

# WBCS GAZETTE

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

DECEMBER 2025

A  
Monthly  
Digest for  
GK & State  
News



## TOPICS COVERED

- Bengal Related News
- West Bengal Related Static GK
- Appointments
- Awards
- Books & Authors
- Sports
- Important Days
- Static GK
- Current Affairs GK
- Learning Through Infographics



<b>Bengal Related News</b>	4
<b>West Bengal Related Static GK</b>	11
<b>Appointments</b>	13
<b>Awards</b>	15
<b>Books &amp; Authors</b>	17
<b>Sports</b>	17
<b>Important Days</b>	20
<b>Static GK</b>	21
<b>Current Affairs GK</b>	23
<b>Learning through Infographics</b>	26

**SALT LAKE**

Office no. 407, 4th Floor, AMP Mall Vaisakhi, AG 112, Salt Lake, Sector-II, Kolkata 700091  
mail: saltlake@aptiplus.in Ph: 033 3547 2686, 8820341777

**ELGIN ROAD**

Room No-302, 3rd Floor, Elgin Chambers, 1A, Ashutosh Mukherjee Road, Kolkata- 700020  
mail: elginroad@aptiplus.in Ph.: +91 33 4064 5777, +91-8100765577

**Disclaimer:**

The views and opinions expressed in the journal are the authors' and do not necessarily reflect the views of the Government or the organization they work for.

**Disclaimer:** Copyright infringement not intended.

**WBCS 2024**

# **CRASH COURSE**

90 Days Crash Course  
for **WBCS 2024 Prelims**

Online ₹6,500.00  
Offline ₹10,000.00



Call for details: **8820341777, 8100765577**

**SYLLABUS: CURRENT EVENTS OF NATIONAL AND INTERNATIONAL IMPORTANCE: TO BE READ FROM THE IAS GAZETTE: COVERS - POLITY, GOVERNMENT SCHEMES, SCIENCE AND TECHNOLOGY, ECONOMY, SECURITY, INTERNATIONAL RELATIONS, SECURITY, GEOGRAPHY, SOCIETY, ENVIRONMENT AND ECOLOGY**

## BENGAL RELATED NEWS

### Progeny Mapping

#### Context

- The Election Commission of India (ECI) is emphasising progeny mapping as a key part of the Special Intensive Revision (SIR) of electoral rolls in West Bengal.

#### Progeny Mapping Explained:

- Progeny mapping links a voter in the 2025 electoral roll to blood relatives listed in the 2002 electoral roll.
- Self-mapping applies when a voter's name appears in both the 2002 and 2025 rolls.
- Un-mapped voters have no self or family linkage in the 2002 roll.

#### Verification Process:

- House-to-house surveys initiated by ECI observers.
- District Electoral Officers (DEOs) to conduct hearings and document verification.
- Final inclusion or deletion to be decided after due verification.

#### Significance:

- Prevents bogus entries and duplicate voters.
- Improves accuracy and credibility of electoral rolls.
- Strengthens free and fair elections.

### Booth Level Officers (BLOs)

#### Context

- At least 14 Booth Level Officers (BLOs) have reportedly died within three weeks across India amid the ongoing Special Intensive Revision (SIR) of electoral rolls, highlighting concerns over work pressure and mental stress.

#### Booth Level Officer (BLO)

- A Booth Level Officer (BLO) is a government or semi-government official appointed by the Election Commission of India (ECI) as the

custodian of the electoral roll at the polling booth level.

- Primary role is to act as a link between voters and the election machinery, ensuring an accurate and updated electoral roll.

#### Appointment and Background

- BLOs are usually drawn from local institutions such as schools, government offices and public sector organisations.
- Teachers, Anganwadi workers, Panchayat Secretaries, Village Level Workers, Electricity Bill Readers, etc., are commonly appointed as BLOs.
- BLOs are not full-time electoral officials and perform election duties in addition to their regular work.
- Section 13B of the Representation of the People Act, 1950 enabled the first appointment of BLOs in August 2006.

#### Administrative Coordination.

- BLOs work under the supervision of the Electoral Registration Officer (ERO).
- They are assisted by the Assistant Electoral Registration Officer (AERO).
- They coordinate with Booth Level Agents (BLAs) appointed by political parties.

#### Roles and Duties of BLOs

##### Electoral Roll Management

- Verify voter details at the booth level.
- Distribute and collect forms for voter registration, correction and deletion.
- Conduct door-to-door verification to prevent duplicate or bogus entries.

##### Voter Facilitation

- Assist citizens in understanding the voter registration process.
- Provide information on polling stations and voting procedures.

- Support **vulnerable groups**, including the elderly and differently-abled persons, in accessing electoral services.

#### **Postal Ballot and Home Voting Support**

- Inform senior citizens above 85 years and Persons with Disabilities (PwDs) with benchmark certificates about Home Voting and Postal Ballot facilities.

#### **Election-Day Responsibilities**

- Ensure smooth conduct of elections at the booth level.
- Act as the first point of contact for voter-related queries.
- Report irregularities or issues to higher election authorities.

#### **Promotion of ECI Digital Initiatives**

- Promote the use of ECI IT applications for voter facilitation and roll accuracy.
- Popular voter-oriented apps include Voter Helpline App, eVIGIL, Know Your Candidate andSaksham-ECI.

## **Buxa Hills**

#### **Context**

- Nearly 13 villages of Buxa Hills in West Bengal's Alipurduar district are battling against abysmally poor network connection.

#### **Buxa Tiger Reserve**

- Location** - Buxa Tiger Reserve (BTR) is located in Alipurduar district, northern West Bengal, India.
- Established** - Declared a Tiger Reserve in 1983; National Park status in 1997.
- Governing body** - Ministry of Environment, Forest and Climate Change, Government of India.
- Geographical significance** -
  - Northern boundary along India-Bhutan international border.
  - Sinchula hill range forms the northern edge.
  - Eastern boundary touches Assam.
  - NH-31C runs along the southern boundary.
  - Part of the Terai eco-system and Indo-Malayan biogeographic region.
- Ecological connectivity** -

- Acts as an international elephant migration corridor between India and Bhutan.
- Phibsoo Wildlife Sanctuary (Bhutan) to the north and Manas National Park to the east.
- Geology** -
  - Linked to the Buxa Formation with stromatolite-bearing dolomite limestone.
  - Declared a National Geological Monument for conservation and geotourism.
- Forest types** -
  - Northern dry deciduous forest.
  - Eastern Bhabar and Terai sal forest.
  - East Himalayan moist mixed deciduous forest.
  - Sub-Himalayan secondary wet mixed forest.
  - Sub-montane semi-evergreen forest.
  - Northern tropical evergreen forest.
  - East Himalayan subtropical wet hill forest.
  - Moist sal savannah, low alluvium and savannah woodland.
- Flora diversity** -
  - Over 300-450 tree species, 250 shrubs, 400 herbs.
  - 150 orchid species, 10 bamboo species, 9 cane species.
  - Major trees include Sal, Champa, Gamhar, Simul, Chikrasi.
- Fauna diversity** -
  - Mammals - Asian elephant, Bengal tiger, Indian leopard, clouded leopard, gaur, sambar, wild boar, dhole.
  - Birds - Over 280-390 species, including hornbills, black-necked crane, black stork, Eurasian teal.
- Endangered species** -
  - Bengal tiger, Asian elephant, Chinese pangolin, leopard cat, hispid hare, hog deer, Bengal florican, white-rumped vulture, great hornbill.
- Hydrology** -
  - Major rivers include Raidak and Jayanti.
  - Narathali Lake supports migratory birds.
- Historical importance** - Buxa Fort -

- Located at **867 m altitude** within BTR.
- Originally built by **Bhutanese rulers** to control trade routes between India, Bhutan and Tibet.
- Captured by the British in **1865** under the **Treaty of Sinchula**.
- Used as a **high-security prison** for Indian **freedom fighters**.
- Associated with **Netaji Subhas Chandra Bose** and **Anushilan Samiti** revolutionaries.
- **Tibetan refugee phase -**
  - Served as a **refugee camp** after the **1959 Tibetan uprising**.
  - Tibetan monks later relocated to **Bylakuppe and Mundgod (Karnataka)**.
- **Major threats -**
  - **Forest fires** caused by NTFP collectors and grazing activities.
  - **Flooding and river siltation** due to heavy bed-load from Bhutan rivers.
  - **Overgrazing by cattle**, leading to habitat degradation.
  - **Timber smuggling** and **sporadic militant intrusion** from Assam.
  - **Encroachment** through unauthorized orange orchards in forest hamlets.
- **Overall significance -**
  - BTR is a **biodiversity hotspot**, **trans-boundary conservation zone** and a site of **ecological, historical and cultural importance** in eastern India.

