **18th edition**, covering crucial aspects like **forest cover, tree cover, mangrove cover** and **carbon stock** in Indian forests.

Key Highlights of ISFR 2023
- **Forest and Tree Cover**:
  1. Total forest and tree cover: **8,27,356.95 km²** (25.17% of India's **Geographical Area (GA)**).
  2. Forest cover: **7,15,342.61 km²** (21.76%).
  3. Tree cover: **1,12,014.34 km²** (3.41%).
  4. **Scrub** and **Non-Forest** land areas account for 1.33% and 73.50%, respectively.
- **Increase in Forest and Tree Cover**:

5. Total increase: **1,445.81 km²**, with the **forest cover** rising by **156.41 km²**.
6. **Top Contributors to Increase**:
   1. Chhattisgarh: **684 km²**,
   2. Uttar Pradesh and Odisha: **559 km²** each.
- **States with Maximum Forest Cover**:
  7. **Madhya Pradesh**: 77,073 km²,
  8. **Arunachal Pradesh**: 65,882 km²,
  9. **Chhattisgarh**: 55,812 km².
- **Top States with High Forest Cover to GA**:
  10. **Lakshadweep**: 91.33%,
  11. **Mizoram**: 85.34%,
  12. **Andaman & Nicobar Islands**: 81.62%.
- **Forest Carbon Stock**:
  13. Total stock: **7,285.5 million tonnes**, with an increase of **81.5 million tonnes** from 2021.
  14. Leading states in carbon stock: **Arunachal Pradesh** (1,021 Mt), **Madhya Pradesh** (608 Mt) and **Chhattisgarh** (505 Mt).
- **Mangrove Cover**:
  15. Total mangrove cover: **4,991.68 km²** (0.15% of GA), showing a slight decrease of **7.43 km²**.
  16. Increase in mangrove cover in **Andhra Pradesh** and **Maharashtra**.
- **Forest Fires**:

17. The **top states** experiencing forest fires in the 2023-24 season are **Uttarakhand**, **Odisha** and **Chhattisgarh**.

This report is crucial for understanding **forest management, biodiversity conservation** and **carbon sequestration** in India, while also highlighting areas for improvement in forest fire prevention and mangrove conservation.

Project VISTAAR
Context
- The Indian Institute of Technology Madras (IIT Madras) has partnered with the Ministry of Agriculture and Farmers Welfare, Government of India, to launch Project VISTAAR (Virtually Integrated System to Access Agricultural Resources).

Details
- **Project VISTAAR** is a joint initiative between the **Indian Institute of Technology Madras (IIT Madras)** and the **Ministry of Agriculture and Farmers Welfare**, aiming to enhance the agricultural extension system's effectiveness through **digitalisation**.
- The project seeks to empower **farmers** and **agriculture stakeholders** by integrating innovative technologies, providing **market information**, **advisory services** and tools that improve **productivity**, **sustainability** and **resilience**. It also connects farmers to over **12,000 agriculture-related start-ups**, enhancing access to technological solutions and services.

GENERAL SCIENCE [STATIC GK]

- **Smallest Bone in the Human Body**: Stapes (in the ear).
- **Cause of Sickle Cell Anemia**: Mutation in the hemoglobin gene.
- **Enzyme Responsible for Breaking Down Starch**: Amylase.
- **Main Source of Oxygen in Earth's Atmosphere**: Phytoplankton.
- **Part of the Brain Responsible for Memory**: Hippocampus.
- **Largest Organ in the Human Body**: Skin.
- **Factor Responsible for the Darkening of Skin**: Melanin.
- **Mode of Reproduction in Fungi**: Spore formation.
- **Type of Muscle Tissue Found in the Walls of Blood Vessels**: Smooth muscle.
- **Primary Function of the Golgi Apparatus**: Protein modification and packaging.
- **Substance that Makes Up the Cell Wall of Fungi**: Chitin.
- **Region of the Brain Responsible for Balance and Coordination**: Cerebellum.
- **Most Electronegative Element**: Fluorine.
- **Most Abundant Element in the Earth's Crust**: Oxygen.
- **Element with the Highest Atomic Number in the Periodic Table**: Oganesson (Og).
- **Most Reactive Alkali Metal**: Cesium (Cs).
- **Element Used in Filament of Light Bulbs**: Tungsten (W).

- **Most Abundant Noble Gas in the Earth's Atmosphere**: Argon.
- **Gas Used in Refrigeration**: Ammonia (NH_3) or Freon.
- **Chemical in Smoke Detectors**: Americium-241 (radioactive isotope).
- **Substance Used to Remove Lead Contaminants from Water**: Activated carbon.
- **Substance Used in the Extraction of Gold**: Cyanide (NaCN).
- **The gas produced when an acid reacts with metal**: Hydrogen gas (H_2).
- **The element present in the highest amount in the human body**: Oxygen.
- **The component responsible for the red color in tomatoes**: Lycopene.
- **Common solvent used in perfumes**: Ethanol.
- **The chemical in bananas that turns brown**: Phenolic compounds (oxidation).
- When light passes through a narrow slit, the angular width of the central diffraction maximum is proportional to: The wavelength of light and inversely proportional to the slit width.
- The potential energy of an object in a gravitational field depends on: The mass of the object, the gravitational acceleration and the height of the object above the reference point.
- In the case of total internal reflection, the angle of incidence must be: Greater than the critical angle.

- The escape velocity for a body to leave the Earth's surface depends on: The mass and radius of the Earth.
- The angular momentum of a particle moving in a circular path is conserved when: There is no external torque acting on the system.
- The color of an object is due to: The wavelength of light it reflects.
- The pressure inside a soap bubble is higher than outside due to: Surface tension.
- The reason why a bicycle's tires become harder to pump in winter is: The air inside contracts as the temperature decreases, reducing the pressure.
- The reason an airplane's wings are designed with a curved shape is: To create a difference in air pressure above and below the wings, providing lift.
- The reason we use mirrors in telescopes is to: Reflect light and focus it onto a point, as mirrors don't absorb light like lenses do.
- Reductional division in meiosis ensures gametes have half the chromosome number, preserving genetic stability.
- **Basophils** release histamine during allergic reactions and help in inflammation.
- **Fibrinogen** is a plasma protein that is converted into fibrin during blood clotting, forming the clot's structure.
- **Lipase** in pancreatic juice breaks down fats into fatty acids and glycerol for absorption.

- **Wi-Fi mesh networks** use multiple access points to extend coverage and reduce dead zones in large spaces.
- **Trichoderma harzianum** is used as a biocontrol agent to protect plants from pathogens.
- **Albumin**, a plasma protein, helps maintain osmotic pressure and transport hormones and drugs.
- **Spleen** serves as a reservoir for platelets and recycles iron from hemoglobin of aged red blood cells.
- The **11th and 12th ribs** are called **floating ribs** because they are not attached to the sternum.
- **Ionizing radiation** carries enough energy to remove tightly bound electrons, forming ions, while **non-ionizing radiation** lacks sufficient energy to ionize atoms.
- Examples of **ionizing radiation** include X-rays, gamma rays and high-energy particles like alpha and beta rays.
- **Non-ionizing radiation** includes radio waves, microwaves, visible light and infrared radiation, which mainly cause heating effects.
- **Ionizing radiation** damages DNA directly, leading to mutations and potentially cancer, while **non-ionizing radiation** generally causes superficial tissue heating.
- **UV-C radiation** is a high-energy non-ionizing radiation but can cause DNA damage.

Key Differences

Metallic minerals	Non-Metallic minerals
Minerals containing metals are called Metallic minerals.	Minerals which do not contain metals are called Non-Metallic minerals.
These minerals are malleable and ductile.	Non-metallic minerals are non-malleable and non-ductile.
These minerals are generally associated with igneous and metamorphic rocks.	These minerals are associated with sedimentary rocks.
Metallic minerals show lusture.	Non-metallic minerals do not show lusture.
Iron-one, Manganese, Copper, Tin etc. are its examples.	Gypsum, potash, Salt etc. are its examples.

DEFENCE & SECURITY

Nag Mk-2 Anti-Tank Missile

Context

- India recently conducted successful field trials of the **Nag Mk-2** missile at the Pokhran Field Range, Rajasthan.

Key Highlights

- **Type**: Indigenously developed 3rd generation **fire-and-forget** Anti-Tank Guided Missile.
- **Developer**: Designed by **DRDO** under the **Integrated Guided Missile Development Programme (IGMDP)**.

- **Technology**: Equipped with fire-and-forget precision targeting, requiring minimal operator intervention.
- **Capability**: Can neutralize modern armoured vehicles with **explosive reactive armour (ERA)**.
- **Platform**: Integrated with the **Nag Missile Carrier (NAMICA)** for enhanced battlefield mobility.
- **Range**:**7-10 km**, an upgrade from the 4-km range of Nag Mk-1.

India has joined the Eurodrone
Context
- India has joined the **Eurodrone** (Medium Altitude Long Endurance Remotely Piloted Aircraft System - MALE RPAS) program, managed by the **Organisation for Joint Armament Cooperation (OCCAR)** and led by **Airbus Defence and Space**.

Details
- The initiative aims to reduce Europe's dependence on U.S. and Israeli drones, strengthening defense ties between India and Europe.

Eurodrone Features:
- **Max Payload:** 2.3 tonnes
- **Endurance:** Up to 40 hours
- **Motor Configuration:** Dual-motor
- **Operational Environment:** Harsh weather
- **Established:** 2022
- **Service Entry:** 2030
- **Applications:** Intelligence, Surveillance, Maritime Surveillance, Anti-Surface Warfare, Early Warning
- **Participating Countries:** Germany, France, Italy, Spain
- **Purpose:** Reduce reliance on U.S. and Israeli drones like **Reaper** and **Heron**.

Strategic Importance for India:
- Strengthens defense ties with Europe.
- Involvement in **C-295 production**, **Rafale M** and**Scorpene-class submarines**.
- Aligns with shared defense objectives.

Organisation for Joint Armament Cooperation (OCCAR)
It is a European intergovernmental organisation that facilitates and manages collaborative armament programmes through their lifecycle between the governments of Belgium, France, Germany, Italy, Spain and the United Kingdom.

- **Established:** November 12, 1996
- **Members:** Belgium, France, Germany, Italy, Spain, UK
- **Non-Members:** EU, NATO countries, Australia
- **Headed by:** Joachim Sucker (since February 2023)

Operation Sard Hawa
Context
- The **BSF** has heightened vigilance at the **Jaisalmer-Pakistan border** to prevent infiltration during winter fog. The operation, called **Operation Sard Hawa**, started on **January 22**.

Details of Operation Sard Hawa
- **Patrolling**: Officers and soldiers are equipped with **modern weapons** and **advanced technology** to see through fog. **Camel patrols** are also increased in tough terrains.
- **Intelligence**: The **BSF intelligence wing** works closely with other agencies to monitor suspicious activity.
- **Personnel**: Soldiers from headquarters are deployed at border posts.

Objectives of the Operation
- **Strengthen security** with more **weapons** and **manpower**.
- **Increase soldier presence** along the border.
- **Boost surveillance** and **intelligence systems**.
- **Dominate the border** day and night.

'Sanjay', a Battlefield Surveillance System (BSS)
Context
- Defence Minister Rajnath Singh flagged off **'Sanjay'**, a **battlefield surveillance system (BSS)** to be inducted into the **Indian Army** by **October 2025**.

Details of Sanjay System
- **Automated Surveillance**: **Sanjay** integrates data from ground and aerial sensors, processes it for accuracy and creates a **real-time common surveillance picture** over secure networks.
- **Induction Plan**: The system will be rolled out in **three phases** between **March and October 2025** across Army brigades, divisions and corps.
- **Enhanced Battlefield Transparency**: It will provide inputs to **Command & Army Headquarters**, improving decision-making and overall battlefield clarity.

Key Features and Impact
- **State-of-the-art Technology**: Equipped with advanced **sensors** and **analytics**, the system will improve intelligence, **surveillance** and **reconnaissance** capabilities.
- **Network-Centric Operations**: It supports both **conventional** and **sub-conventional operations** in a **data-driven** environment, enabling commanders to react swiftly.

- **Indigenous Development**: Developed by **Indian Army** and **Bharat Electronics Limited (BEL)**, it aligns with India's push for **self-reliance** under **Aatmanirbharta**.

Significance

- **Force Multiplier**: The system enhances intelligence and **prevents intrusions**, becoming a vital asset for national security.
- **Operational Efficiency**: The centralized application provides a **holistic view** of the battlefield, aiding faster decisions and improving military effectiveness.

Fourth edition of the Multinational Exercise LA PEROUSE

Context

- The **Indian Navy** is participating in the **fourth edition of the Multinational Exercise LA PEROUSE**, aboard the indigenously designed and built **guided missile destroyer INS Mumbai**.

Details

- The exercise involves various maritime partners, including the **Royal Australian Navy**, **French Navy**, **Royal Navy**, **United States Navy**, **Indonesian Navy**, **Royal Malaysian Navy**, **Republic of Singapore Navy** and **Royal Canadian Navy**.

Objective of the Exercise

- **Maritime Situational Awareness**: The exercise focuses on enhancing cooperation in **maritime surveillance**, **maritime interdiction operations** and **air operations**.
- **Tactical Interoperability**: It aims to improve **planning**, **coordination** and **information sharing** among navies for greater **tactical interoperability**.

Key Activities

- **Multi-Domain Exercises**: The exercise includes **surface warfare**, **anti-air warfare**, **air-defense** and **cross-deck landings**.
- **Tactical Maneuvers**: Operations such as **Visit, Board, Search and Seizure (VBSS)** and other constabulary missions will be conducted.

Strategic Significance

- **Synergy and Coordination**: The participation of the **Indian Navy** demonstrates **high levels of synergy, coordination** and **interoperability** between like-minded navies.
- **Commitment to Rules-Based Order**: It highlights the navies' commitment to a **rules-based international order** in the maritime domain.

India's Vision: SAGAR

- **Security and Growth for All in the Region (SAGAR)**: The exercise aligns with India's vision to enhance **maritime cooperation** and promote a **secure Indo-Pacific Region**.

Exercise Devil Strike

Context

- The **Indian Armed Forces** conducted **Exercise Devil Strike** from **January 16 to 19**, involving **elite airborne soldiers** from the **Indian Army** and the **Indian Air Force**.

Details

- This joint exercise focuses on validating critical drills and improving operational readiness in a challenging environment.

Key Objectives of the Exercise

- **Complex Airborne Operations**: The exercise will involve **troop and equipment insertion** in hostile terrain, testing airborne forces' capabilities.
- **Logistic Sustainment**: The exercise will focus on refining **logistic sustainment strategies** to ensure troops remain well-equipped and operational under challenging conditions.

Technological Integration

- **Advanced Equipment**: State-of-the-art equipment and technologies will be used to facilitate highly accurate and efficient delivery of airborne forces to remote locations.

INS Utkarsh

Context

- **Larsen & Toubro (L&T)** has launched the **second multi-purpose vessel (MPV)**, **INS Utkarsh**, for the **Indian Navy** at its **Kattupalli Shipyard** near **Chennai**. This launch follows the debut of **INS Samarthak**, which was launched just three months earlier.

Key Features of the MPVs

- **Versatile Roles**: MPVs like INS Utkarsh are highly specialized vessels with multiple roles, including:
  o **Trial Platforms** for developing next-generation weapons and sensors.
  o **Maritime Surveillance**.
  o **Humanitarian Assistance**.
  o **Combatting Sea Pollution**.
  o **Launch and Recovery** of surface and aerial assets.

India-US Partnership: Co-production of Sonobuoys for the Indian Navy

Context

- India and the US have partnered to **co-produce American sonobuoys** in India for enhancing the **Indian Navy's undersea domain awareness** by 2027.

Sonobuoys are small, expendable underwater acoustic sensors that are used to detect and track submarines. They are used in anti-submarine warfare and underwater acoustic research.

Key Details of the Partnership

- **Joint Production**: The **sonobuoys** will be co-produced by **Ultra Maritime (USA)** and **Bharat Dynamics Limited (BDL)** (India). The initiative is aligned with India's **Make in India** mission and involves **technology transfer** to India, as well as potential integration of Indian suppliers into the global supply chain.
- **Enhanced Interoperability**: The sonobuoys will be manufactured to **US specifications**, ensuring compatibility with aircraft used by the **US**, **Indian** and **allied navies**. These will be identical to those used on **P-8 aircraft** and compatible with platforms like **P-8**, **MH-60R** and **MQ-9B Sea Guardian** aircraft.
- **Production Location**: The final assembly of the sonobuoys will take place in **India**, with **Vishakhapatnam** as a likely location for the production facility.

Strategic and Technological Impact

- **Undersea Domain Awareness**: This collaboration strengthens the India-US defense partnership and aims to enhance India's ability to detect submarines, especially with the growing presence of China in the Indian Ocean. The partnership is also a part of the broader **US-India Initiative on Critical and Emerging Technologies (ICET)**.
- **Regional Cooperation**: The project also reinforces India's growing cooperation with **regional partners** within the **Quad** (Australia, Japan and the US), enhancing maritime security and interoperability through **Malabar naval exercises**.
- **Future Developments**: As part of the strategic expansion, the co-production of sonobuoys will also lead to advancements in technologies suited for the **Indian Ocean's acoustic environment** and **alternative sensor technologies**, like **seabed-embedded sensors**, are also under exploration with Indian start-ups.

Abdali Missile

Context

- Dhaka is set to purchase the Abdali Short Range Ballistic Missiles (SRBMs) aka the Hatf 2 missiles, from Pakistan.

Abdali Missile

- The **Abdali Missile (Hatf 2)** is a **short-range ballistic missile** developed by the **Pakistan Space Research Commission (SUPARCO)**. It is designed for quick response in battlefield scenarios, capable of targeting military assets and critical infrastructure.

Features of Abdali Missile

- **Range**: 180-200 km, making it suitable for regional conflicts and rapid retaliation.
- **Payload**: Likely to carry **high explosive** or **submunitions**.
- **Guidance System**: **Inertial guidance system** for precise targeting.
- **CEP (Circular Error Probable)**: 150 meters, which indicates a relatively high accuracy.
- **Engine**: Powered by a **single-stage solid fuel engine**.
- **Transport**: The missile is road-mobile and transported on a **Transporter-Erector-Launcher (TEL)** vehicle, which allows it to be quickly deployed and launched.
- **Destructive Power**: The relatively **small warhead** makes it ideal for targeting military bases, airfields and critical infrastructure.

Exercise Surya Kiran

Context

- The 18th edition of the Battalion-Level Joint Military Exercise, SURYA KIRAN, is set to be conducted between the Indian Army and the Nepalese Army.

Exercise Surya Kiran

- **Exercise Surya Kiran** is an **annual joint military exercise** between the **Indian Army** and the **Nepalese Army**. It is conducted alternately in both countries and aims to enhance **interoperability** in **jungle warfare**, **mountain counter-terrorism operations** and **humanitarian disaster relief** under the **United Nations Charter**.

Key Objectives:

- **Operational Capabilities**: Both armies work together through **war games** to improve their skills and strengthen their coordination in challenging scenarios.
- **Exchange of Ideas**: The exercise provides a platform for soldiers to exchange **ideas**, **best**

practices and improve mutual understanding of each other's operational procedures.

- **Humanitarian Assistance**: Focus on enhancing joint efforts in providing **disaster relief** and **humanitarian assistance** in times of crisis.

- **Location**: **Saljhandi**, Nepal.
- **Indian Army Representation**: A **battalion from the 11th Gorkha Rifles**.
- **Nepalese Army Representation**: The **Srijung Battalion**.

ECONOMICS

Cheq Wisor

Context
- CheQ introduces CheQ Wisor, an AI-powered tool aimed at helping individuals manage their credit cards efficiently.

What is CheQ Wisor?
- **CheQ Wisor** is India's first **AI-powered credit card expert**, developed by **CheQ**, a leading **credit management platform**. The tool is designed to help users efficiently manage their credit cards by providing **personalized insights**, **real-time assistance** and **comprehensive analysis** of credit usage.

Key Features:
- **Spends Insights**: Provides users with a detailed summary of their spending patterns in a user-friendly dashboard.
- **Unified Rewards View**: Allows users to access and analyze all their credit card rewards in one convenient location.
- **Personalized Tips**: Offers tailored recommendations to help users optimize their rewards and minimize costs based on their individual spending habits.

Target Audience:
- CheQ Wisor is specifically designed for users, particularly those aged **25-45**, helping them make smarter financial decisions and maximize the value of their credit cards with ease.

Consumer Protection Act, 2019 and Central Consumer Protection Authority (CCPA)

Context
- The Central Consumer Protection Authority (CCPA) issued notices to Ola and Uber for allegedly charging different rates based on mobile phone operating systems.

Central Consumer Protection Authority (CCPA)
- The **Consumer Protection Act, 2019** ensures consumer rights against unfair trade practices, defective goods and misleading advertisements. It replaced the **Consumer Protection Act, 1986** and outlines **6 key rights** for consumers, including:
  - **Right to Protection** against hazardous goods/services
  - **Right to Information** on quality, price and standards
  - **Right to Choice** at competitive prices
  - **Right to be Heard**
  - **Right to Seek Redressal** against unfair practices
  - **Right to Consumer Awareness**

Central Consumer Protection Authority (CCPA)
- The **Central Consumer Protection Authority (CCPA)**, established under **Section 10(1)** of the Act, enforces these rights. It regulates violations, such as **unfair trade practices** and **misleading advertisements** and has an **investigation wing** for inquiry and action.

Key functions of the CCPA include:
- Investigating consumer rights violations
- Ordering **recall of goods** or **withdrawal of hazardous services**
- Imposing penalties up to **Rs 10 lakh** and imprisonment for misleading ads
- Issuing **safety notices** to consumers

The **Consumer Disputes Redressal Commissions (CDRCs)** at the **District**, **State** and **National** levels address complaints based on the value of goods/services. Appeals from the **State CDRC** are heard by the **National CDRC**, with the **Supreme Court** being the final appellate authority.

The CCPA, a statutory body, consists of a **Chief Commissioner** and two **Commissioners** for goods and services, appointed by the **Central Government**.
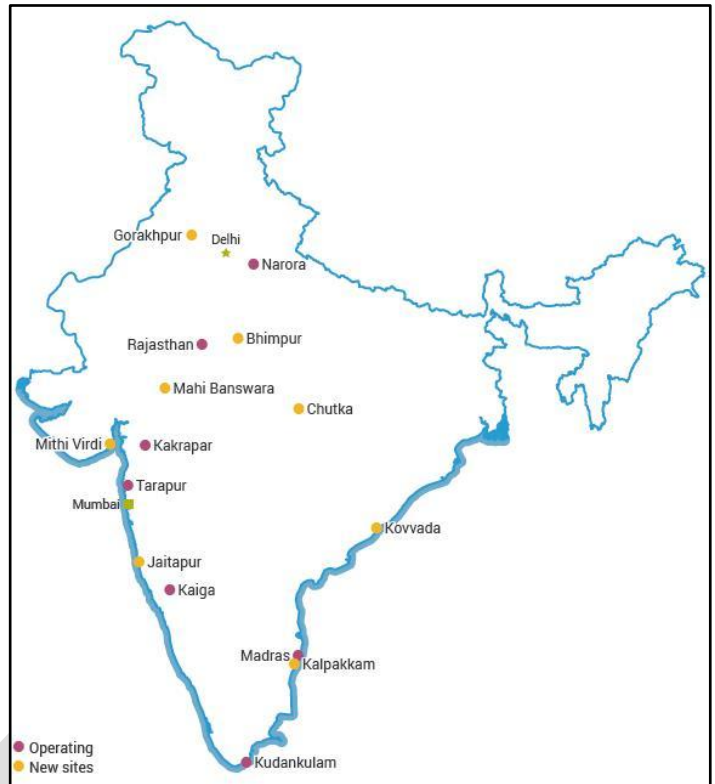
India's Nuclear Power Growth

Context

- India's **nuclear power generation capacity** has nearly **doubled** in the last decade, increasing from **4,780 MW** in **2014** to **8,180 MW** in **2024**. This was shared by Union Minister of State for Science and Technology.

India's Thorium Reserves

- India holds **21% of the global thorium reserves**, with indigenous projects like **"Bhavani"** under development to harness this resource, reducing dependence on imported uranium.

India's Nuclear Energy

- **Homi Bhabha**, established the **Tata Institute of Fundamental Research (TIFR)** in 1945 to focus on nuclear science.
- Following independence, Prime Minister **Jawaharlal Nehru** created the **Atomic Energy Commission (AEC)** in 1948.
- In the late 1960s, India began developing its own **Pressurized Heavy Water Reactor (PHWR)** for **self-reliance** in **nuclear energy**. The **Kakrapar Atomic Power Station 3 & 4** (2 x 700 MW) is the largest indigenous **PHWR**, featuring **advanced safety measures** that meet global standards.

- As of November 2024, **India has 24 nuclear reactors in operation in 8 nuclear power plants, with a total installed capacity of 8,180 MW.**
- Nuclear power <u>**produced a total of 48 TWh in 2023, contributing around 3% of total power generation in India.**</u>
- India's **PFBR** at **Kalpakkam** marks a key step in its three-stage nuclear program, positioning India alongside **Russia** in operating **Fast Breeder Reactors (FBRs)**.
- **Bharat Small Reactors (BSRs)** will drive India's future energy mix, targeting **40-50 units** to replace thermal plants.
- India plans to expand its nuclear capacity from **8,180 MW** to **100 GW** by **2047**, supported by initiatives like **BSRs** and **FBRs**.

Confederation of Indian Industry (CII)

Context

- Confederation of Indian Industry (CII) establishes a Strategy Cell in Coimbatore to empower industries, guiding them towards global competitiveness and sustainable growth.

Confederation of Indian Industry (CII)

- The **Confederation of Indian Industry (CII)**, founded in **1895** and headquartered in **New Delhi**, is a non-governmental trade association and advocacy group.
- CII engages with **business**, **political**, **academic** and societal leaders to influence **global**, **regional** and **industry agendas**. It operates as a **membership-based organisation**.

India's Foreign Exchange Reserves

Context

- India's **foreign exchange reserves** dropped by **$17.8 billion** to **$657.89 billion** in the week of November 15, marking the sharpest weekly fall on record.

Details

- This decline was triggered by a stronger **US dollar** following the **US election verdict** and possible **RBI dollar sales** to stabilize the rupee. The **rupee** hit a record low of **84.5013** and continues to face pressure from **foreign outflows** and election-related concerns.
- **Key changes included:**
  o **Gold reserves** decreased by **$2.068 billion** to **$65.746 billion**.

o **Special Drawing Rights (SDRs)** fell by **$94 million** to **$18.064 billion**.

o **RBI's reserve position with the IMF** dropped by **$51 million** to **$4.247 billion**.

What are Foreign Exchange Reserves?

- **Foreign exchange reserves (forex reserves)** are assets held by a central bank or monetary authority to manage a country's liabilities, such as currency issued and deposits by financial institutions. These reserves typically include:
  o **Reserve currencies**: Primarily the **US dollar**, **Euro**, **British pound** and **Japanese yen**.
  o **Foreign assets**: These include **foreign bank notes**, **deposits**, **treasury bills** and **government securities** (both short-term and long-term).
  o **Gold reserves**.
  o **Special Drawing Rights (SDRs)** and **IMF reserve positions**.

In essence, forex reserves ensure a country can meet its financial obligations and provides a cushion during economic crises.

Importance of Forex Reserves

- **Crisis Management**: Forex reserves act as a safeguard during periods of **economic contraction**.
- **Import Coverage**: They are enough to cover the **import bill** for a year.
- **Currency Stability**: Help in strengthening the **rupee** against the dollar.
- **Market Confidence**: Provide confidence that the country can meet external obligations and maintain currency stability.
- **External Debt Management**: Aid in meeting **foreign exchange needs** and servicing external debt.
- **Emergency Funds**: Reserve for national disasters or emergencies.

What does the RBI do with Forex Reserves?