## Reallocated Territorial Jurisdiction of Debt Recovery Tribunals (DRTS) In West Bengal

### Context

- The Ministry of Finance has reallocated territorial jurisdiction of **Debt Recovery Tribunals (DRTs)** in West Bengal and the **Andaman & Nicobar Islands**.
- The change has been notified through a **Gazette notification dated 16 December 2025**.

### Why this change was made?

- To remove jurisdictional ambiguity while filing cases.

- To **distribute workload evenly** among DRTs.
- To **reduce delays** in debt recovery proceedings for banks and financial institutions.

### Legal basis

- Issued under **Section 3 of the Recovery of Debts and Bankruptcy Act, 1993**.
- Amends the earlier **2017 notification** on DRT jurisdiction.
- Applicable from the date of publication and only to new cases.

### DRT under Serial No. 2

- Covers all districts of West Bengal, except:
  - **Kolkata City, Howrah, Hooghly, South 24 Parganas**.
  - **Darjeeling, Jalpaiguri, Coochbehar, Uttar Dinajpur, Dakshin Dinajpur, Malda, Murshidabad, Birbhum, Alipurduar, Kalimpong**.
- Also has jurisdiction over the **entire Andaman & Nicobar Islands**.

### DRT under Serial No. 3

- Limited to specific areas of **Kolkata City**.
- Police station areas covered:
  - **Shyampukur, Jorabagan, Burtolla, Burrabazar, Posta, Jorasanko, Amherst Street**.
- Any new police stations created in **Kolkata City** or **South 24 Parganas** will be automatically included.

### DRT under Serial No. 4

- Covers the following districts of **West Bengal**:
  - **Darjeeling, Jalpaiguri, Coochbehar**.
  - **Uttar Dinajpur, Dakshin Dinajpur, Malda**.
  - **Murshidabad, Birbhum, Alipurduar, Kalimpong**.

### Overall significance

- Provides clear guidance on which DRT to approach.
- Helps in faster disposal of debt recovery cases.
- Improves administrative efficiency of the DRT system.

## Clean Energy Transition In West Bengal

### Context

- **West Bengal** is strengthening its clean energy transition by committing to a higher share of **renewable energy** in its power mix by 2030.
- **Details**
- The State aims to meet **20% of its total energy demand** through **renewable sources** by 2030.
- Focus is on **scaling solar energy**, along with **biomass and hybrid renewable systems**.
- The government is exploring **integrated clean energy models** combining multiple renewable sources.
- Emphasis is on making renewable energy **accessible and affordable** for agricultural, residential and commercial consumers.
- According to the Minister for **Non-Conventional and Renewable Energy Sources**, electricity demand is projected to grow:
  - **5% annually in the utility sector.**
  - **19% annually in the captive power segment** over the next 2-3 decades.
- The **Renewable Purchase Obligation (RPO)** is planned to increase from **30%** to **50%** by **2030**.
- Installed renewable capacity targets include:
  - **15 GW by 2026.**
  - **25 GW by 2032.**

## Two New Marine Insect Species Along The Bay Of Bengal Coast

### Context

- Indian marine biodiversity has received a boost with the discovery of **two new marine insect species** along the **Bay of Bengal coast in West Bengal**, highlighting the ecological importance of the region.

### Details

- The discoveries were made by the **Estuarine Biology Regional Centre of the Zoological Survey of India (ZSI), Gopalpur**.
- The new species belong to the **Nereididae family (polychaete worms)** and were found along the **Digha and Bankiput coasts** in **East Medinipur district**.
- The two species have been named:
  - **Namalycastissolenotognatha**.

- **Nereis dhritiae.**

### **Namalycastissolenotognatha:**

- Name derived from Greek words indicating **black-spotted, canal-rich teeth**.
- Found in **saline, sulphide-rich soils** with high organic matter.
- Associated with **deciduous forests** and **hard coastal soils**.

### **Nereis dhritiae:**

- Named in honour of **Dr. Dhritiae Banerjee**, first woman Director of **ZSI, Kolkata**.
- Found on **sandy beaches**, burrowing into **water-soaked wood** during high tides.
- Plays an important role in **coastal ecosystem functioning**.

- Both species are expected to act as **environmental bioindicators**, helping assess **pollution and ecological health** of coastal zones.
- The discovery underlines the need for **enhanced environmental research and conservation**, especially in **human-impacted coastal areas**.

## Matua Community

### Context

- The **Matua community**, a significant Bengali Hindu group largely concentrated in **North 24 Parganas, Nadia and South 24 Parganas districts** of West Bengal, has expressed **concerns over the Special Intensive Revision (SIR) of electoral rolls**.

### Details

- The **Matua Mahasangha** is a Hindu reform movement founded by **Harichand Thakur** around 1860 in present-day Bangladesh. It emphasizes **education, social upliftment and devotional chanting of God's name (harinama)**.
- Following the **partition of India in 1947**, many Matua followers migrated to West Bengal, settling in areas like **Thakurnagar**, which became the new headquarters of the Matua Mahasangha.

## Illegal Sand Mining In West Bengal

### Context

- Illegal sand mining in West Bengal, especially in Birbhum, Malda, South Dinajpur and North Bengal, has grown into a large-scale underground economy with environmental, economic and political implications.

### Governance and Law Enforcement:

- STF and ED investigations revealed illegal sand transport, fake e-challans and unaccounted cash flows.
- Operators like G.D. Mining allegedly moved Rs 130 crore through illicit channels.
- Arrests occur, but most offenders secure bail, showing enforcement challenges.
- Government introduced measures:
  - Online auctioning of quarries
  - Digitisation of permits and inter-state transport
  - Generation of 27+ lakh e-challans to curb illegal activity
- Despite policy reforms, illegal operations continue via local verbal deals and revenue-sharing arrangements.

### Economic Aspects:

- Inflated sand prices: from Rs 900–1,100 per 100 CFT (pre-2011) to Rs 4,200–5,000 after 2013.
- Increased construction costs due to monopoly by big operators.
- Small traders are squeezed between government regulations and large capital.
- Illegal trade contributes to underground political funding and election leverage.

### Environmental Impact:

- Mechanical pumps excavate 70–150 feet below riverbeds, weakening embankments.
- Altered river flow increases flooding, soil erosion and ecological imbalance.
- Agricultural land near rivers is converted into temporary sand depots, reducing fertility.
- River ecosystems and biodiversity are disturbed, with cumulative damage over years.

### Socio-Political Implications:

- Villagers employed as diggers, loaders, or guards earn higher-than-farm wages, creating dependency.

- Employment used as electoral leverage, influencing voting patterns.
- The trade operates with political protection, making it difficult to break entrenched systems.

### Government Response:

- 2021 sand quarry policy aims to regularise extraction and increase revenue (projected Rs 1,100 crore over five years).
- Digitised permits, auctions and e-challans intended to reduce illegal sand lifting.
- On-ground implementation is partially successful, as illegal extraction continues in unmonitored areas.