- The **Reserve Bank of India (RBI)** manages and uses forex reserves within a policy framework set with the government:
  o **Foreign Currency Management**: It **buys or sells** dollars to manage the value of the rupee.

o **Sterilization**: When the RBI buys dollars, it injects rupees into the economy. This excess liquidity is controlled through bonds and **Liquidity Adjustment Facility (LAF)** operations.

o **Remittance Support**: Allocates dollars for schemes like the **Liberalised Remittance Scheme (LRS)**, allowing individuals to remit up to **$250,000** annually.

In short, RBI's management of forex reserves ensures currency stability and supports India's external financial obligations.

Department for Promotion of Industry and Internal Trade (DPIIT)

Context

- DPIIT has recently **approved** the ₹10,000-crore acquisition of **Reliance Capital** by **IndusInd International Holdings (IIHL)**

Department for Promotion of Industry and Internal Trade (DPIIT)

- The **Department for Promotion of Industry and Internal Trade (DPIIT)** is a central government department under the **Ministry of Commerce and Industry**, responsible for promoting and facilitating the growth of India's industrial sector.
- It formulates and implements policies aimed at boosting industrial development, facilitating **foreign direct investment (FDI)** and fostering **internal trade**.

Key Initiatives

- **Bhaskar**: An initiative aimed at fostering a dynamic startup ecosystem, connecting entrepreneurs, government bodies, investors and academic institutions on a unified platform.

DPIIT's Role in Industry and Trade

- **Promotion of Industrial Cooperation**: It coordinates with organizations like **CII (Confederation of Indian Industry)** and **FICCI (Federation of Indian Chambers of Commerce and Industry)** to promote industrial cooperation.
- **Foreign Trade**: DPIIT also contributes to the development of policies to boost **internal trade** and align them with global trade practices.

SPORTS

ICC Men's Test Cricketer of the Year 2024

Title

Context

- Jasprit Bumrah won ICC Men's Test Cricketer of the Year 2024 title.

Key Highlights of Bumrah's Performance

Overall Stats

- **Wickets**: 71 in 13 matches
- **Average**: 14.92 (lowest among bowlers with 70+ wickets in a calendar year)
- **Strike Rate**: 30.1
- **Economy Rate**: 2.96
- **Overs Bowled**: 357
- **Milestone**: Only bowler in Test history with 200+ dismissals at an average below 20 (19.4).

Series Contributions

- **South Africa (Cape Town)**: 8 wickets in two innings; pivotal in an eight-wicket win.
- **England (Home Series)**: 19 wickets in five matches, leading to a dominant 4-1 series victory.
- **Australia (Border-Gavaskar Trophy)**: 32 wickets in five matches; earned Player of the Series and achieved the 200 Test wickets milestone.

Memorable Performances

- **Perth Test (Australia)**: Match figures of 5/30 and 3/42, leading India to a historic 295-run win at Perth.
- Stepped up as captain in Rohit Sharma's absence, showcasing exceptional leadership.

ICC Women's ODI Cricketer of the Year 2024

Context

- Smriti Mandhana has earned the title of ICC Women's ODI Cricketer of the Year 2024.

Key Highlights: Overview/Stats

- **Runs Scored**: 747 runs in 13 matches, becoming the **leading run-scorer in WODIs** for 2024.
- **Batting Average**: 57.86, reflecting her consistency in the format.
- **Strike Rate**: 95.15, showcasing her balanced aggression at the crease.
- **Centuries Scored**: Four, a record for women's ODIs in a single year.
- **Boundary Count**: 95 fours and 6 sixes, highlighting her ability to dominate bowlers.

Notable Performances

- **Against South Africa**: Back-to-back centuries led India to a **3-0 series win** in June.
- **Against New Zealand**: A match-winning century in the **series decider** in October.
- **Against Australia**: A valiant **105 at the WACA, Perth**, against the world's top-ranked team in December.

ICC Women's Championship

- Mandhana finished as the **highest run-scorer** in the championship with **1,358 runs in 24 matches**.

ICC Men's ODI Cricketer of The Year

Context

- Azmatullah Omarzai, Afghanistan's star all-rounder, excelled in 2024 with impactful right-arm pace and versatile batting, earning the title of **ICC Men's ODI Cricketer of the Year**.

Azmatullah Omarzai's Stellar ODI Record in 2024

- **Runs and Wickets**: 417 runs and 17 wickets in 14 matches
- **Batting Average**: 52.12
- **Bowling Average**: 20.47

Key Performances in 2024

Unbeaten 149 Against Sri Lanka:

- Scored 149* in Afghanistan's loss to Sri Lanka in the first ODI of the year.
- Played a remarkable rearguard effort despite the defeat.

86 Against South Africa:

- Scored 86* from just 50 balls in the second ODI.
- His rapid scoring helped Afghanistan secure a series win.

International Open Chess Tournament Title in Malaysia

Context:

- Indian Grandmaster Iniyan Panneerselvam dominated the 9th Johor International Open Chess Tournament in Malaysia.

Details

- **Champion**: Iniyan Panneerselvam (22) from Erode, Tamil Nadu
- **Total Points**: 8.5/9, 1.5 points ahead of the nearest rival
- **Tournament**: 84 participants from 8 countries, 24 titled players
- **Key Victories**: Defeated 4 International Masters and 1 Grandmaster, including Indonesian IM Nayaka Budhidharma and Vietnamese GM Nguyen Van Huy.

Final Standings:

- 2nd: Indian IM VS Raahul
- 3rd: Chinese IM Li Bo
- **Additional Achievement**: Won the Chennai Open in January, securing 15 rating points.

ATP 500 Tournaments

Context:

- **World number one and reigning Australian Open champion Jannik Sinner** has withdrawn from the upcoming ATP 500 tennis tournament in Rotterdam.

Details
- The ATP 500 tournaments are a key tier in men's tennis, ranking just below the four Grand Slam events, ATP Finals and ATP Masters 1000.
- **Level**: Fourth-highest tier of men's tennis.**Points**: 500 ranking points for singles champions
- **Tournaments**: 16 tournaments as of 2025
- **Participation**: Leading players must compete in at least four ATP 500 events, including one after the US Open; failure to do so results in a "zero" score for each missing event.

Records:
- **Most Singles Titles**: Roger Federer (24)
- **Most Doubles Titles**: Daniel Nestor (20)

ICC Awards 2024 Winners
Context:
- The ICC Awards 2024 revealed the winners of several prestigious categories, recognizing the standout performances in international cricket across men's and women's cricket.

Details
ICC Emerging Men's Cricketer of the Year
- **Winner**: Kamindu Mendis (Sri Lanka)
- **Achievement**: Fastest player to reach 1,000 Test runs in 75 years
- **Notable Performance**: Scored 1,049 runs in 9 Tests, including twin centuries against Bangladesh

ICC Emerging Women's Cricketer of the Year
- **Winner**: AnnerieDercksen (South Africa)
- **Achievement**: Key player in South Africa's T20 World Cup final run
- **Notable Performance**: 161 runs at an average of 32.20 and 5 wickets

ICC Men's Associate Cricketer of the Year
- **Winner**: Gerhard Erasmus (Namibia)
- **Achievement**: Stellar year with consistent performances in ODI and T20I
- **Notable Performance**: Career-best 5-28 against Nepal, four half-centuries in ICC tournaments

ICC Women's Associate Cricketer of the Year
- **Winner**: Esha Oza (UAE)
- **Achievement**: Consistent all-round performances for UAE
- **Notable Performance**: 711 runs in the year, including an unbeaten 114 against Oman

ICC Umpire of the Year
- **Winner**: Richard Illingworth
- **Achievement**: Awarded for consistent decision-making and strong relationships with teams
- **Notable Performance**: Third consecutive win, known for his exemplary officiating

ICC T20I Cricketer of the Year
Context:
- As part of the ICC Awards 2024, Arshdeep Singh was honored as the **ICC Men's T20I Cricketer of the Year**, while Amelia Kerr claimed the **ICC Women's T20I Cricketer of the Year**.

ICC Men's T20I Cricketer of the Year
- **Winner**: Arshdeep Singh (India)
- **Achievement**: Stellar year with a standout performance in the ICC Men's T20 World Cup 2024
- **Notable Performance**: Took 36 wickets in 18 T20Is with an average of 15.31 and an economy rate of 7.49
- **Impact**: Dominated with the ball, particularly in powerplays and death overs, contributing significantly to India's T20 World Cup triumph

ICC Women's T20I Cricketer of the Year
- **Winner**: Amelia Kerr (New Zealand)
- **Achievement**: Consistent all-round performances throughout the year
- **Notable Performance**: Integral in New Zealand's success in T20I cricket, contributing with both bat and ball

Jay Saha inducted into MCC World Cricket connects Advisory Board
Context
- Former Indian cricket captain **Sourav Ganguly** and **Jay Shah**, the former secretary of the Board of Control for Cricket in India (**BCCI**), are now members of the newly formed **Marylebone Cricket Club (MCC) World Cricket Connects Advisory Board**.

Marylebone Cricket Club (MCC) World Cricket Board
- The **MCC World Cricket Connects Advisory Board** replaces the previous **World Cricket Committee**.
- **Ganguly** and **Shah** are now key members of this newly formed council.
- **Kumar Sangakkara**, former **MCC president**, leads the 13-member board.

Replacing the World Cricket Committee
- The **World Cricket Committee** had significant influence despite not being formally empowered.
- The committee-initiated changes like the **Decision Review System (DRS)**, **World Test Championship (WTC)**, **Day-Night Pink Ball Tests** and **Slow Over Rate Time Out**.
- The new advisory board continues this legacy, guiding cricket's developments.

Regular Meetings and Annual Gatherings

- The board will meet regularly and hold an annual gathering to discuss improvements and ideas for cricket's growth. Their goal is to contribute to the sport's global evolution.

Khelo India Winter Games 2025

Context:

- The **Khelo India Winter Games 2025** concluded its first phase in Ladakh.

Key Highlights:

- **Ladakh's Success**: In their second year as hosts, Ladakh secured **two gold medals** in the first phase of KIWG 2025.
- **Ice Hockey Finals**: The Indian Army defeated **ITBP 2-1** in a thrilling men's ice hockey final to retain their title.
- **Women's Ice Hockey**: **Ladakh** dominated in women's ice hockey, avenging last year's defeat by ITBP with a 4-0 victory.
- **Skating Success**: **Tamil Nadu** made a mark in skating, winning **three golds**, including a win in the 500m women's long track event.

About Khelo India Winter Games:

- The **Khelo India Winter Games**, part of the **Khelo India Scheme**, provide a platform for young athletes to showcase their skills.
- The games are organized by the **Ministry of Youth Affairs & Sports (MYAS)** and aim to promote regional talent, culture and tourism through sports.
- The fifth edition of KIWG 2025 is being hosted in Ladakh and **J&K**, covering ice and snow disciplines.

India to host FIDE Chess World Cup 2025

Context

- India will host the **FIDE Chess World Cup 2025** from **October 31 to November 27, 2025**.

FIDE World Cup 2005–Present:

- Since 2005, the **FIDE World Cup** has become a key event in the **World Chess Championship cycle**, held biennially. The **128-player knockout** tournament features **7 single-elimination rounds**, with **2 games** per match. If needed, **rapid** and **blitz tiebreakers** are used. The final typically consists of **4 games**, with tiebreaks following if necessary.
- **Qualification for Candidates Tournament:** Each World Cup qualifies between one to three players for the **Candidates Tournament**, which determines the challenger for the **World Chess Championship**.

India Open Super 750 Badminton Tournament

Context

- **Viktor Axelsen**, the Danish badminton star, clinched the men's singles title at the **India Open Super 750** tournament in New Delhi.

India Open

- The **India Open** began in **2008** as an integral event in the **Badminton World Federation (BWF) World Tour**.
- The tournament was initially classified as a **Grand Prix Gold** event.
- **Upgrade to Superseries**: In **2011**, the **India Open** was upgraded to a **BWF Superseries** tournament.
- In **2023**, the **India Open** was further upgraded to a **BWF World Tour Super 750** event, reflecting its increasing importance in the global badminton arena.

Karnataka won the Vijay Hazare Trophy (VHT) 2024-25 Final

Context

- Karnataka won the **Vijay Hazare Trophy (VHT) 2024-25 final** by defeating Vidarbha by **36 runs** at **Kotambi Stadium**, **Vadodara**.

Details

- Karnataka finished with a total of 348/6 in 50 overs, setting a challenging target for Vidarbha.
- **Ravichandran Smaran**: Scored a blistering **101 runs off 92 balls**, marking his second **List A** century.
- This is **Karnataka's fifth Vijay Hazare Trophy title** after wins in **2013-14**, **2014-15**, **2017-18** and **2019-20**.

> The **Vijay Hazare Trophy** (officially known as the **IDFC First Bank Vijay Hazare Trophy** for sponsorship reasons) is an annual **List A cricket** competition organized by the **Board of Control for Cricket in India (BCCI)**. Initially, the tournament was played at the zonal level, but it was expanded to a **national competition** in the **2002-03** season. Teams from **Indian states** and **union territories** participate, with a format of **50 overs per side.**

Djokovic Breaks Grand Slam matches record at Australian Open

Context

- **Novak Djokovic** surpassed **Roger Federer's** record for the most-Grand Slam matches played, reaching **430 matches**. He defeated **Jaime Faria** 6-

1, 6-7 (4), 6-3, 6-2 in the second round, improving his career Grand Slam record to **379-51** with a **.881 winning percentage**.

Key Achievements

- **24 Grand Slam Titles**: Most by any male player, ahead of **Nadal's 22** and **Federer's 20**.
- **37 Slam Finals**: Djokovic has reached **6 more** finals than Federer's previous record.
- **25th Slam Title**: A win at the Australian Open would mark his **25th Grand Slam** title, setting a new record.

India's Fastest Women's ODI Century

Context

- Indian Women's cricket team captain **Smriti Mandhana** scored a record-breaking **century** in the third **Women's One Day International** (ODI) against **Ireland**.

Details

- **Smriti Mandhana** scored a **century in 70 balls**, setting a new record for the fastest century by an Indian woman in ODIs.
- This milestone broke the previous record of **87 balls**, set by **Harmanpreet Kaur** against South Africa.
- **Mandhana's 10th ODI century** ties her with **Tammy Beaumont** for the third-most centuries in women's ODIs.
- **Meg Lanning** (15 centuries) and **Suzie Bates** (13 centuries) lead the list.