### Conclusion:

- Illegal sand mining in West Bengal exemplifies the complex interplay of governance failure, environmental degradation, economic monopoly and political exploitation.
- Policy and technological reforms alone are insufficient; strict enforcement, community monitoring and political accountability are essential for sustainable regulation.

## Chamta Wetland In West Bengal

### Context

- Chamta Wetland in West Bengal is a key site under the ICAR-WorldFish Collaborative Programme (Window-3), focusing on sustainable aquaculture and wetland management.

### Key Initiatives and Activities:

- Field-level engagement involved international and national experts, including Prof. Mohammad Muslem Uddin from the University of Chittagong.
- Assessment of HDPE pen culture facility for experimental rearing of *Mystuscavasius* and *Macrobrachium* species.
- Promotion of eco-friendly wetland management methods:
  - Natural macrophyte control through herbivorous cattle grazing as an alternative to mechanical or chemical removal.
- Emphasis on scientific pond management, including:

- Broodstock care
- Water quality management
- Enhanced larval rearing practices
- Strengthening hatchery operations and capacity-building for local fisher communities.

**Significance:**

- Encourages sustainable inland fisheries and nature-based solutions.
- Enhances livelihood opportunities for local fisherfolk while conserving wetland ecosystems.
- Supports scientific collaboration between India and Bangladesh for inland fisheries research.

**Conclusion:**

- The programme exemplifies integrated wetland management, combining biodiversity conservation, sustainable aquaculture and community engagement—a model relevant for ecological and rural development policies.

## Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) In West Bengal

**Context**

- The Union Government resumed the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) in West Bengal after more than three years, following a Calcutta High Court directive (June 2025). The scheme is vital for providing 100 days of wage employment to rural households,

## Musk Deer

**Context**

- Musk deer are endangered species restricted to the Himalayan region in India, previously confirmed in Arunachal Pradesh, Himachal Pradesh, Jammu & Kashmir, Sikkim and Uttarakhand. Their last recorded sighting in West Bengal was in 1955 in Singhalila National Park.

**Recent Development:**

- First photographic evidence of musk deer in West Bengal was recorded on 17 December 2024 in Neora Valley National Park at an altitude of 3,112 m.
- Six consecutive images captured at night confirmed the presence of the genus *Moschus*.

**Significance:**

- Confirms the continued presence of musk deer in West Bengal after ~70 years.
- Indicates suitable habitat availability in Neora Valley National Park, part of the Kangchenjunga transboundary landscape.

especially in underdeveloped districts like Bankura, Purulia, Jhargram and Paschim Medinipur (Jangalmahal region).

**Key Points:**

- **Special conditions imposed by the Union Government:**
  - Work costing more than Rs 20 lakh prohibited.
  - Mandatory 100% e-KYC for all workers.
  - Pre-estimation field visits required before starting any project.
  - Labour budget approval to be quarterly (FY26 submission within 30 days), instead of the usual annual approval.
- **State Government Response:**
  - Chief Minister Mamata Banerjee rejected the conditions, calling them restrictive and disrespectful, citing time constraints ahead of elections.
  - She emphasized that the state does not want "mercy" and criticized the imposed quarterly labour budget and training requirements.
- **Significance of MGNREGS in West Bengal:**
  - Provides livelihood security to poor and marginalised communities.
  - Disruption of the scheme led to large-scale rural-to-urban migration over the past few years.
  - Crucial for employment in backward regions like Jangalmahal.

- Highlights the need for species-level identification, population assessment and long-term conservation strategies.
- Emphasizes the importance of strengthened protection measures and monitoring for this highly threatened species.

### **Musk Deer**

Musk deer, belonging to the genus **Moschus** and the only living members of the family **Moschidae**, are **small, solitary, herbivorous mammals** found primarily in the **forested and alpine regions** of the **Himalayas** and other parts of **Asia**. Despite their name, they are not **true deer**, as they lack **antlers** and **preorbital glands** and are more closely related to **bovids**. Musk deer have a **stocky build, long hind legs** and males possess **elongated upper canines forming tusks**, while only adult males have a specialized **musk gland** used to **attract mates**. They are **shy, mostly nocturnal or crepuscular** and maintain well-defined **territories**, often marked with **scent from caudal glands**. Their diet consists mainly of **leaves, flowers, grasses, mosses andlichens**. Musk deer have historically been **hunted** for their **musk**, which is highly valued in **perfumes and traditional medicine**, leading to significant **population decline**. Currently, their **global population** ranges between **400,000 and 800,000**, with higher densities in **China, Russia and Mongolia**. Threats to their survival include **habitat fragmentation, illegal hunting, deforestation and climate change**, although **conservation efforts** and **captive breeding programs** are helping populations recover. **Fossil records** show that musk deer have existed since the **late Oligocene**, with the genus **Moschus** surviving since the **Late Miocene**, making them the only **extant representatives** of a once widespread group.

## **International Tourist Destination**

### **Context:**

- West Bengal is emerging as a major **international tourist destination** in India.
- In **2024**, the state received **31 lakh foreign tourists**, up from 27 lakh in 2023, making it **second in the country** after Maharashtra.

### **Key Drivers of Tourism:**

- Focus on **festival tourism, religious tourism, MICE tourism** and niche segments.
- Attractions include:
  - **Kolkata:** Heritage walks in College Street, Kumartuli, Park Street; Princep Ghat for evening leisure.
  - **Darjeeling:** Hills, tea gardens, sunrise points and toy train rides.
  - **Sundarbans:** Mangrove ecosystem, wildlife spotting, eco-tourism.
  - **Bengali Cuisine:** Traditional food and sweets like mishtidoi, rosogolla and sandesh.

### **Tourist Demographics:**

- Major sources: **Europe (UK, Italy), USA, Russia**.
- Growth despite **limited direct international flights**, driven by **cultural and heritage appeal**.

### **Significance for Economy and Policy:**

- Boosts **state revenue**, local employment and small businesses.
- Enhances **global visibility** and soft power through cultural promotion.
- Supports initiatives for **sustainable tourism and regional development**.

## WEST BENGAL RELATED STATIC GK

- **Coal** – Principal mineral, mainly in Raniganj Coalfield, Bardhaman; used in thermal power and industries.
- **China Clay** – Found in Darjeeling hills; used in ceramics, sanitary ware, pottery, tiles and porcelain.
- **Fire Clay** – Alongside coal in Birbhum, Bankura, Purulia; used for refractory bricks, tiles and pottery.
- **Limestone** – Found in Purulia, Bankura, Birbhum; essential for cement and iron & steel industry.
- **Silica Sand** – Abundant in Medinipur; used in glass, foundry molds, ceramics and metallurgy.
- **Apatite & Rock Phosphate** – Found in Purulia; used for phosphatic fertilizer production.
- **Dolomite** – Purulia reserves; used in float glass, iron & steel flux, soil conditioning.
- **Quartz & Feldspar** – Found in Purulia pegmatites; quartz for glass, molds, electronics; feldspar for ceramics and glass.
- **Farakka Super Thermal Power Station**, located at **Nabarun, Murshidabad, West Bengal** is a **coal-based power plant** owned by **NTPC** and commissioned in **1986**. It has a total capacity of **2,100 MW**. Coal is sourced from **Rajmahal open cast project, Jharkhand** and imported via **Farakka and Haldia ports** through **National Waterway 1**. It is a key power supplier for **West Bengal** and nearby regions.
- **Mahasweta Devi** received the **Ramon Magsaysay Award** in **1997**.
- **Surendranath Banerjee** formed the **Indian Association**, merged with **INC** in **1886**.
- **Young Bengal movement** was started by **Vivian Derozio**.
- **Sahitya Akademi Award 2017** in Bengali went to **Afsar Ahmed**.
- **Raiganj Wildlife Sanctuary** is located in **Uttar Dinajpur district**.
- **Ramakrishna Mission** was founded by **Swami Vivekananda** in **1897**.
- 'Jugantar' was started by **Sri Aurobindo Ghose**.
- **First Bengal Peasants Party & Workers Party** was organized in **1925 AD**.
- **Bina Das** attempted to shoot the Governor of Bengal during her convocation at **University of Calcutta**.
- **Job Charnock** founded **Calcutta** at **Sutanuti, Kalikata and Govindapur**.
- 'Rabindra Puraskar' award started in **1950**.
- **Satinath Bhaduri** received **Rabindra Puraskar** for the novel '**Hate Bazare**'.
- **Chandannagar** was integrated into **West Bengal** in **1954**.
- **First Speaker** of West Bengal Legislative Assembly was **Saila Kumar Mukherjee**.
- **Durgapur Steel Plant** was established with **USA** help in **1955**.

- Smallest National Park in West Bengal is Singalila National Park.
- Buxa Wildlife Sanctuary declared as Tiger Reserve in 1983.
- Smallest Wildlife Sanctuary in West Bengal is Jore Pokhri Wildlife Sanctuary.
- 'Nil Darpan' was written by Dinabandhu Mitra.
- Largest district by population in West Bengal is North 24 Parganas.
- First Bengali film to win National Film Award for Best Feature Film is Pather Panchali.
- The first Bengali feature film was the silent movie Billwamangal, released in 1919.
- First Sultan of Bengal was Shamsuddin Ilyas Shah.
- Last British Governor of Bengal was Sir Frederick Burrows.
- First Bengali novel – Durgeshnandini.
- 'Meghnad Badh Kavya' was written by Michael Madhusudan Dutt.
- 'Anandamath' by Bankim Chandra Chattopadhyay published in 1882.
- Author of first Bengali novel 'Durgeshnandini' – Bankim Chandra Chattopadhyay.
- First Indian Librarian of National Library of India – Harinath De.
- National Library of India in Kolkata was set up by Lord Curzon.
- Indian Science Congress Association started in 1914.
- First ODI at Eden Gardens – 1987.
- Captain of Indian football team (1951 Asian Games Gold Medal) – Shailesh Manna.
- Mihir Sen crossed English Channel in 1959.
- East Bengal was named East Pakistan in 1956.
- Longest railway platform in West Bengal – Kharagpur.
- Doctors' Day in India – 1st July, in memory of Bidhan Chandra Roy.
- IIT Kharagpur established in 1951.
- Bengal Partition (1905) declared by Lord Curzon.
- Victoria Memorial construction completed in 1921.
- Novel 'Parineeta' written by Sarat Chandra Chattopadhyay.
- Novel 'Devdas' written by Sarat Chandra Chattopadhyay in 1917.
- Dutch ceded Chinsura to the British in 1825.

## APPOINTMENTS

Position	Details of Appointment (1-2 lines)
Chief Secretary of Delhi	Rajeev Verma appointed as the Chief Secretary of Delhi.
Director General of National Cadet Corps	Lieutenant General Virendra Vats appointed as the 35th Director General of National Cadet Corps.
Chief Executive Member of Bodoland Territorial Council	Hagrama Mohilary appointed as the Chief Executive Member of Bodoland Territorial Council.
Executive Director of Reserve Bank of India	Sanjay Kumar Hansda appointed as Executive Director in the Department of Economic and Policy Research of Reserve Bank of India.
President of PHD Chamber of Commerce and Industry	Rajeev Juneja appointed as President of PHD Chamber of Commerce and Industry.
Chairperson of World Intellectual Property Organization Advisory Board of Judges	Justice Prathiba M. Singh appointed as Chairperson.
President of Associated Chambers of Commerce and Industry of India	Nirmal Kumar Minda appointed as President of Associated Chambers of Commerce and Industry of India.
President-Elect of Federation of Indian Chambers of Commerce and Industry	Anant Goenka appointed as President-Elect of Federation of Indian Chambers of Commerce and Industry.
Chief Justice of India	Justice Surya Kant appointed as the 53rd Chief Justice of India.
Chief Justice of Bombay High Court	Justice Shree Chandrashekhar appointed as Chief Justice of Bombay High Court.
Chief Justice of Patna High Court	Justice Pavankumar Bhimappa Bajanthri appointed as the 46th Chief Justice of Patna High Court.
Chief Justice of Manipur High Court	Justice M. Sundar appointed as Chief Justice of Manipur High Court.
Acting Chief Justice of Calcutta High Court	Justice Sujoy Paul appointed as Acting Chief Justice of Calcutta High Court.
Attorney General of India	Ranga Venkataramani appointed as Attorney General of India.
Chief Secretary of Manipur	Dr. Puneet Kumar Goel appointed as Chief Secretary of Manipur.
Governor of Maharashtra (Additional Charge)	Acharya Devvrat given additional charge as Governor of Maharashtra.
Governor of Haryana	Professor Ashim Kumar Ghosh appointed as Governor of Haryana.
Governor of Goa	Pusapati Ashok Gajapathi Raju appointed as Governor of Goa.
Lieutenant Governor of Ladakh	Kavinder Gupta appointed as Lieutenant Governor of Ladakh.
Secretary of Ministry of Mines	Piyush Goyal appointed as Secretary of Ministry of Mines.
Chief Executive Officer of Food Safety	Rajit Punhani appointed as Chief Executive Officer.

<b>and Standards Authority of India</b>	
<b>Director General of Central Industrial Security Force</b>	Praveer Ranjan appointed as Director General.
<b>Director General of Indo-Tibetan Border Police</b>	Praveen Kumar appointed as Director General.
<b>Chief of Defence Staff and Secretary, Department of Military Affairs</b>	General Anil Chauhan appointed Chief of Defence Staff and Secretary, Department of Military Affairs.
<b>Vice Chief of Army Staff</b>	Lieutenant General Pushpendra Singh appointed as Vice Chief of Army Staff.
<b>Air Officer-in-Charge Maintenance, Indian Air Force</b>	Air Marshal Sanjiv Ghuraria appointed.
<b>Air Officer-in-Charge Administration at Air Headquarters</b>	Sreedhara Sivakumar appointed.
<b>Director of Vikram Sarabhai Space Centre</b>	Dr. A. Rajarajan appointed Director.
<b>Commissioner of Delhi Police</b>	Shashi Bhushan Kumar Singh appointed as Commissioner of Delhi Police.
<b>First Woman Director General of Railway Protection Force</b>	Sonali Mishra appointed.
<b>Controller General of Accounts</b>	Tiruvalam Cudamani Aishwarya Kalyani appointed as the 29th Controller General of Accounts.
<b>Chairperson of National Medical Commission</b>	Vishwas Patel / Dr. Abhijat Sheth appointed as Chairperson.
<b>Chairperson of United Nations Environment Programme Financial Initiative Principles for Sustainable Insurance</b>	Amita Chaudhary appointed.
<b>Executive Director at International Monetary Fund</b>	Dr. Urjit Patel appointed.
<b>India's Executive Director at Asian Development Bank</b>	L. Satya Srinivas appointed.
<b>President of United Nations Global Compact Network India</b>	Vaishali Nigam Sinha appointed.
<b>Mission Director of Atal Innovation Mission</b>	Deepak Bagla appointed.
<b>Chairman and Managing Director of National Thermal Power Corporation Limited</b>	Gurdeep Singh appointed.
<b>Managing Director and Chief Executive Officer of Indian Overseas Bank</b>	Ajay Kumar Srivastava appointed.
<b>Part-Time Chairman, Yes Bank</b>	Rama Subramaniam Gandhi appointed.
<b>Executive Director of Reserve Bank of India (Monetary Policy Committee)</b>	Indranil Bhattacharyya appointed ex-officio member.
<b>Vice Presidential Election Officials</b>	Sushil Kumar Lohani (Ministry of Panchayati Raj) and D. Anandan (Ministry of Finance) appointed.
<b>Chief of Research and Analysis Wing</b>	Parag Jain appointed as Chief of Research and Analysis Wing.