Notable Statistics:

Fastest hundreds for India Women in ODIs:

- **70** – Smriti Mandhana vs Ireland, Rajkot (2025)
- **87** – Harmanpreet Kaur vs South Africa, Bengaluru (2024)

Highest partnerships for India Women in WODIs:

- **320** – Punam Raut & Deepti Sharma vs Ireland, Potchefstroom (2017)
- **258*** – Mithali Raj & Reshma Gandhi vs Ireland, Milton Keynes (1999)
- **233** – Smriti Mandhana& Pratika Rawal vs Ireland, Rajkot (2025)

Kho Kho World Cup 2025

Context

- The **Kho Kho Federation of India (KKFI)** has officially launched the trophies and mascots for the inaugural **Kho Kho World Cup 2025.**

Event Overview

- **Dates:** January 13-19, 2025. **Venue:** Indira Gandhi Indoor Stadium, New Delhi
- **Participants:** 21 men's teams and 20 women's teams from **24 countries** across six continents
- **Governing Body:** Conducted under the aegis of the **Sports Authority of India (SAI)**

Trophies Unveiled

Men's Trophy (Blue):

- **Symbolism:** Trust, determination and universal appeal
- **Design:** A modern design featuring flowing curves and golden figures

Women's Trophy (Green):

- **Symbolism:** Growth and vitality
- **Design:** Shares similarities with the men's trophy, with **intricate crystal detailing** to highlight precision and excellence

Mascots: Tejas and Tara

- **Tejas:** A blue gazelle representing brilliance and energy
- **Tara:** An orange gazelle symbolizing guidance and aspiration
- **Design Elements:** Both mascots incorporate **traditional Indian motifs**, blending cultural heritage with modern appeal.

APPOINTMENTS

Posts	Details
President of the Institute of Company Secretaries of India (ICSI)	Dhananjay Shukla. Pawan G Chandak is the Vice President. ICSI: Established under the Company Secretaries Act, 1980, ICSI is a statutory body under the Ministry of Corporate Affairs focused on regulating and developing the profession of company secretaries in India.
Chairperson of the Athletes Commission of the Athletics Federation of India (AFI)	Former long-jumper and world bronze medalist**Anju Bobby George. She also serves as the Vice President of the AFI.**
Board of Control for Cricket in India (BCCI) Secretary	Devajit Saikia

BCCI Treasurer	Prabhtej Singh Bhatia
Ireland's Prime Minister	Micheál Martin was elected prime minister for the second time.
47th President of the United States	Donald Trump
President of Venezuela (46th President)	Nicolas Maduro was sworn in for a third six-year term.
US House Speaker	Mike Johnson has been re-Elected as US House Speaker.
Director General (DG) of the Bureau of Civil Aviation Security (BCAS)	Amrit Mohan Prasad, the Director General (DG) of Sashastra Seema Bal (SSB) has been given this additional charge.
India's New Ambassador to Israel	Jitender Pal Singh an Indian Foreign Service (IFS) officer.
Chairman of Bharti AXA Life Insurance	Akhil Gupta, Vice Chairman of Bharti Enterprises, has been appointed as the Chairman of Bharti AXA Life Insurance.
BSF ADG	Senior IPS officer Mahesh Kumar Aggarwal has been appointed ADG of BSF for four years, effective January 19, 2025.
Chief Justice of Bombay High Court	Justice Alok Aradhe appointed Chief Justice of Bombay High Court.
Chief Justice of Delhi High Court	Justice Devendra Kumar Upadhyaya as Chief Justice of Delhi High Court.
Secretary General of Indian Ocean Rim Association	Sanjiv Ranjan appointed Secretary General of Indian Ocean Rim Association (IORA).
CRPF Director General	Gyanendra Pratap Singh, 1991-batch IPS, appointed DG of CRPF.
New Ombudsman of BCCI	Justice Arun Mishra, former Supreme Court judge, appointed Ombudsman and Ethics Officer of BCCI.
Secretary of the Department of Higher Education	Vineet Joshi appointed Secretary, Department of Higher Education, Ministry of Education.
Newest judge of the Supreme Court of India	Justice Krishnan Vinod Chandran sworn in as Supreme Court judge on January 16, 2025; CJI Sanjiv Khanna administered the oath.
Secretary, Department of Revenue.	Tuhin Kanta Pandey
Secretary, DIPAM; additional charge as Secretary, DPE and Ministry of Culture.	Arunish Chawla
AFI President	Asian Games gold medalist and Padma Shri Bahadur Singh Sagoo elected president of Athletics Federation of India (AFI).
ISRO Chief and Space Secretary	Dr. V. Narayanan appointed Secretary, Department of Space and Chairman, ISRO, succeeding S. Somanath.
Director-General of the Directorate General of Civil Aviation (DGCA)	Faiz Ahmed Kidwai, 1996-batch IAS (Madhya Pradesh cadre), appointed DG of Directorate General of Civil Aviation (DGCA).

IMPORTANT DAYS

Date	Important Day/News
1 January	Global Family Day
3 January	DRDO Foundation Day

4 January	World Braille Day
5 January	National Birds Day
6 January	World Day of War Orphans
6 January	Guru Gobind Singh Jayanti
8 January	Earth's Rotation Day
9 January	NRI (Non-Resident Indian) Day or Pravasi Bharatiya Divas
10 January	World Hindi Day
12 January	National Youth Day
13 January	Lohri Festival
14 January	Makar Sankranti
15 January	Indian Army Day
21 January	Tripura, Manipur and Meghalaya Foundation Day
23 January	Netaji Subhas Chandra Bose Jayanti
24 January	National Girl Child Day
24 January	International Day of Education
25 January	National Voters Day
25 January	National Tourism Day
26 January	Republic Day
26 January	International Day of Clean Energy 2025
26 January	International Customs Day
27 January	National Geographic Day
27 January	International Day of Commemoration in Memory of the Victims of the Holocaust 2025
28 January	Birth Anniversary of Lala Lajpat Rai
28 January	K.M. Cariappa Jayanti
29 January	Indian Newspaper Day
30 January	Martyrs Day or Shaheed Diwas
30 January	World Leprosy Day
31 January	International Zebra Day

IMPORTANT PERSONALITIES IN THE NEWS

Personality	Details
Sister Inah Lucas	World's Oldest Living Person
Justin Trudeau	Canadian Prime Minister Justin Trudeau announced his resignation.
Tomiko Itooka	World's Oldest Person, Tomiko Itooka, Dies at 116 Years
Shigemi Fukahori	Shigemi Fukahori, Nagasaki Atomic Bomb survivor dies at 93
P. Jayachandran	Playback singer. Languages Sung in Malayalam, Tamil, Telugu, Kannada, Hindi
Libia Lobo Sardesai	Libia Lobo Sardesai was a key figure in Goa's freedom struggle, co-operating the underground radio *Voice of Freedom* (1955-1961) with her husband and Nicolau Menezes. She announced Goa's liberation on December 19, 1961, using an Indian Air Force plane. Her efforts boosted Goan morale during the movement. After liberation, she became the first Director of Tourism for Goa, Daman and Diu.
M. S. Subbulakshmi	M. S. Subbulakshmi, a renowned Carnatic singer, was the first musician awarded the **Bharat Ratna**. In 1974, she became the first Indian to win the **Ramon Magsaysay Award**. She also made history as the first Indian to perform at the **United Nations** in 1966 on **UN Day**. In 2005, the UN issued stamps to celebrate her birth centenary. She popularized classical and devotional works like **Venkatesa Suprabhatam** and **Bhajagovindam**.
Potti Sriramulu	Potti Sriramulu, honored as **'Amarajeevi'**, played a key role in the creation of **Andhra Pradesh**. Inspired by **Mahatma Gandhi**, he participated in major movements like **Non-Cooperation**, **Salt Satyagraha** and **Quit India**. In 1952, he began a hunger strike for Andhra's formation, dying after 58 days. His sacrifice led to the creation of Andhra

	Pradesh in 1956.
Khwaja Moinuddin Chishti	Ajmer Sharif, the shrine of **Khwaja Moinuddin Chishti**, built by **Humayun** in 1532, is an iconic example of **Indo-Islamic architecture**. It has hosted rulers like **Akbar** and **Aurangzeb**. The **Urs Sharif** marks his death anniversary. Born in **Sijistan (Iran)** in 1141-42 CE, Moinuddin spread the **Chishti order** in India, emphasizing devotion and renouncing materialism. Other key Sufi orders in India include **Suhrawardi**, **Naqshbandi** and **Qadri**. Sufism focuses on spirituality, asceticism and devotion to God.
59th death anniversary of Shri Lal Bahadur Shastri	A key freedom fighter, he led during crises like the **1962 Indo-China war** and **1965 Indo-Pak war** with his iconic slogan "**Jai Jawan Jai Kisan**." Shastri resigned twice as **Railways Minister** for train accidents, showing moral accountability. He died mysteriously on **11th January 1966** after signing the **Tashkent Agreement** and was posthumously awarded the **Bharat Ratna**.
162nd Birth Anniversary of Swami Vivekananda	Vivekananda was a disciple of Ramakrishna Paramhansa and introduced **Vedanta** and **Yoga** to the world. His teachings emphasized **self-realization, selfless service** and **character-building education**. He founded the **Ramakrishna Mission** (1897) and represented **Hinduism** at the **Chicago Parliament of Religions** (1893). His vision of **nationalism** was rooted in **humanism**, **freedom** and **equality**. Vivekananda also founded **Belur Math** (1899), addressed the **London Hindu Association** (1896) and promoted **neo-Vedanta**, blending **spirituality** with **material progress**. He outlined **four paths to moksha**: **Raja-yoga**, **Karma-yoga**, **Jnana-yoga** and **Bhakti-yoga**.
358th Birth Anniversary of Guru Gobind Singh Ji	Guru Gobind Singh Ji (22nd Dec 1666, Patna Sahib) was the 10th Sikh Guru. He founded the **Khalsa** in 1699, introduced the **Five K's**—**Kangha**, **Kesh**, **Kara**, **Kirpan**, **Kachhera**—and established **Panj Pyare**. His sons **Zorwar** and **Fateh Singh** were martyred and **Ajit** and **Jujhar Singh** died in the **Battle of Chamkaur** (1705).
193rd Birth Anniversary of Savitribai Phule	Savitribai Phule (born 3rd Jan 1831, Naigaon, Maharashtra) was a pioneering feminist and social reformer. With her husband, **Jyotirao Phule**, she founded **India's first school for girls** in 1848. Phule established 17 schools, advocating for **women's education** and for **Dalit and lower-caste women**. She fought against **social injustices** like **Sati**, **child marriage** and the **caste system**, opening a well for **untouchables** and founding a center for pregnant rape victims. She also founded the **Mahila Seva Mandal** to raise awareness. A plague warrior, she passed away on 10th March 1897 due to the bubonic plague.

AWARDS

AWARD	DETAILS
US Presidential Medal of Freedom	Lionel Messi, captain of the Argentina men's football team has been honored with the award. The **US Presidential Medal of Freedom**, the **highest civilian honor in the US, recognizes contributions to national interest, world peace, or cultural and humanitarian endeavors. Established in 1945 by President Truman** for WWII contributions, it was expanded in 1963 by President Kennedy. The medal features a white star surrounded by 13 gold stars, symbolizing unity and is suspended on a blue ribbon.
Honorary Citizen Award by Singapore	Singapore awarded the Honorary Citizen Award to Tarun Das -- former CII Director General, for his pivotal role in enhancing Singapore-India relations. His contributions include initiating economic collaborations, the India-Singapore Strategic Dialogue and fostering youth exchanges.
'Anuja'	'Anuja' Nominated for Oscar Anuja, produced by Priyanka Chopra and Guneet Monga, is nominated for Best Live Action Short Film at the 97th Academy Awards. Directed by Adam J. Graves, it follows a young girl working in a Delhi garment factory.
Apple Man of India	Shri Hariman Sharma, a farmer from Himachal Pradesh, has been awarded the

Honored with Padma Shri	Padma Shri. Shri Hariman Sharma, a pioneering farmer from Himachal Pradesh, has been awarded the Padma Shri for his contributions to Indian agriculture. He developed the HRMN-99 apple variety, revolutionizing apple farming in tropical regions.
Padma Awards 2025	Padma Awards 2025 announced The **Padma Awards** are one of India's highest civilian honors, conferred annually on the occasion of **Republic Day**. They recognize distinguished contributions across various fields, including **art**, **social work**, **public affairs**, **science and engineering**, **trade and industry**, **medicine**, **literature and education**, **sports** and **civil service**. The awards are presented in three categories: 1. **Padma Vibhushan**: For exceptional and distinguished service. 2. **Padma Bhushan**: For distinguished service of high order. 3. **Padma Shri**: For distinguished service in any field. The **Padma Vibhushan** awardees for 2025 include prominent figures such as **Shri Duvvur Nageshwar Reddy** (Medicine), **Justice (Retd.) Shri Jagdish Singh Khehar** (Public Affairs) and **Shri M. T. Vasudevan Nair** (Literature). **Padma Bhushan** recipients include **Shri A Surya Prakash** (Journalism), **Shri Kailash Nath Dikshit** (Archaeology) and **Sadhvi Ritambhara** (Social Work). Among the **Padma Shri** awardees, **Shri Arijit Singh** (Art), **Smt. Arundhati Bhattacharya** (Trade and Industry) and **Shri Vinayak Lohani** (Social Work) are notable. These awards are conferred by the **President of India** at a ceremonial function at **Rashtrapati Bhawan** in **March/April** each year. For **2025**, 139 Padma Awards have been approved, with 23 women awardees and 13 posthumous recipients.
Subhash Chandra Bose AapdaPrabandhanPuraskar	Indian National Centre for Ocean Information Services (INCOIS), Hyderabad, has been awarded with Subhash Chandra Bose AapdaPrabandhan Puraskar-2025. The Subhash Chandra Bose AapdaPrabandhanPuraskar, awarded annually on January 23, recognizes excellence in disaster management with a cash prize and certificate. INCOIS, established in 1999, enhances India's disaster strategy through early ocean hazard warnings.
Gates-Cambridge Impact Prize 2025	Professor Urbasi Sinha, head of the Quantum Information and Computing lab at RRI, has been awarded the Gates-Cambridge Impact Prize 2025 by the Bill & Melinda Gates Foundation. Her lab's pioneering work in quantum communication, computing and optics has significantly advanced India's quantum research capabilities. Professor Sinha also plays a pivotal role in India's 'National Quantum Mission,' aiming to position the country at the forefront of global quantum innovation.
National Sports Awards 2025	President Droupadi Murmu presented the National Sports Awards at Rashtrapati Bhavan, recognizing India's top athletes and coaches. The Major Dhyan Chand Khel Ratna was awarded to champions like double Olympic-medalist Manu Bhaker, chess prodigy D. Gukesh and Paralympic gold-medalist Praveen Kumar. The Arjuna Awards honored athletes such as Jyothi Yarraji (Athletics), Nitu (Boxing) and Salima Tete (Hockey). The Lifetime Arjuna Award went to Murlikant Rajaram Petkar, India's first Paralympic gold-medalist in swimming. The Dronacharya Award was presented to coaches Deepali Deshpande (Shooting) and Armando Agnelo Colaco (Football). The Maulana Abul Kalam Azad Trophy was awarded to Chandigarh University, Lovely Professional University and Guru Nanak Dev University.
RK Srikantan Trust Award	Mridangist T.V. Gopalakrishnan has been honored with the RK Srikantan Trust Award.