Executive Director of Reserve Bank of India	Kesavan Ramachandran appointed.
Executive Director of Securities and Exchange Board of India	Sunil Jayawant Kadam appointed.
Deputy Prime Minister of United Kingdom and Secretary of State for Justice	David Lammy appointed.
Prime Minister of Jamaica	Andrew Holness appointed.
Prime Minister of Thailand	AnutinCharnvirakul appointed.
Prime Minister of Lithuania	Inga Ruginienė appointed.
President of Argentina	Javier Milei appointed.
President of Seychelles	Dr. Patrick Herminie appointed.
President of Guyana	Mohamed Irfaan Ali appointed.
Prime Minister of Rwanda	Dr. Justin Nsengiyumva appointed.
President of Cameroon	Paul Biya continues in office.

## AWARDS IN NEWS

### India's Film *Homebound* Shortlisted for Academy Award

- The Indian feature film *Homebound*, directed by Neeraj Ghaywan, has been shortlisted for the Best International Feature Film category at the 98th Academy Awards (Oscars) 2026. *Homebound* is among 15 films selected worldwide from 86 submissions.

### Prime Minister of India Receives Highest Award of Ethiopia

- Prime Minister Narendra Modi was conferred Ethiopia's highest civilian honour, the Great Honour Nishan of Ethiopia, making him the first head of state or head of government to receive this distinction, in recognition of his contribution to India-Ethiopia partnership.

### National Energy Conservation Award 2025

- Miyana Railway Station received the National Energy Conservation Award 2025 for excellence in energy efficiency and conservation efforts in infrastructure.

### FIA European Rally Championship Title Won by MRF Tyres

- Indian tyre manufacturer MRF Tyres won the 2025 FIA European Rally Championship Title, marking a global motorsport achievement.

### Technological Innovation Awards

- Scientists from National Thermal Power Corporation Limited, NETRA and the Council of Scientific and Industrial Research received awards for technological innovations, highlighting achievements in research and development.

### Global Bank of the Year 2025 Award

- Development Bank of Singapore Limited (DBS) was named Global Bank of the Year 2025 by The Banker magazine, a prestigious international banking award.

### Union Home Minister's Efficiency Medal

- Central Reserve Police Force Officer Dinesh Khatak was awarded the Union Home Minister's Efficiency Medal for exemplary service in internal security duties.

## Shilp Guru and National Handicrafts Awards

- President Droupadi Murmu presented the Shilp Guru and National Handicrafts Awards for 2023 and 2024, recognising master craftspersons for outstanding contribution to Indian handicrafts.

## Golden Globe Horizon Award

- Indian actor Alia Bhatt was honoured with the Golden Globe Horizon Award at the Red Sea International Film Festival for her contribution to cinema.

## Champions of the Earth Award 2025

- Supriya Sahu won the United Nations Environment Programme Champions of the Earth Award 2025 for leadership in climate action and environmental sustainability.

## TIME Athlete of the Year 2025

- American basketball player A'ja Wilson was named TIME Athlete of the Year 2025 by TIME magazine.

## TIME Entertainer of the Year 2025

- Actor Leonardo DiCaprio was named TIME Entertainer of the Year 2025 by TIME magazine for his contributions to entertainment.

## TIME CEO of the Year 2025

- Indian-origin technology executive Neal Mohan was named TIME CEO of the Year 2025 by TIME magazine.

## Global Humane Society Animal Welfare Award

- Anant Ambani became the youngest recipient of the Global Humane Society's Animal Welfare Award for leadership in animal welfare initiatives.

## People for the Ethical Treatment of Animals India Awards

- Bollywood actor Raveena Tandon won the top annual award from People for the Ethical Treatment of Animals (PETA) India for her contribution to animal rights.

## FIFA Peace Prize Award

- Former United States President Donald Trump was awarded the first FIFA Peace Prize during the 2026 FIFA World Cup draw ceremony, an international recognition event.

## United Nations Population Award Institutional Category

- The International Union for the Scientific Study of Population (IUSSP) was honoured by UNFPA India with the United Nations Population Award 2025 in the institutional category for contributions to population research.

## Cooperative Bank Recognition

- RCMS Bank was honoured as the Best Profit-Making Cooperative Bank in recognition of its financial performance and community banking achievements.

## International Emmy Awards 2025

- The International Emmy Awards 2025 winners were announced, with notable Indian entries and nominations highlighted, marking a key international media recognition.

## Prestigious Literary Award

- Velamala Simmanna was selected for the LNF Literary Award 2025, recognising excellence in literature.

## IIM Ranchi International Accreditation

- Indian Institute of Management Ranchi earned AMBA (Association of MBAs) accreditation and 4 Palms in the Eduniversal 2025 global rankings, a significant educational achievement.

## National Book Awards 2025

- Rabih Alameddine and Patricia Smith were crowned winners at the National Book Awards 2025, marking international literary recognition.

## Miss Universe 2025

- Fátima Bosch of Mexico was crowned Miss Universe 2025, with India's Manika Vishwakarma finishing in the Top 12 at the global pageant.

## BOOKS & AUTHORS

Book	Author and Details
The One: Cricket, My Life and More	Shikhar Dhawan's autobiography titled "The One: Cricket, My Life and More" was published by HarperCollins India.
Highway to Swades: rediscovering India's superpowers	Bhairavi Jani
The India Way	S. Jaishankar
A new idea of India-Individual rights in a civilizational state	Harsh Madhusudan and Rajeev Mantri
Indianomix-making sense of modern India	Vivek Dehejia and Rupa Subramanya.
India Unbound-from independence to the global information age	Gurcharan Das
The heat and dust project-the broke couple's guide to Bharat	Devapriya Roy
Land of the seven rivers-A brief history of India's geography	Sanjeev Sanyal
In Spite of the Gods	Edward Luce
Freedom at Midnight	Dominique Lapierre and Larry Collin

## SPORTS

### India Enters Squash World Cup Final

- India reached the Squash World Cup final for the first time after defeating Egypt 3-0 in the semifinal. The Squash World Cup is an international team tournament conducted under the aegis of the World Squash Federation, the global governing body recognised by the International Olympic Committee. Squash is played in a four-walled court under the point-a-rally scoring system,

### Desert Palm Achievement Award

- Leonardo DiCaprio was announced to receive the Desert Palm Achievement Award, a distinguished film industry honour.

### Indira Gandhi Peace Prize

- Former United Nations High Commissioner Michelle Bachelet was awarded the Indira Gandhi Peace Prize, recognising her contribution to peace and humanitarian causes.

**World Cup Final** is the season-ending elite competition organised by the **International Shooting Sport Federation**, featuring only top-ranked shooters. Events are conducted across disciplines such as **ten-metre air pistol**, **twenty-five metre pistol** and **fifty metre rifle**. India's performance reflected improved international competitiveness in Olympic shooting events.

### Inika Mazumder Wins National Kyokushin Karate Title

- Inika Mazumder won gold in **Kihon** and **Kumite** to become **National Champion** in **Kyokushin Full Contact Karate**. Kyokushin karate was founded in 1964 by **Masutatsu Oyama** and follows a **knockdown competition format** with full-contact rules. **Kihon** assesses fundamental techniques, while **Kumite** involves regulated full-contact bouts. The national championship is one of India's highest-level competitions in Kyokushin karate.

### Manipur Wins 15th Manipur Polo International

- India B (Manipur) defeated Colombia to win the 15th Manipur Polo International Tournament at Mapal Kangjeibung, Imphal. The tournament is organised by the **Manipur Horse Riding and Polo Association** and is a major event of the **Sangai Festival**. Polo originated in Manipur as **Sagol Kangjei** before evolving into the modern international sport. Mapal Kangjeibung is regarded as one of the oldest polo grounds in the world.

### Ayush Mhatre Becomes Youngest to Score Centuries in All Formats

- Ayush Mhatre became the **youngest cricketer** to score centuries in **first-class**, **List A** and **Twenty20** cricket. These formats are officially classified under the laws and playing conditions framed by the **Marylebone Cricket Club** and regulated internationally by the **International Cricket Council**. He achieved the milestone at **18 years and 135 days**,

surpassing the earlier record of **Rohit Sharma**. The feat underlines the strength of India's domestic cricket structure.

### Niki KaliyandaPoonacha Qualifies for Australian Open Doubles

- Niki KaliyandaPoonacha qualified for the **Australian Open men's doubles main draw** after winning the **Asia-Pacific Wildcard Playoff**. The **Australian Open**, first held in 1905, is one of the **four Grand Slam tournaments** governed by the **International Tennis Federation**. Doubles matches are played using the **full doubles court**, including alleys. This marks Poonacha's **first appearance in a Grand Slam main draw**.

### South Africa Register Record Test Win Over India

- **South Africa** defeated India by **408 runs** in a **Test match**, the largest defeat for India by runs. **Test cricket**, first played in 1877, is governed by the **International Cricket Council** and consists of **two innings per side** over **five days**. India were dismissed for **140** while chasing **549**, resulting in a **two-nil series sweep** for South Africa. The result impacted standings in the ongoing **World Test Championship cycle**.

### Javokhir Sindarov Becomes Youngest World Chess Cup Champion

- Javokhir Sindarov became the **youngest winner** of the **World Chess Cup**, defeating **Wei Yi** in tie-breaks. The **World Chess Cup** is organised by the **International Chess Federation** and follows a **knockout format**. Classical games are followed by **rapid and blitz tie-breaks** if required. The 2025 edition was hosted in **Goa**, highlighting India's growing role in international chess events.

### India to Host Silver Level International Athletics Meet

- India will host its first **Silver level Continental Tour athletics meet** in **Bhubaneswar**. The

Continental Tour is organised by World Athletics, the international governing body for athletics. Silver level meets are classified as Category B competitions for global ranking points. India will also conduct its first national indoor athletics championships, marking a structural expansion of domestic athletics.

### India Retain Women's Kabaddi World Cup Title

- India won the Women's Kabaddi World Cup by defeating Chinese Taipei in the final. The Kabaddi World Cup is organised under the framework of the International Kabaddi Federation. Kabaddi is played on a rectangular court with rules governing raids, tackles and breath control. This victory marked India's second consecutive Women's Kabaddi World Cup title.

### India Win Inaugural Blind Women's Twenty20 World Cup

- India won the first Blind Women's Twenty20 Cricket World Cup, defeating Nepal in the final. The tournament was conducted under rules framed by the World Blind Cricket Council. Blind cricket categorises players based on visual impairment and uses an audible ball. India completed the tournament with an unbeaten record, marking a historic milestone in inclusive sports.

### Indian Women Secure Four Golds at World Boxing Cup Finals

- Indian women boxers won four gold medals at the World Boxing Cup Finals. The competition is organised under World Boxing, the international governing body for Olympic-style boxing. Bouts follow a three-round format with scoring based on clean punches landed. India had the highest number of

finalists, reflecting rising depth in women's boxing.

### Zimbabwe and Namibia to Host Under-19 Cricket World Cup

- Zimbabwe and Namibia will jointly host the Under-19 Men's Cricket World Cup, organised by the International Cricket Council. The tournament features sixteen teams and follows a group stage and Super Six format. The event serves as a key platform for identifying future international cricketers. Tanzania will make its first appearance in an international cricket tournament.

### World Beach Ultimate Championship 2025

- The World Beach Ultimate Championship concluded in Portugal with participation from thirty-eight countries. The event is organised by the World Flying Disc Federation, recognised by the International Olympic Committee. Matches are played on sand with seven players per side and follow the principle of Spirit of the Game. India registered competitive performances, including a win over Germany.

### Gurpreet Singh Wins Silver at World Shooting Championships

- Gurpreet Singh won silver in the twenty-five metre centre fire pistol event at the World Shooting Championships. The championships are organised by the International Shooting Sport Federation and represent the highest level of non-Olympic shooting competition. The event includes precision and rapid-fire stages. India finished third overall with thirteen medals, while China topped the medal table.

## IMPORTANT DAYS

Date	Event & Significance
17 November	<b>National Epilepsy Day (India)</b> – Raises awareness about <b>epilepsy</b> , its causes, treatment and social inclusion.
19 November	<b>World Toilet Day</b> – Highlights <b>sanitation, hygiene</b> and access to toilets under <b>SDG-6</b> .
19 November	<b>Indira Gandhi Birth Anniversary</b> – Commemorates the <b>former Prime Minister of India</b> and her contribution to nation-building.
19 November	<b>World COPD Day</b> – Raises awareness on <b>Chronic Obstructive Pulmonary Disease</b> and respiratory health.
19 November	<b>International Men's Day</b> – Focuses on <b>men's health</b> , gender equality and positive male role models.
20 November	<b>Universal / World Children's Day</b> – Promotes <b>children's rights</b> , welfare and the UN's commitment to child protection.
21 November	<b>World Television Day</b> – Recognizes television's role in <b>information dissemination and public awareness</b> .
21 November	<b>World Philosophy Day (UNESCO)</b> – Emphasizes <b>critical thinking, dialogue</b> and intellectual traditions.
24 November	<b>Lachit Diwas (Assam)</b> – Honors <b>Lachit Borphukan</b> , Ahom general who defeated Mughals at <b>Battle of Saraighat (1671)</b> .
24 November	<b>Shaheedi Diwas of Guru Tegh Bahadur Ji</b> – Marks martyrdom of the <b>9th Sikh Guru</b> for defending religious freedom.
25 November	<b>International Day for Elimination of Violence against Women</b> – Global campaign to end gender-based violence.
26 November	<b>Constitution Day (Samvidhan Divas)</b> – Commemorates <b>adoption of the Indian Constitution (1949)</b> .
26 November	<b>National Milk Day (India)</b> – Birth anniversary of <b>Dr. Verghese Kurien</b> , Father of the White Revolution.
29 November	<b>International Day of Solidarity with Palestinian People</b> – Observed by UN to support <b>Palestinian rights</b> .
1 December	<b>World AIDS Day</b> – Spreads awareness about <b>HIV/AIDS</b> , prevention and stigma reduction.
2 December	<b>National Pollution Control Day (India)</b> – Commemorates <b>Bhopal Gas Tragedy (1984)</b> ; focuses on pollution control.
2 December	<b>International Day for Abolition of Slavery</b> – Highlights fight against <b>modern slavery, trafficking</b> and forced labour.
3 December	<b>International Day of Persons with Disabilities</b> – Promotes <b>inclusion, rights</b> and accessibility for persons with disabilities.
5 December	<b>World Soil Day</b> – Emphasizes <b>soil health</b> , sustainable agriculture and food security.
5 December	<b>International Volunteer Day</b> – Recognizes contribution of <b>volunteers</b> to social and economic development.
6 December	<b>Mahaparinirvan Diwas</b> – Death anniversary of <b>Dr. B.R. Ambedkar</b> , architect of the Indian Constitution.

7 December	Armed Forces Flag Day (India) – Honors Indian Armed Forces and supports veterans and families.
7 December	International Civil Aviation Day – Highlights role of ICAO in safe and sustainable air transport.
8 December	Bodhi Day – Marks Buddha's enlightenment under the Bodhi tree.
9 December	International Anti-Corruption Day – Promotes transparency and fight against corruption.
9 December	UN Day on Genocide Prevention – Commemorates victims and promotes genocide prevention.
10 December	Human Rights Day – Marks adoption of Universal Declaration of Human Rights (1948).
11 December	International Mountain Day – Focuses on mountain ecosystems, livelihoods and sustainability.
12 December	Universal Health Coverage Day – Advocates accessible, affordable healthcare for all.
14 December	National Energy Conservation Day (India) – Promotes energy efficiency and sustainable energy use.
16 December	Vijay Diwas – Celebrates India's victory in the 1971 Indo-Pak War and creation of Bangladesh.