	The award was given recognizing his significant contributions to Carnatic music. The award, presented annually, is named after the legendary Carnatic vocalist R.K. Srikantan, known for his traditional approach to the art. Born in 1920 and awarded the Padma Bhushan in 2011, R.K. Srikantan passed away in 2014, leaving a lasting impact on the world of Carnatic music.
Satyajit Ray Lifetime Achievement Award	The West Bengal Film Journalists Association (WBFJA) held its annual awards ceremony. Aparna Sen received the Satyajit Ray Lifetime Achievement Award for her contributions to Indian cinema. The West Bengal Film Journalists Association (WBFJA) Annual Awards Ceremony: **Top Winners:** • **Best Film**: *Manik Babur Megh* • **Best Actor (Male)**: Chandan Sen for *Manik Babur Megh* • **Best Actor (Female)**: Rituparna Sengupta for *Ajogya* • **Most Popular Film**: *Khadaan* • **Most Popular Actor**: Dev for *Khadaan* **Best Director (Joint Award)**: Srijit Mukherji for *Badami HaynarKabale* and Debaloy Bhattacharya for *Padatik* **Special Recognition**: *Oti Uttam* by Srijit Mukherji for AI innovation recreating Uttam Kumar's voice **Special Mentions**: • **Most Promising Director**: Abhinandan Banerjee for *Manik Babur Megh* • **Best Screenplay**: Anjan Dutt for *ChalchitraEkhon* • **Best Music Director**: Amit Chatterjee for *Badami HaynarKabale* • **Best Background Score**: Rathijit Bhattacharya for *Khadaan* **Playback Singer Awards**: • **Male**: Timir Biswas for *Tekka*, Rathijit Bhattacharya for *Khadaan* • **Female**: Antara Mitra for *Khadaan* • **Best Lyricist**: Kaushik Ganguly for *Ajogya* The ceremony also paid tribute to Raj Kapoor on his birth centenary, with a focus on the circus industry and the iconic song *Jeena Yahan Marna Yahan* from *Mera Naam Joker*.
Blue Flag Certification	Kerala's Kappad beach in Kozhikode and Chal beach in Kannur have received the prestigious Blue Flag certification from the Denmark-based Foundation for Environmental Education (FEE). This recognition honors beaches that meet high standards of environmental protection, safety and sustainability. The Blue Flag status not only enhances Kerala's appeal as a sustainable tourism destination but also sets a global benchmark for eco-friendly tourism practices.
82nd Annual Golden Globe Awards (2025)	The 82nd Annual Golden Globe Awards, held at The Beverly Hilton in California, celebrated outstanding achievements in film and television. **Key Winners:** • **Best Performance by an Actor in a Motion Picture – Drama**: Adrien Brody, *The Brutalist* • **Best Performance by an Actress in a Motion Picture – Drama**: Fernanda Torres, *I'm Still Here* • **Best Motion Picture – Drama**: *The Brutalist* • **Best Performance by an Actress in a Supporting Role in Any Motion Picture**: Zoe Saldaña, *Emilia Pérez* • **Best Performance by an Actor in a Supporting Role in Any Motion Picture**: Kieran Culkin, *A Real Pain* • **Best Performance by an Actress in a Television Series – Musical or**

	Comedy: Jean Smart, *Hacks* **Best Performance by an Actor in a Television Series – Drama**: Hiroyuki Sanada, *Shōgun* **Best Director – Motion Picture**: Brady Corbet, *The Brutalist* **Best Motion Picture – Non-English Language**: *Emilia Pérez* **Best Television Series – Drama**: *Shōgun* **Best Television Series – Comedy or Musical**: *Hacks* **Other Notable Winners:** **Best Performance by an Actress in a Supporting Role in a Television Series**: Jessica Gunning, *Baby Reindeer* **Best Performance by an Actor in a Supporting Role in a Television Series**: Tadanobu Asano, *Shōgun* **Best Performance in Stand-Up Comedy on Television**: Ali Wong, *Single Lady* **Best Cinematic and Box Office Achievement**: *Wicked* **Best Original Score – Motion Picture**: Trent Reznor, Atticus Ross, *Challengers*
Padmapani Lifetime Achievement Award	Sai Paranjpye, a legendary director and writer in Indian cinema, will receive the **Padmapani Lifetime Achievement Award** at the **Ajanta-Ellora International Film Festival (AIFF) 2025**. Known for her impactful films such as *Sparsh*, *Chashme Buddoor*, *Katha* and *Saaz*, Paranjpye is a key figure in India's parallel cinema movement. Her career, marked by contributions to **Marathi literature**, **children's films** and social realism.
Gangadhar National Award	**Odia poet Prativa Satpathy** will be honored with the prestigious **Gangadhar National Award for Poetry 2023** by **Sambalpur University** on its **58th foundation day**. The **Gangadhar National Award**, established in 1989 and first presented in 1991, is named after the renowned poet **Gangadhar Meher**. It is awarded annually during the foundation day celebrations of **Sambalpur University**. The award includes a **citation**, a **shawl** and a **cash prize of ₹1,00,000**. This year, the award will be presented to **Prativa Satpathy**, a prominent Odia poet who gained recognition in the 1960s with her work **'Sesha Janha'**. Her writings have been translated into several Indian and foreign languages.
National Sports Awards for 2024	**Ministry of Youth Affairs & Sports** has announced the prestigious **National Sports Awards for 2024.** **Among the top awards:** **Major Dhyan Chand Khel Ratna Award 2024** honors the most outstanding sports performances over the past four years, with recipients including **Shri Gukesh D** (Chess), **Shri Harmanpreet Singh** (Hockey), **Shri Praveen Kumar** (Para-Athletics) and **Ms. Manu Bhaker** (Shooting). The **Arjuna Awards for Outstanding Performance in Sports 2024** celebrate excellence, leadership, sportsmanship and discipline, with recipients across disciplines like **Athletics**, **Boxing**, **Para-Athletics** and **Hockey**. Notable winners include **Ms. Jyothi Yarraji** (Athletics), **Ms. Annu Rani** (Athletics) and **Ms. Nitu** (Boxing). The **Arjuna Awards (Lifetime)** honor retired sportspersons contributing to the promotion of sports, with recipients like **Shri Sucha Singh** (Athletics) and **Shri Murlikant Rajaram Petkar** (Para-Swimming). The **Dronacharya Award for Outstanding Coaches in Sports and Games 2024** recognizes coaches who have excelled in training athletes for international success. Notable recipients include **Shri Subhash Rana** (Para-Shooting) and **Ms.**

	Deepali Deshpande (Shooting).
	The **Rashtriya Khel ProtsahanPuraskar** is awarded to entities promoting sports, with the **Physical Education Foundation of India** recognized this year.
	The **Maulana Abul Kalam Azad (MAKA) Trophy 2024** is awarded to the top-performing university in the **Khelo India University Games**, with **Chandigarh University** taking the top spot.
	The awards are selected through an online application process, with a committee chaired by Justice (Retd.) V. Ramasubramanian, comprising eminent sports figures, journalists and administrators.

Gallantry Awards 2025

Context

- On Republic Day 2025 eve, President Droupadi Murmu approved gallantry awards for 93 personnel from the Armed Forces and CAPFs.

All about Gallantry Awards

- **Gallantry Awards** are instituted by the Government of India to honor bravery and sacrifice by officers/personnel of the Armed Forces, lawfully constituted Forces and civilians. They are announced twice yearly—on **Republic Day** and **Independence Day**.

Types of Gallantry Awards:

1. **Gallantry in the Face of Enemy:**
   o **Param Vir Chakra (PVC)**
   o **Mahavir Chakra (MVC)**
   o **Vir Chakra**
2. **Gallantry Other than in the Face of Enemy:**
   o **Ashoka Chakra**
   o **Kirti Chakra**
   o **Shaurya Chakra**

Award History:

- The **Param Vir Chakra**, **Mahavir Chakra** and **Vir Chakra** were instituted on **26th January, 1950**.
- **Ashoka Chakra**, **Kirti Chakra** and **Shaurya Chakra** were instituted on **4th January, 1952**, renamed in 1967.

Award Precedence:

1. **Param Vir Chakra**
2. **Ashoka Chakra**
3. **Mahavir Chakra**
4. **Kirti Chakra**
5. **Vir Chakra**
6. **Shaurya Chakra**

Award Descriptions:

- **Param Vir Chakra**: Bronze, circular, with Indra's Vajra. Ribbon: Purple.
- **Mahavir Chakra**: Silver, circular, with a gilded State Emblem. Ribbon: Half-white, half-orange.
- **Vir Chakra**: Silver, circular, with a Chakra. Ribbon: Half-blue, half-orange.
- **Ashoka Chakra**: Gold-gilded, with Ashoka's Chakra. Ribbon: Green with orange line.
- **Kirti Chakra**: Silver, with Ashoka's Chakra. Ribbon: Green, divided by two orange lines.
- **Shaurya Chakra**: Bronze, with Ashoka's Chakra. Ribbon: Green, divided by three vertical lines.

Investiture Ceremony:

- Awards are conferred by the **President** at the **Defence Investiture Ceremony** or the **Republic Day Parade** for **Param Vir Chakra** and **Ashoka Chakra**.
- **Eligibility:**
  o **Param Vir Chakra**: For the most conspicuous bravery in the presence of the enemy.
  o **Maha Vir Chakra**: For conspicuous gallantry in the face of the enemy.
  o **Vir Chakra**: For acts of gallantry in the face of the enemy.
  o **Ashoka Chakra**: For the most conspicuous bravery, otherwise than in the face of the enemy.

- o **Kirti Chakra**: For conspicuous gallantry, otherwise than in the face of the enemy.
- o **Shaurya Chakra**: For gallantry, otherwise than in the face of the enemy.

Selection Process:

- Recommendations are sent twice a year to the **Ministry of Defence** and the **Ministry of Home Affairs** for Armed Forces and civilian awards, respectively. The **Central Honours & Awards Committee** reviews these recommendations and final approval is given by the **President**.

BOOKS & AUTHORS [CURRENT]

BOOK	AUTHOR
Soumitra Chatterjee and His World	Sanghamitra Chakraborty
How India Scaled Mt G20: The Inside Story of the G20 Presidency	Amitabh Kant
'The World After Gaza': A Guide to Challenging Times	Pankaj Mishra
Parliament: Powers, Functions & Privileges; A Comparative Constitutional Perspective	Dr. K.S. Chauhan
Jammu Kashmir & Ladakh Through the Ages: A Visual Narrative of Continuities and Linkages	Union Home Minister and Minister of Cooperation, Shri Amit Shah

BOOKS & AUTHORS [STATIC GK]

Book	Author
An Area of Darkness	V.S. Naipaul
The Ministry of Utmost Happiness	Arundhati Roy
The Immortal Life of Henrietta Lacks	Rebecca Skloot
The Great Indian Novel	Shashi Tharoor
The Man Who Knew Infinity	Robert Kanigel
Inglorious Empire: What the British Did to India	Shashi Tharoor
India's War: World War II and the Making of Modern India	Srinath Raghavan
City of Joy	Novel by Dominique Lapierre. Calcutta is nicknamed "the City of Joy" after this novel.
The Last Mughal	William Dalrymple
The Idea of India	Sunil Khilnani

STATIC GK

■ **United Nations Democracy Fund (UNDEF)**

Created in 2005 by Kofi A. Annan to support democratization and it depends on voluntary contributions.

■ **President's Bodyguard (PBG)**

Raised in 1773 by Warren Hastings in Benares and is the oldest and senior-most regiment of the Indian Army.

■ **Srijan Portal**

Aims to encourage FDI in the defense sector.

■ **Akash Weapon System (AWS)**

An indigenously developed Short Range Surface to Air Missile (SRSAM) by DRDO, targeting helicopters, fighter aircraft and UAVs.

■ **Tactical Nuclear Weapons (TNWs)**

Short-range weapons with land-based missiles under 500 km and air/sea-launched weapons under 600 km.

■ **Umiam Lake**

In Meghalaya, also known as "Bara Pani," was created by damming the Umiam River for the state's first Hydel Power Project.

■ **Congo Basin**

Spans across Cameroon, Central African Republic, Democratic Republic of the Congo, Republic of the Congo, Equatorial Guinea and Gabon, excluding Angola.

■ **Siyom Bridge**

Located in Arunachal Pradesh, enhances strategic connectivity along the Sino-India border.

■ **Mahila Samman Savings Certificate Scheme (MSSC)**

Exclusively for women and girls, with a maximum deposit of ₹2 Lakhs and can be opened by women of any age group.

■ **Trade Secrets**

Intellectual property rights on confidential information that may be sold or licensed. Currently, India lacks a specific law for the protection of trade secrets.