## STATIC GK

The Indian Rupee symbol (₹) was adopted in 2010.

ISRO was established in 1969.

Loktak Lake is the largest freshwater lake in Northeast India.

UNESCO Headquarters is located in Paris, France.

pH scale is logarithmic, meaning each unit change represents a tenfold change in acidity.

Sound intensity depends on the **square of the amplitude**, not on frequency.

Mercury is the only metal that is liquid at room temperature.

**Graphite**, though a non-metal, is a **good conductor of electricity** due to free electrons.

Pure water is a **poor conductor of electricity** in the absence of dissolved ions.

Aluminium appears less reactive because of a **thin oxide layer** on its surface.

**Heat capacity** depends on both the **mass and nature** of a substance.

**Latent heat** is absorbed or released **without change in temperature**.

**Atmospheric pressure** decreases with **increase in altitude**.

Sound travels fastest in **solids** and slowest in **gases**.

**Echo formation** requires a minimum reflector distance of about **17 metres**.

**Hydrated salts** lose water on heating and may change color.

**Carbon monoxide** is more dangerous than carbon dioxide due to **higher affinity for haemoglobin**.

**Solar eclipse** occurs only on a **new moon day**.

**Lunar eclipse** occurs only on a full moon day.

**Tides** are mainly caused by the gravitational pull of the Moon.

**Leap year** has 366 days to adjust Earth's revolution period.

**Time difference** of 1 hour corresponds to  $15^\circ$  longitude.

**Archaeological Survey of India (ASI)** was founded in 1861.

**Specific heat** of water is high, which is why coastal areas experience moderate climate.

**Thermal expansion of solids** is least compared to liquids and gases.

**Convex mirrors** always form virtual, erect and diminished images.

**Concave lenses** are used to correct myopia by diverging light rays.

**Electrical resistivity** of a material is independent of its dimensions.

**Superconductivity** is characterized by zero electrical resistance below a critical temperature.

**Ribosomes** are absent in mature mammalian red blood cells.

**Lysosomes** are called suicidal bags due to hydrolytic enzymes.

**Meiosis** reduces chromosome number by half to maintain species stability.

**Crossing over** occurs during prophase-I of meiosis.

**Oxygenated blood** is carried by pulmonary veins, unlike other veins.

**Arteries** generally carry oxygenated blood except pulmonary artery.

**Bile** aids digestion of fats but contains no digestive enzymes.

**Aphelion** occurs when Earth is farthest from the Sun.

**Earth's rotation** causes day and night, not revolution.

**International Date Line** deviates to avoid landmasses.

**Isobars** are lines joining points of equal atmospheric pressure.

**Cyclones** rotate counter-clockwise in the Northern Hemisphere.

**Anticyclones** are associated with clear and dry weather.

**Tsunamis** are caused mainly by undersea earthquakes.

**Continental drift theory** was proposed by Alfred Wegener.

**Pediplains** are formed in arid regions due to erosion.

**Biomagnification** increases concentration of toxins at higher trophic levels.

**Primary productivity** depends largely on sunlight and nutrients.

**Decomposers** recycle nutrients back into ecosystem.

**Carbon sinks** absorb more carbon than they release.

**Afforestation** helps reduce soil erosion and CO<sub>2</sub> levels.

**Eutrophication** results from nutrient enrichment of water bodies.

**Adiabatic lapse rate** describes temperature change of an air parcel without heat exchange with surroundings.

**Thermal conductivity of diamond** is higher than that of copper.

**Electron affinity** does not increase uniformly across a period due to orbital stability anomalies.

**Geostrophic winds** result from balance between pressure gradient force and Coriolis force.

**Isostasy** explains vertical equilibrium of Earth's crust floating on denser mantle.

Transform faults offset mid-oceanic ridges without creating or destroying crust.	Fermi level indicates highest occupied energy level at absolute zero.	Biomagnification is more pronounced in long-lived, fat-soluble pollutants.
<b>Shadow zone of seismic waves</b> provides evidence for Earth's liquid outer core.	<b>Heavy water (D<sub>2</sub>O)</b> is used as moderator in nuclear reactors to slow neutrons.	<b>Ecological succession</b> proceeds faster on bare rock than on existing soil.
Red shift in astronomy indicates recession of galaxies due to cosmic expansion.	<b>Fast breeder reactors</b> produce more fissile material than they consume.	<b>Keystone species</b> have disproportionately large impact on ecosystem stability.
Chandrasekhar limit (~1.4 solar masses) defines maximum mass of stable white dwarf.	Radioactive decay is unaffected by temperature, pressure, or chemical state.	<b>Trophic efficiency</b> rarely exceeds 10% in natural ecosystems.
Escape velocity is independent of mass of the escaping object.	<b>Cosmic rays</b> are primarily high-energy protons originating outside Earth.	<b>Resilience</b> measures an ecosystem's ability to recover after disturbance.
Solar constant represents energy received per unit area at top of Earth's atmosphere.	<b>Ionizing radiation</b> can damage DNA directly or via free radical formation.	

## CURRENT AFFAIRS GK

GenomeIndia Project launched 10,000 whole genome sequences and operationalised Functional Enabling Environment for Data and Indian Biological Data Centre for global research access. Strengthens precision medicine, tuberculosis drug resistance mapping and data-driven biotechnology research.

India-Jordan bilateral trade reached 3.1 billion United States Dollars in 2024; expansion includes Digital Public Infrastructure sharing, fertiliser and phosphate cooperation and water resource memoranda of understanding. Jordan expressed interest in International Solar Alliance, Coalition for Disaster Resilient Infrastructure and Global Biofuels Alliance, enhancing India's Global South leadership.

India produces approximately 80 percent of global Makhana, mainly from Bihar, with Darbhanga as a

major hub. Government approved 476.03 crore rupees scheme from 2025 to 2031 via National Makhana Board for processing, branding, value addition and exports.

The Armed Forces Medical Services launched India's first artificial intelligence-based Diabetic Retinopathy screening programme using MadhuNetAI, deployed in seven locations. Enables community-level early detection, automated referral and real-time prevalence mapping.

Indian Space Research Organisation RESPOND Basket 2025 invites academia to address mission-aligned research problems. Focus areas include space technology, satellite systems and advanced research, strengthening Indian Space Research Organisation and academia collaboration.

**Param Vir Chakra** instituted on 26 January 1950, is India's highest wartime gallantry award; open to all ranks and can be awarded posthumously. Provides three thousand rupees honorarium plus three thousand rupees for each bar; twenty-one awardees so far, fourteen posthumously.

**Tianjin Declaration at Shanghai Cooperation Organisation 2025** emphasises artificial intelligence governance, capacity building, security and transparency. Supports Shanghai Cooperation Organisation artificial intelligence roadmap and Regional Artificial Intelligence Centre in Dushanbe, aligned with United Nations General Assembly artificial intelligence resolution.

**Tigris River** originates in the Taurus Mountains, **Türkiye**, flows through Iraq and joins the Euphrates to form Shatt al-Arab, draining into the Persian Gulf. Key issues include water scarcity, pollution and upstream dams, crucial for agriculture and regional geopolitics.

**Viksit Bharat-Guarantee for Rozgar and Ajeevika Mission Bill, 2025** replaces the 2005 rural employment law, guaranteeing 125 days of wage employment and focusing on water, rural infrastructure, livelihoods and climate-resilient assets. Includes normative funding, biometric attendance, Aadhaar-linked payments and GPS/geotagging.