■ **Ajrak**

An ancient art and craft of block printing on cloth, practised in Ajrakhpur, Gujarat, using natural hues inspired by the sky.

■ **Ankia Naat**

A traditional one-act play of Assam, linked to the Sattriya dance form, depicting incidents from Lord Krishna's life.

■ **High-altitude Balloons**

Used in meteorological research, astronomical observations and espionage operations.

■ **Fields Medal**

Awarded every four years in mathematics, but only to mathematicians under 40 years of age.

■ **Largest shareholder in the World Bank Group**

The United States is the largest shareholder in the World Bank Group.

■ **Vande Mataram Movement**

Vande Mataram Movement of 1907 in Andhra Pradesh, led by Harisarvothama Rao and Pingali Lakshmi Narayana, ended with the annulment of Bengal's partition.

■ **Direct Listing Scheme**

Allows Indian companies to list on foreign exchanges without intermediaries, aiming for better global valuations and access to international markets

■ **Toll Operate Transfer (TOT) Model**

Allows private entities to collect tolls on national highway projects for a set period, after which the government regains ownership.

■ **Subak System**

A traditional irrigation method from Bali, Indonesia, distributes water through canals and dykes to rice terraces.

■ **Hashing**

It scrambles data to ensure its integrity, while encryption scrambles data to secure it for transmission, which can later be decrypted using a key.

■ **Sitabena and Jogimara Caves**

Ancient cave monuments nested in the north side of Ramgarh hills in Puta village, Chhattisgarh.

■ **Horizontal Gene Transfer (HGT)**

Non-sexual movement of genetic material between organisms.

■ **Fifth Mass Extinction**

Famously known for the dinosaurs' extinction caused by an asteroid impact.

■ **El Niño Modoki**

Associated with warming in the central tropical Pacific and cooling in the eastern and western tropical Pacific.

■ **GRAPES-3 experiment**

Focused on studying solar flares and their impact on Earth's climate and is located in Ooty, Tamil Nadu.

■ **Andes Mountain Range**

Stretches across Venezuela, Colombia, Ecuador, Peru, Bolivia, Chile and Argentina.

■ **Schengen Area**

A zone of 27 European countries with abolished internal borders and shared external border rules.

■ **United Nations Convention Against Corruption (UNCAC)**

Only legally binding international anti-corruption multilateral treaty.

■ **Environmental DNA (eDNA)**

DNA released by organisms into the environment, found in excreted feces, mucous and gametes, but is not resistant to UVB radiation.

■ **Payments Infrastructure Development Fund (PIDF)**

Covers a range of devices like QR codes, Aadhaar-enabled biometric devices, Soundbox devices and physical PoS terminals to enhance payment infrastructure.

■ **Ayak and Anyat**

Varieties of millet grown in Arunachal Pradesh by the Adi community.

■ **Milling Copra**

Milling copra is used to extract oil, while ball copra is consumed as a dry fruit.

■ **SIGHT Programme**

A sub-component under India's National Green Hydrogen Mission, aimed at bolstering domestic electrolyser manufacturing and green hydrogen production.

■ **Pheromones**

Chemicals released by insects and animals to trigger specific behaviors in others of the same species.

■ **Longest coastline among Indian states**

Gujarat has the longest coastline among Indian states.

■ **Calcium-41**

Calcium-41 has a shorter half-life than carbon-14, making the detection of calcium-41 rarer.

■ **Public Charging Stations (PCS)**

A license is not required to set up Public Charging Stations (PCS) in India, as it is a de-licensed activity. Power Distribution Companies (DISCOMs) manage private charging stations at residences in India.

■ **Nodal agency for the promotion of EV charging infrastructure**

The Bureau of Energy Efficiency (BEE) is the nodal agency for the promotion of EV charging infrastructure in India.

■ **'Connected Lending'**

Refers to loans provided by banks to their owners or related businesses on softer-than-market terms.

■ **'Calibrated Tightening' Policy**

The Reserve Bank of India's 'calibrated tightening' policy stance means the overall policy is tilted towards rate hikes, although not at every policy meeting.

■ **Hazardous Wastes in India**

Mercury, cadmium and arsenic are included in the category of hazardous wastes in India.

■ **Bengal Barrier**

A proposed green wall to be built along the western border of West Bengal to prevent pollutants from entering the state.

■ **Hussain Sagar Lake in Hyderabad**

Built during the reign of Ibrahim Quli Qutub Shah and connects Secunderabad and Hyderabad.

■ **Spiral Galaxies**

In spiral galaxies, the youngest stars are formed in the spiral arms, while elliptical galaxies contain less gas and dust than spiral galaxies.

■ **REDD+**

REDD+ is a mechanism developed under UNFCCC to offer incentives for developing countries to invest in low-carbon sustainable development paths.

■ **First organized trade union in India**

Madras Labour Union, founded in 1918.

■ **Realized Niche**

The realized niche of a species is more restricted than its fundamental niche, shaped by biological interactions such as competition and predation.

🌐 CURRENT ONE LINER

■ **Pangsau Pass**
Located on the Patkai hills along the India-Myanmar border.

■ **Doctrine of Merger**
When a higher court reviews a decision from a lower court, the lower court's order merges with the higher court's order.

■ **Dhanauri Wetland**
Located in Greater Noida, Gautam Buddha Nagar District, Uttar Pradesh, near Okhla Bird Sanctuary and Surajpur Wetland

■ **Rhodamine B**
A synthetic dye known for its bright pink color. Banned in the food sector due to their carcinogenicity.

■ **Guillain-Barré Syndrome**
A rare neurological disorder where the body's immune system attacks the nervous system

■ **Mount Ibu**
A stratovolcano located on Halmahera Island, Indonesia.

■ **Eddington limit**
Defines the maximum rate at which a black hole can feed on matter while balancing radiation pressure with gravitational pull.

■ **Asan Wetland**
Located in the Dehradun district of Uttarakhand. A Ramsar site and an Important Bird Area.

■ **KaWaCHaM**
An advanced disaster warning system in Kerala designed to enhance public safety and disaster preparedness.

■ **Crosspathy**
Practice where medical practitioners trained in one system of medicine (like Ayurveda, Homeopathy, or Unani) prescribe treatments or medicines from another system, primarily Allopathy (modern medicine).

■ **Stargate Project**
A $500 billion initiative announced by Donald Trump to establish the U.S. as a global leader in artificial intelligence (AI) by building massive data centers and AI campuses.

■ **Entity Locker**
A secure, cloud-based solution designed to simplify the storage, sharing and verification of documents for a wide range of entities like large organizations, corporations, MSMEs, trusts, startups and societies.

■ **Lake Naivasha**
Located in Southern Rift Valley, Kenya.

■ **Kokborok**
Native language of the Borok people in Tripura.

■ **Electrokinetic mining (EKM)**
An eco-friendly technique for extracting rare earth elements (REEs), offering over 95% recovery with reduced environmental impact.

■ **Bhargavastra**
India's first indigenous micro-missile system developed to counter drone swarm threats.

■ **Makaravilakku festival**
Celebrated at Sabarimala Ayyappa temple.

■ **Diego Garcia**
A coral atoll in the central Indian Ocean, part of the British Indian Ocean Territory.

■ **Blue Flag Certification**
A globally recognized eco-label, awarded for sustainable tourism at beaches, marinas and boats, launched in 1985 in France and extended globally in 2001.

■ **Neduntheevu**
Largest island in the Palk Strait, located in northern Sri Lanka.

■ **Z Morh Tunnel**
Located in Ganderbal district, central Kashmir, it ensures Sonamarg remains accessible to tourists year-round.

■ **Trajan Gun**

155mm towed artillery gun system developed jointly by India and France.

■ **Philadelphi Corridor**

A narrow strip of land between the **Gaza Strip** and **Egypt**, including the **Rafah crossing**, the main entry and exit point between Gaza and Egypt.

■ **FY 2024-25 Allocation**

For **FY 2024-25**, the **Ministry of Defence** received the highest allocation among all ministries, with the majority of the budget allocated for **pay and allowances**.

■ **68th Session of the Commission on Narcotic Drugs (CND)**

India has been chosen to chair the **68th Session of the Commission on Narcotic Drugs (CND)** for the first time, which operates under **ECOSOC**.

■ **Moldova**

Moldova is a **landlocked country** in Eastern Europe, with the **Prut River** forming its western border.

OPSC PRELIMS MOCK TEST
TEST ID – 43

Q1. Which one of the following statements is not correct with reference to jet streams?
(a) These are narrow bands of strong winds that usually blow from west to east.
(b) They are formed when warm air masses meet the cold air masses in the atmosphere.
(c) The jet streams exist in the mid to upper troposphere.
(d) Air planes cannot fly in the jet streams.

Q2. Consider the following statements:
Statement-I: Lichens are sensitive to atmospheric nitrogen pollution.
Statement-II: Lichens receive all their nutrients and water from wet and dry atmospheric deposition.
Which one of the following is correct in respect of the above statements?
(a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
(c) Statement-I is correct but Statement-II is incorrect
(d) Statement-I is incorrect but Statement-II is correct

Q3. Which of the following terms are mentioned in Article 1 of the Constitution of India?
1. Bharat
2. Union of States
3. Territory of India
Select the correct answer using the code given below:
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Q4. Consider the following statements:
Statement-I: Termites are considered natural sources of methane.
Statement-II: The breakdown of the cellulose-rich diet of termites by gut microorganisms releases methane.
Which one of the following is correct in respect of the above statements?

(a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
(c) Statement-I is correct but Statement-II is incorrect
(d) Statement-I is incorrect but Statement-II is correct

Q5. Consider the following statements with reference to the Green Credit Programme (GCP):
1. Individuals are not eligible to earn green credits.
2. Green credits can be traded on a domestic market platform.
3. Any activity generating green credits is not eligible to receive carbon credits under the Carbon Credit Trading scheme.
Which of the above-given statements is/are incorrect?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Q6. What is the significance of the 'Iron Catastrophe' in the context of Earth's formation?
(a) It refers to the sudden increase in iron ore deposits in the Earth's crust.
(b) It marks the formation of Earth's core through the segregation of molten iron.
(c) It signifies the mass extinction of plants caused by excessive iron levels in the soil.
(d) It represents the geological event leading to the separation of crust and mantle.

Q7. With reference to earthquakes, consider the following statements:
1. Earthquakes along divergent boundaries are generally shallow.
2. The depth of earthquakes decreases on the landward side of the subduction zone.
3. Intraplate earthquakes are often less damaging than plate margin earthquakes of the same size.
Which of the above-given statements is/are correct?
(a) 1 only

(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Q8. The primary purpose behind enactment of the Jan Vishwas (Amendment of Provisions) Act, 2023 is to
(a) replace the British era Indian Penal Code
(b) re-enactment of farm laws
(c) rationalise criminal provisions in existing Central Acts
(d) withdraw outdated British era laws

Q9. With reference to the Dadni system, consider the following statements:
1. It allowed merchants to give cash and raw materials advances to artisans and buy the finished products later.
2. It was followed by the British East India Company till 1833 when its monopoly was abolished.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Q10. With reference to Delegated Legislation in India, consider the following statements:
1. If the Parent Act conferring power on the subordinate authority is itself unconstitutional then the delegated legislation is also unconstitutional.
2. If the Parent Act is Constitutional but the delegated legislation is ultra vires the Constitution, then the delegated legislation will be declared invalid.

Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Q11. Which one of the following statements best describes the 'Grey Infrastructure'?
(a) It refers to the restoration of natural resources like wetlands to help in the management of excess rainwater.
(b) It refers to the development of infrastructure corridors for the safe movement of wildlife.
(c) It refers to human-engineered infrastructure created for the management of water resources.

(d) It is a computing network that seeks to improve and automate the delivery of forest products.

Q12. Consider the following statements:
1. The term 'special session' is explicitly mentioned in the rulebooks of the Parliament Houses.
2. Since independence only two special sessions have been convened.
3. A 'special sitting' of the House can be convened in case of a proclamation of emergency under Article 352 of the Constitution of India.

Which of the above-given statements is/are incorrect?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Q13. Consider the following statements:
1. Well-drained loam soil is the most suitable for soybean plants.
2. Import of genetically modified (GM) soybeans is banned in India.
3. Telangana is the highest soybean-producing state.

Which of the statements given above is/are correct?
(a) 1 only
(b) 3 only
(c) 2 and 3 only
(d) 1, 2 and 3

Q14. It is located at the junction of the Indian Sub-Continent Biogeography region and the Indo-China Biogeography Region. It is located between the Dapha Bum ridge of Mishmi Hills and the Patkai Ranges of the North Eastern Himalayas. The Yobin community lives in and around this Protected Area.
The above-given paragraph is a description of which among the following National Park?
(a) Namdapha National Park
(b) Kaziranga National Park
(c) Manas National Park
(d) Blue Mountains National Park

Q15. Arrange the following States in the correct descending order based on their length of coastline?
1. Maharashtra
2. Gujarat
3. Andhra Pradesh
4. Tamil Nadu

Select the correct answer using the code given below:

(a) 1-2-3-4
(b) 2-3-4-1
(c) 2-4-3-1
(d) 1-3-2-4

Q16. Arrange the following sectors in the decreasing order of their shares in total methane emissions in India:

1. Agriculture
2. Waste
3. Energy
4. Industrial processes and product use

Select the correct answer using the code given below:

(a) 1-4-2-3
(b) 4-1-3-2
(c) 1-2-3-4
(d) 3-1-4-2

Q17. The 'Marine Snow', sometimes seen in the news, refers to:

(a) large block of frozen marine water floating in the polar surface water
(b) intermittent rain of snowflakes over oceans which are collected and used by sailors
(c) salty ice blocks and snow crystals used in cold storages to preserve the perishable agricultural products
(d) biological debris that originates from the top layers of the ocean and drifts to the deep seafloor.

Q18. Which of the following are considered as corrupt practices under the Representation of the People Act, 1951?

1. Failing to declare election expenses within time
2. Hiring of vehicles for the free conveyance of electors to the polling station
3. Publication of any false statement of fact about the personal character of a candidate
4. Making false promises in the election manifesto

Select the correct answer using the code given below:

(a) 1, 2 and 3 only
(b) 1 and 3 only
(c) 2 and 4 only
(d) 1, 2, 3 and 4

Q19. Consider the statements with reference to Tea plantations in India:

1. Tea was introduced by the British in Assam as there were no native tea species in India.
2. The Tea Committee was established in 1834 under the chairmanship of William Bentinck.
3. India was exporting more tea to Britain than China towards the end of the 19th Century.

Which of the above-given statements is/are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Q20. Consider the following statements:

Statement-I: Due to the existence of phytoplankton on the upper surface of the water the oceans appear green.

Statement-II: Chlorophyll absorbs the red and blue portions of the light spectrum and reflects green light.

Which one of the following is correct in respect of the above statements?

(a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
(c) Statement-I is correct but Statement-II is incorrect.
(d) Statement-I is incorrect but Statement-II is correct.

Q21. Consider the following statements with reference to the Small Hydro Power Plants (SHP) in India:

1. Hydro Power plants with a capacity of 25 MW or below are classified as SHP Projects.
2. They are regulated by the Union Ministry of Environment, Forest and Climate Change.
3. They are established by the State Government.

Which of the above-given statements is/are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Q22. **With reference to difference between the Electoral bonds (EB) and Electoral Trusts (ET), consider the following statements:**

1. An Electoral Bond is a bearer banking instrument while an Electoral Trust is a legal arrangement for holding assets on behalf of a political party.
2. Unlike Electoral Trusts, Electoral Bonds do not disclose the donors and beneficiary political parties.
3. Political parties cannot receive funding via cash in case of both Electoral Bonds and Electoral Trusts.

Which of the above-given statements is/are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Q23. **Consider the following statements:**

The short-lived halogens released by the oceans:

1. increase methane's lifetime in the atmosphere
2. increase the level of water vapour in the atmosphere
3. increase the formation of cooling aerosols in the atmosphere
4. have no impact on ozone level in the troposphere

Which of the statements given above are correct?

(a) 1 and 2 only
(b) 1, 2 and 3 only
(c) 3 and 4 only
(d) 1, 3 and 4 only

Q24. **With reference to secularism in India, consider the following statements:**

1. It deals with both intra-religious and inter-religious domination.
2. It allows for principled State intervention in all religions.
3. The State can regulate any economic or political activity associated with religious practice.

Which of the above-given statements is/are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Q25. **With reference to the Cinematograph (Amendment) Act, 2023, consider the following statements:**

1. It permits limited use of copyrighted content without the owner's authorisation for reporting current affairs.
2. The certificate issued by the Central Board of Film Certification is valid only for 5 years.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Q26. **National Carbon Registry, which allows countries to effectively manage national processes for trading carbon credits, is a/an:**

(a) open-source software developed by the United Nations Development Programme
(b) consortium of multinational corporations to promote green initiatives and sustainable practices
(c) coalition of international Non-Governmental Organisations to promote research and development in carbon capture technologies
(d) regional initiative led by the European Union to monitor and reduce carbon emissions in Europe

Q27. **European Honeybees Can act as an Effective biomonitor to determine the spread of Antimicrobial Resistance (AMR) in urban neighbourhoods because:**

(a) they are the only insects that do not exhibit any kind of AMR
(b) they carry genetic elements of key AMR drivers in their digestive tracts
(c) they can directly consume antibiotics and become carriers of AMR genes
(d) they can directly transmit AMR genes to humans

Q28. **The Maximum Residue Limit (MRL) is the maximum concentration of pesticide residue that is legally permissible in food and animal feeds as a result of pesticide use in accordance with Good Agricultural Practices (GAP).**

In this context, consider the following statements:

1. The determination of MRLs on a global scale was instituted by the Codex Alimentarius Commission.
2. In India, MRL are determined by the Food Safety and Standards Authority of India (FSSAI).

3. MRL cannot be prescribed for processed food commodities.

Which of the above-given statements is/are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Q29. Which one of the following Acts of the British Government removed all restrictions on European immigration and acquisition of landed property in India?

(a) The Charter Act of 1793
(b) The Charter Act of 1813
(c) The Charter Act of 1833
(d) The Charter Act of 1853

Q30. In the context of Indian history, Khalimpur copper plate inscription mentions which one of the following events?

(a) Election of Pala ruler Gopala by the people to replace an unfit ruler
(b) Position of ministers was made hereditary under the Rashtrakutas
(c) Conversion of Mauryan king Ashoka to Buddhism
(d) Construction of Sun temple by Bhima I of the Solanki dynasty

Q31. With reference to the Inland Emigration Act of 1859, which one of the following statements is correct?

(a) It required the plantation workers not to leave the tea gardens without permission.
(b) It was primarily concerned with regulating the movement of European settlers within India.
(c) It was enacted to regulate the emigration of Indian labourers to other British colonies.
(d) It sought to abolish the practice of indentured labour in British colonies.

Q32. Consider the following statements with reference to 'polar nights':

Statement – I: All latitudes situated in polar circles experience total darkness for six months.
Statement – II: The rotation of the earth with respect to the sun results in polar nights.

Which one of the following is correct in respect of the above statements?

(a) Both Statement – I and Statement – II are correct and Statement – II is the correct explanation for Statement – I
(b) Both Statement – I and Statement – II are correct and Statement – II is not the correct explanation for Statement – I

(c) Statement – I is correct but Statement – II is incorrect
(d) Statement – I is incorrect but Statement – II is correct

Q33. Consider the following statements with reference to Horizontal Gene Transfer (HGT):

1. It transfers genetic material to its offspring by the sexual movement.
2. Only eukaryotic organisms are capable of undergoing HGT.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Q34. Riboflavin, niacin and folate, sometimes seen in the news, are:

(a) amino acids that play a crucial role in protein synthesis
(b) essential minerals for bone health
(c) water-soluble vitamins essential for metabolic processes
(d) types of neurotransmitters that regulate mood and emotions

Q35. Which one of the following statements is correct with reference to pericytes?

(a) These are specialised immune cells found in the central nervous system.
(b) These play a significant role in the production of digestive enzymes in the stomach.
(c) These work with neurons to form and store long-term memories.
(d) These are responsible for the production of insulin in the pancreas.

Q36. With reference to cryogenic rocket engine, consider the following statements:

1. It uses liquid oxygen and liquid hydrogen as propellants.
2. It provides more thrust for propellant it burns compared to solid propellant rocket stages.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Q37. Which one of the following is not a characteristic of Thallium, an element recently seen in the news?

(a) It can be released into outdoor air as fine particles (aerosol).

(b) It can be absorbed into the body by skin contact.

(c) It can be used in the manufacturing of electronics.

(d) It can be used to contaminate a water body.

Q38. Consider the following statements with reference to nucleosome:

1. It constitutes the repeating unit of a structure in the nucleus called chromatin.

2. It is a section of Ribonucleic Acid (RNA) that is wrapped around a core of proteins.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

Q39. Consider the following:

1. Solving complex mathematical equations

2. Adjudication of legal issues in court

3. Diagnosing medical conditions

4. Automating stock trading

How many of the above are the applications of Artificial Intelligence at the present level of technology?

(a) Only one

(b) Only two

(c) Only three

(d) All four

Q40. Consider the following statements regarding the history of Odisha:

1. The Kalinga War was fought between the Maurya Empire and the kingdom of Kalinga in 261 BCE.

2. The Sun Temple at Konark was built by King Narasimhadeva I of the Ganga dynasty in the 13th century.

Which of the statements given above is/are correct?

(a) 1 only

(b) 2 only

(c) Both 1 and 2

(d) Neither 1 nor 2

Q41. Consider the following pairs:

Writer Work

1. Fakir Mohan Senapati Chha Mana Atha Guntha

2. Gopinath Mohanty Chilika

3. Sitakant Mahapatra Amrutara Santana

4. Pratibha Ray Mamu

Which of the pairs given above is/are correctly matched?

(a) 1 and 2 only

(b) 1, 2 and 4 only

(c) 1 and 4 only

(d) 1, 2,3 and 4

Q42. Which of the following rivers originates outside the state of Odisha but flows through it?

1. Brahmani

2. Mahanadi

3. Baitarani

4. Subarnarekha

Select the correct answer using the code given below:

(a) 1 and 4 only

(b) 2 and 3 only

(c) 1, 3, and 4 only

(d) 2, 3, and 4 only

Q43. Consider the following statements regarding Particularly Vulnerable Tribal Groups (PVTGs) in Odisha:

1. Odisha has the highest number of PVTGs in India.

2. The total number of PVTGs in Odisha is 13.

3. All the PVTGs in Odisha are recognized at the national level.

Which of the above-given statements is/are correct?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2 and 3

Q44. Which of the following statements correctly describes the climatic zones in Odisha?

1. Odisha experiences a tropical monsoon climate with distinct wet and dry seasons.

2. The coastal region of Odisha experiences higher humidity and receives more rainfall than the interior regions.

3. The western part of Odisha experiences a semi-arid climate with lower rainfall compared to the coastal areas.

4. The hilly regions in the eastern part of Odisha experience cooler temperatures due to their elevation.

Select the correct answer using the code given below:
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1, 2, and 4 only
(d) 1, 2, 3, and 4

Q45. Consider the following statements regarding GAURAV, the Long Range Glide Bomb developed in India:
1. GAURAV has a range of 1000 km and is capable of carrying both conventional and nuclear warheads.
2. The bomb is guided using GPS and INS (Inertial Navigation System).
3. It has developed by the Defence Research and Development Organisation (DRDO) and is primarily intended for use by the Indian Navy.

Which of the statements given above is/are correct?
(a) 2 only
(b) 1 and 2 only
(c) 2 and 3 only
(d) 1, 2, and 3

Q46. Who laid the foundation stone for multiple development projects worth over Rs 19,600 crores in Chandikhole, Jajpur district of Odisha in 2024?
(a) President Ram Nath Kovind
(b) Prime Minister Narendra Modi
(c) Chief Minister Naveen Patnaik
(d) Finance Minister Nirmala Sitharaman

Q47. For how many more years has the Odisha state cabinet extended the KALIA scheme starting from 2024-2025?
(a) One year
(b) Two years
(c) Three years
(d) Five years

Q48. What is the name of the newly discovered species of snake eel in Odisha?
(a) Anguilla bengalensis
(b) Lepiophthalmus indicus
(c) Ophichthuskailashchandrai
(d) Pseudorhombusarsius

Q49. Consider the following forms of dance:
1. Gotipua
2. Chhau
3. Odissi
4. Mohiniyattam

Which of the above are traditional dance forms of Odisha?
(a) 1, 2, and 3 only
(b) 2 and 4 only
(c) 1 and 3 only
(d) 1, 2, 3, and 4

Q50. The Odisha government has recently Inaugurated Deo irrigation project in which among the following districts of Odisha?
(a) Debagarh
(b) Kalahandi
(c) Kendrapara
(d) Mayurbhanj

Q51. Which of the following rulers is known for their patronage to Tantric Buddhism in Odisha during the medieval period?
(a) Kharavela
(b) Somavamsa Dynasty
(c) Ganga Dynasty
(d) Mughals

Q52. Who is recently being appointed as the Director General of Police (DGP) of Odisha?
(a) YB Khurania
(b) S.M. Narvane
(c) A.M. Prasad
(d) Arun Kumar Ray

Q53. Which of the following were divisions of Odisha in ancient times?
(a) Kalinga, Utkala, and Kosala
(b) Kalinga, Vanga, and Magadha
(c) Utkala, Kosala, and Andhra
(d) Kalinga, Andhra, and Vanga

Q54. Which of the following is the largest district in terms of area in Odisha?
(a) Balasore
(b) Ganjam
(c) Mayurbhanj
(d) Sundargarh

Q55. Which of the following statements is correct about the Odisha Millet Mission?
(a) It is a state government initiative aimed at promoting the cultivation of millets to improve food security and nutrition in Odisha.
(b) It focuses on the development of high-yielding varieties of rice and wheat to enhance agricultural productivity in Odisha.

(c) The mission is part of a national scheme to subsidize the import of millets to reduce the cost of staple foods.

(d) It is a private sector project designed to market Odisha's traditional millets internationally for economic benefits.

Q56. Consider the following statements:
1. The policy allows women employees to take a one- day menstrual leave in both the private and government sectors.
2. The leave can be availed on the first or second day of the menstrual cycle.
3. Odisha is the first state in India to introduce a menstrual leave policy.

Select the correct answer using the code given below:
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1, 2, and 3
(d) 1 and 3 only

Q57. Which organization's scientists discovered a new species of snake eel in Odisha's estuarine ecosystems?
(a) Wildlife Institute of India (WII)
(b) Botanical Survey of India (BSI)
(c) Zoological Survey of India (ZSI)
(d) Indian Council of Agricultural Research (ICAR)

Q58. Byanjana Dwadashi festival Of Odisha is famous for promoting which among the following cultures of India?
(a) Ancient philosophies.
(b) Script writing and performances.
(c) Food security
(d) Regional dance forms

Q59. Consider the following pairs of dams and the districts they are located in Odisha:
1. Hirakud Dam – Sambalpur
2. Rengali Dam – Angul
3. Indravati Dam – Nabarangpur
4. Balimela Dam – Malkangiri

Which of the pairs given above are correctly matched?
(a) 1 and 2 only
(b) 1, 3, and 4 only
(c) 2 and 4 only
(d) 1, 2, 3, and 4

Q60. The GREAT Scheme, recently seen in the news, is launched by:

(a) the Ministry of Science & Technology to promote industry-academia linkage for R&D in priority areas
(b) the Ministry of Health and Family Welfare to ensure safe delivery and good nutrition for mothers during their pregnancy
(c) the Ministry of Agriculture & Farmers' Welfare to improve agricultural marketing infrastructure
(d) the Ministry of Textiles to develop the startup ecosystem in technical textiles

Q61. Consider the following statements:
1. Urban Self Governance of the Cantonments falls in the Concurrent List under the Seventh Schedule of the Constitution of India.
2. The Cantonment Board exclusively consists of nominated members.
3. Both Cantonments and Military Stations comprise the military and civil population.

Which of the above-given statements is/are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Q62. Consider the following:
1. Aspartame
2. Saccharin
3. Stevia
4. Galactose

Which of the above-given statements is/are correct?
(a) 1 and 4 only
(b) 2, 3 and 4 only
(c) 1, 2 and 3 only
(d) 1, 2, 3 and 4

Q63. Consider the following statements with reference to Block Development Officer (BDO):
1. He belongs to the State Civil Service cadre.
2. He is the ex-officio Secretary of the Panchayat Sa miti.
3. He has the power to issue certificates regarding Scheduled Castes/Scheduled Tribes and other Backward Classes.

Which of the above-given statements is/are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Q64. Consider the following statements:

Statement-I: The Government of India can be sued in a contract.

Statement-II: The contractual liability of the Government of India is the same as that of an individual.

Which one of the following is correct in respect of the above statements?

(a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I

(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I

(c) Statement-I is correct but Statement-II is incorrect

(d) Statement-I is incorrect but Statement-II is correct

Q65. With reference to the Kunming-Montreal Global Biodiversity Framework (GBF), consider the following statements:

1. It is a framework of the Convention of Biological Diversity.
2. It aims for 50 per cent conservation of land, sea and inland waters by 2050.
3. It mandates the elimination of all harmful subsidies by member countries by 2030.

Which of the above-given statements is/are incorrect?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Q66. Fenpyroximate, hexaconazole and quinalphos', recently seen in the news, are:

(a) pesticides used in tea plantation
(b) Active Pharmaceutical Ingredients (APIs) used in cancer drugs
(c) endocrine disrupting chemicals found in cosmetics
(d) food additives used for preserving meat

Q67. Consider the following with reference to Ethanol:

1. It is commonly used in fire-extinguishers.
2. It is a common ingredient in hand sanitizers.
3. It makes an effective solvent for use in paints.
4. It acts as a preservative in lotions.
5. It is used to oxygenate petrol and reduce air pollution.

Which of the above are applications of ethanol?

(a) 1,2 and 4 only

(b) 2, 3, 4 and 5 only
(c) 1, 3, 4 and 5 only
(d) 1, 2, 3, 4 and 5

Q68. With reference to 'gas hydrates', consider the following statements:

1. They primarily consist of methane.
2. They are stable at high temperatures and low pressures.
3. Their extraction and use as an energy source have minimal environmental concerns.

Which of the above-given statements is/are correct?

(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Q69. This tree, scientifically known as Adansonia, is renowned for its unique appearance. Its branches resemble roots sticking up into the sky and have thick trunks. It is native to Africa, Madagascar and Australia. It is known for its drought-resistant qualities and stores water in its trunks, making it well-suited for arid environments.

The above-given paragraph is related to which among the following options?

(a) Acacia
(b) Baobab
(c) Marula
(d) Eucalyptus

Q70. Which one of the following statements best describes a "quasi-moon"?

(a) A celestial object that doesn't orbit a planet in a circular path but maintains a relatively consistent distance from the planet

(b) A celestial object orbiting in complex paths due to the combined gravitational influences of the planet and the Sun

(c) A man-made satellite projected and placed in the same orbit of the planet which is also the orbit of the natural satellite

(d) The previous parts of large celestial satellite that orbits the planet in a similar way as the old satellite.

Q71. Zircon, an oldest mineral known to exist on Earth, is used in which of the following?

1. Ceramics
2. Metal casting
3. Refractories
4. Gemstone

5.   Cathode Ray Tubes (CRT)

Select the correct answer using the code given below:
(a)   1, and 3 only
(b)   2, 4 and 5 only
(c)   1, 2, 4 and 5 only
(d)   1, 2, 3, 4 and 5

Q72. With reference to various Public Private Partnership (PPP) models for infrastructure development, consider the following statements:
1.   The private entity's revenue in a Build-Operate- Transfer (BOT) project comes from marketing of user facilities and renting of commercial space.
2.   In Engineering, Procurement and Construction (EPC) projects, the government bears the entire project cost.
3.   In the Hybrid Annuity Model (HAM) projects, the private entity bears the entire project cost.

Which of the statements given above is/are correct?
(a)   1 and 2 only
(b)   2 only
(c)   1 and 3 only
(d)   1, 2 and 3

Q73. With reference to 'blue holes,' consider the following statements:
1.   They are underwater sinkholes formed primarily by volcanic activity.
2.   The unique dark blue colour of blue holes is due to the presence of marine algae.
3.   They are hypoxic regions where multicellular organisms cannot survive.
4.   The Dragon Hole in the South China Sea is the deepest blue hole in the world.

Which of the above-given statements is/are incorrect?
(a)   1, 2 and 3 only
(b)   2, 3 and 4 only
(c)   1 and 4 only
(d)   1, 2, 3 and 4

Q74. Which one of the following countries is the largest producer of Copper, a major industrial metal critical for the manufacture of solar panels and wind turbines?
(a)   Brazil
(b)   Argentina
(c)   Chile
(d)   Venezuela

Q75. In India, Gift tax is levied on which of the following transactions?
1.   Gifts received during weddings
2.   Gifts received as part of the inheritance
3.   Gifts whose value exceeds Rs.50,000
4.   Acquisition of equity shares in Public-Sector Units (PSUs) through strategic disinvestment

Select the correct answer using the code given below:
(a)   1, 2 and 3 only
(b)   2 and 4 only
(c)   3 only
(d)   1, 2, 3 and 4

Q76. Which one of the following is in the correct order of the following Seas of the Arctic Ocean from west to east?
(a)   Kara sea, Laptev sea, Chukchi sea
(b)   Chukchi sea, Laptev sea, Kara sea
(c)   Kara sea, Chukchi sea, Laptev sea
(d)   Chukchi sea, Kara sea, Laptev sea

Q77. Ari Atoll, Baa Atoll and Rashdoo Atoll, recently seen in the news, are part of:
(a)   Madagascar
(b)   Seychelles
(c)   Maldives
(d)   Marshall Islands

Q78. Consider the following statements with reference to India's external trade (FY 2021- 22):
1.   Gujarat accounts for the largest share of India's exports to other countries.
2.   Canada is the only country with which India has a trade surplus.
3.   China ranks top in terms of the value of both imports and exports with India.
4.   Petroleum products remain the single largest commodity in terms of both imports and exports.

Which of the above-given statements is/are incorrect?
(a)   1, 2 and 4 only
(b)   2 and 4 only
(c)   2, 3 and 4 only
(d)   1, 2, 4 and 5

Q79. Consider the following:
1.   Increase in investment demand
2.   Increase in profit of a company
3.   Increase in total output of goods at lower capital cost

How many of the above are the possible consequences of a decrease in the Marginal Product of Capital?

(a) Only one
(b) Only two
(c) All three
(d) None

Q80. The Nara-Narayana relief, the Gajendramoksha relief and the Vishnu on Shesha relief are found at which of the following temples?
(a) Dashavatara Temple at Deogarh
(b) Yaksha temple at Padmavati
(c) Vishnu temple at Tigawa
(d) Bhitargaon temple near Kanpu

Q81. AnubhavaMantapa was organised by Guru Basavanna mainly for which one of the following reasons?
(a) To facilitate gathering for discussion on philosophy and experience
(b) To honour the new members who followed Lingayatism
(c) To compile the literary works authored by leading gurus
(d) To arrange and systematise rules and codes of the Lingayat sect

Q82. Consider the following statements with reference to Clearing Corporations in India:
1. They approve the establishment of Social Stock Exchanges in India.
2. They act as a mediator between entities engaged in a financial transaction.
3. They set the price and maturity of the contract for entities engaged in a financial transaction.
Which of the above-given statements is/are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Q83. Which of the following are most likely the outcomes of the demonetisation of a legal currency?
1. Stabilisation of the domestic currency value
2. Facilitation of trade
3. Decline in the rate of inflation
Select the correct answer using the code given below:
(a) 1 and 2 only
(b) 2 and 3 only
(c) 3 only
(d) 1, 2 and 3

Q84. Consider the following:

1. Digital Aadhaar
2 Unified Payment Interface (UPI)
3. Hypertext Transfer Protocol (HTTP)
4. Short Message Service (SMS)
5. Simple Mail Transfer Protocol (SMTP)
Which of the above are examples of Digital Public Infrastructure (DPI)?
(a) 1, 2 and 5 only
(b) 2, 4 and 5 only
(c) 1, 2, 3 and 4 only
(d) 1, 2, 3, 4 and 5

Q85. Consider the following statements with reference to Panini:
1. He gave scientific theory of phonetics (study of speech sounds).
2. His work Ashtadhyayi is known for its rigorous and consistent use of Sutras.
3. He was a contemporary of Patanjali.
Which of the statements given above are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Q86. Consider the following:
1. Public Provident Fund
2. Post Office Monthly Income Scheme
3. Sovereign Gold Bonds
4. Kisan Vikas Patra
Which of the above are classified as Small Savings Instruments in India?
(a) 1, 2 and 4 only
(b) 1, 3 and 4 only
(c) 2, 3 and 4 only
(d) 1, 2, 3 and 4

Q87. Recently, 'Khamti rice', 'Yak churpi' and 'Tangsa textile' were granted the Geographical Indications (GI) tag. They belong to:
(a) Mizoram
(b) Assam
(c) Meghalaya
(d) Arunachal Pradesh

Q88. With reference to the Vijayanagara empire, consider the following statements:
1. Palayakkarargal (poligar) was the holder of a territory granted to him in return for military service and tribute.
2. The Palayakkarar system was first introduced in India during this period.
Which of the statements given above is/are correct?
(a) 1 only

(b)   2 only
(c)   Both 1 and 2
(d)   Neither 1 nor 2

Q89. The 'Mylara Cult', recently seen in the news, is related to:
(a)   Shaivism
(b)   Vaishnavism
(c)   Buddhism
(d)   Jainism

Q90. Klebsiella', recently seen in the news, is a:
(a)   virus that causes respiratory infections in humans
(b)   bacterial strain often picked up by surgery patients in hospitals
(c)   gram-positive bacterium commonly found in soil and water
(d)   fungal pathogen responsible for skin infections

Q91. Consider the following:
1.   Processed meat
2.   Arecanut
3.   Benzene
4.   Asbestos
How many of the above are characterised as carcinogens by the World Health Organisation (WHO)?
(a)   Only one
(b)   Only two
(c)   Only three
(d)   All four

Q92. Consider the following statements with reference to Biofilms:
1.   They are 3D structures of multiple microorganisms attached to the surface.
2.   Mycobacterium tuberculosis forms biofilms that host drug-tolerant bacteria.
3.   They can include bacteria, fungi and protists.
Which of the above-given statements is/are correct?
(a)   1 and 2 only
(b)   2 and 3 only
(c)   1 and 3 only
(d)   1, 2 and 3

Q93. Consider the following:
1.   Pavapuri
2.   Lalitgiri
3.   Ratnagiri
4.   Udaygiri
Which of the above Buddhist Heritage Sites are part of the Diamond Triangle of Odisha?

(a)   1, 2 and 3 only
(b)   1, 3 and 4 only
(c)   2, 3 and 4 only
(d)   1, 2 and 4 only

Q94. Barnase/barstar system is associated with:
(a)   neutralisation of cancer cells through modification in genes
(b)   oil spill treatment
(c)   hybrid seed production
(d)   DNA amplification through Polymerase Chain Reaction (PCR)

Q95. 'Suka Saptati', written by Chintamani, is believed to be the first book to have been translated into Persian. It was translated by:
(a)   Amir Khusrau
(b)   Muntakhab-ul-Tawarikh
(c)   Minhaj-i-Siraj
(d)   Zia' al-Din Nakshab

Q96. Piezoelectric Materials (PM) are materials that can generate an electrical charge when mechanical stress is applied. Which of the following are classified as Piezoelectric Materials?
1.   Bones
2.   Silicon
3.   Quartz
4.   Sugar
Select the correct answer using the code given below:
(a)   1, 2 and 4 only
(b)   1, 3 and 4 only
(c)   2 and 3 only
(d)   1, 2, 3 and 4

Q97. The term analgesics is best defined by which among the following options?
(a)   substances that cause numbness and loss of sensation in the body
(b)   substances that enhance the sensation of pain to improve pain management
(c)   drugs that primarily target bacterial infections in the body
(d)   medications that reduce or relieve pain without causing loss of consciousness

Q98. Who among the following set up the Adalat-i-Ala in Lahore for the administration of justice?
(a)   Maharaja Ranjit Sing**h**
(b)   Shahjahan
(c)   Sawai Raja Jai Singh
(d)   Akbar

Q99. Which one of the following best describes the term "cognitive computing"?

(a) It is a type of artificial intelligence that mimics human thought processes and can understand, reason and learn from data.

(b) It is a form of quantum computing that relies on the principles of superposition and entanglement to process information.

(c) It is a term used to describe traditional computing methods that follow a linear, rule-based approach to problem-solving.

(d) It is a form of industrial automation that is primarily concerned with automating physical tasks, such as manufacturing and robotics.

Q100. Which of the following statements is correct with reference to 'Majorana fermions'?

(a) These are exotic particles that are their own antiparticles.

(b) These particles can only exist at extremely low temperatures close to absolute zero.

(c) These are predicted to be components of dark matter in the universe.

(d) These are elementary particles that possess both electric and magnetic charges.

ANSWERS

1. d	11. c	21. c	31. a	41. c	51. c	61. d	71. d	81. a	91. d
2. b	12. a	22. d	32. d	42. a	52. a	62. c	72. a	82. b	92. d
3. d	13. a	23. a	33. d	43. a	53. a	63. a	73. a	83. d	93. c
4. a	14. a	24. d	34. c	44. d	54. c	64. a	74. c	84. d	94. c
5. b	15. b	25. a	35. c	45. a	55. a	65. b	75. c	85. a	95. d
6. b	16. c	26. a	36. c	46. b	56. a	66. a	76. b	86. a	96. b
7. a	17. d	27. b	37. d	47. d	57. c	67. c	77. c	87. d	97. d
8. c	18. a	28. a	38. a	48. c	58. c	68. a	78. c	88. a	98. a
9. a	19. b	29. c	39. c	49. a	59. b	69. b	79. d	89. a	99. a
10. c	20. a	30. a	40. c	50. d	60. d	70. b	80. a	90. b	100. a