**India-Oman Bilateral Relations** span 70 years of diplomatic ties, combining maritime security, defence access at Duqm, trade, joint ventures, fintech and energy transition cooperation. Strategic depth supported by civilisational linkages, diaspora and CEPA prospects.

**Australia's Social Media Ban for Children Under 16** prohibits social media access to minors on platforms like Instagram, Facebook, TikTok and X, making companies liable for enforcement. Aims to protect children from online harms, addictive algorithms and cyberbullying.

**FSSAI Egg Safety Drive** targets residues of banned nitrofurans in eggs to protect public health and food safety compliance. Nitrofurans are synthetic antimicrobial agents with carcinogenic risk, banned in India, European Union and other countries.

**United Nations Alliance of Civilizations** promotes intercultural dialogue, religious harmony, youth and women in peace building, with India reaffirming Vasudhaiva Kutumbakam ethos. 2025 edition in Riyadh highlighted global commitment to dialogue and multilateralism.

**Vijay Diwas 16 December** commemorates India's 1971 victory and creation of Bangladesh, with ~93,000 Pakistani troops surrendered. Demonstrates joint military operations, air and naval superiority and rapid strategic decision-making.

**India-Asian Development Bank \$2.2 Billion Loan** funds skills, renewable energy, healthcare, urban transport and sustainable livelihoods projects. Supports PM Surya Ghar scheme, ITI modernisation, tertiary healthcare upgradation and Meghalaya ecotourism.

**HAMMER Precision-Guided Weapon** is a stand-off air-to-ground munition converting conventional bombs into high-accuracy strike systems. Jointly manufactured by India's Bharat Electronics Limited and Safran, it offers multiple guidance modes and off-axis launch flexibility.

**India's Trade Deficit** fell to \$6.6 billion in November 2025 due to higher merchandise exports and lower imports, especially gold. Trade deficit indicates net external demand, currency pressure and impact on current account.

**Ethiopia Geography and Strategic Importance:** Landlocked Horn of Africa nation, capital Addis Ababa hosts African Union and UN Economic Commission for Africa. Features Ethiopian Highlands, Great Rift Valley, volcanic plateau,

**Blue Nile origin and Denakil Depression**, crucial for geopolitics and natural resources.

Supreme Court in **Ranveer Allahbadia vs Union of India (2025)** emphasized judicial restraint in free speech, limiting courts to constitutional review under Article 19(1)(a)-19(2) and avoiding policy-making. Important for freedom of expression, judicial review.

**Bondi Beach - Sydney beach**, site of terror linked attack, highlights urban security, public safety and tourism geography. Relevant for places in news / world geography.

**SHANTI Bill 2025: Atomic Energy Bill** modernises India's nuclear governance, enables private sector participation, establishes an independent nuclear safety authority, reforms liability and licensing and targets 100 GW nuclear capacity by 2047.

Cabinet approves raising FDI cap in Indian insurance firms from 74% to 100% via **Insurance Laws (Amendment) Bill 2025**, promoting foreign investment, sectoral growth and regulatory alignment under LIC, IRDA and Insurance Acts.

**Siliserh Lake (Rajasthan) & Kopra Jalashay (Chhattisgarh)**: Newly designated Ramsar wetlands (Sites 2581 & 2583), crucial for biodiversity, migratory birds, water security and ecosystem services, supporting eco-tourism, conservation and local livelihoods.

**Boreendo** is a clay vessel-flute from Sindh linked to Indus Valley musical tradition, producing breathy tones. Inscribed on UNESCO's Intangible Cultural Heritage list, it survives via a single maestro and family artisans.

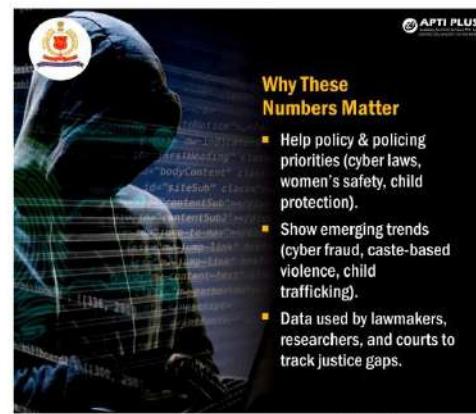
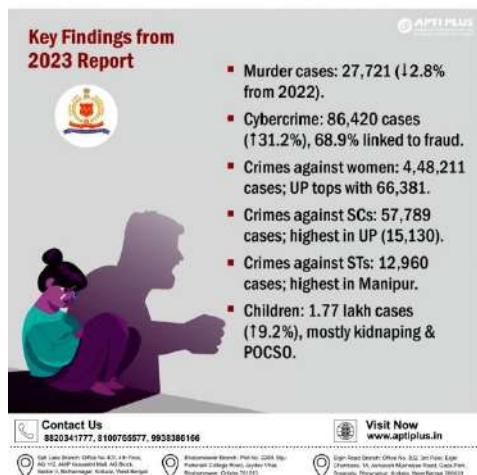
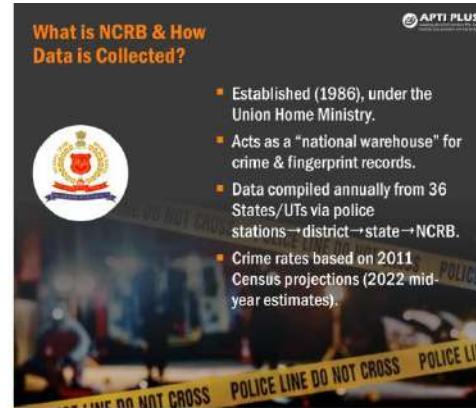
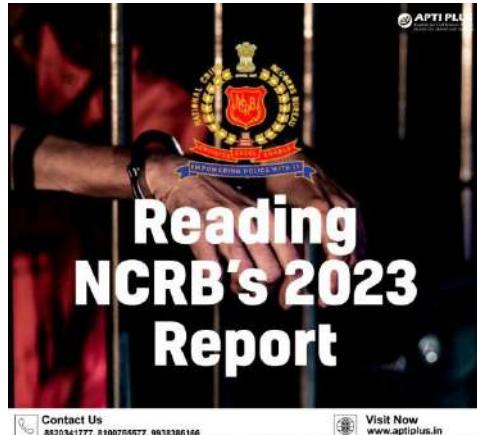
**50 YEARS OF CITES**: CITES regulates international trade of endangered species, effective 1 July 1975, with 185 parties. CoP20 (2025, Samarkand) added 77 species, including sharks, rays, Galápagos iguanas and India opposed guggul listing citing scientific gaps.

**Senna spectabilis**: Invasive alien species in Western Ghats; dense growth reduces biodiversity, increases fire risk; Tamil Nadu eradication drive targets complete removal by March 2026.

**Eturnagaram Wildlife Sanctuary**: Telangana's oldest protected area, Deccan dry deciduous ecosystem; hosts tigers, leopards, gaurs, Medaram Jatara festival, now promoting eco-tourism and local livelihoods.

**Hindu Rate of Growth**: Term coined by Raj Krishna for India's 3.5-4% GDP growth (1950s-1980s) under Licence-Quota-Permit Raj; reflects structural stagnation, not religion; contrast with East Asian growth miracles.

## LEARNING THROUGH INFOGRAPHICS



# Public-Private Partnership (PPP) Models in India



Contact Us  
8820341777, 8100765577, 9938386166

Salt Lake Branch, Office No.407, 4th Floor,  
Ad.112, APTI Vimantran Mkt, Ad Block,  
Bishnupur, Kolkata, West Bengal  
700091

Dhakuria Branch, Plot No.2280, Bjp  
Ad.112, APTI Vimantran Mkt, Ad Block,  
Bishnupur, Kolkata, West Bengal  
700091

Dighi Road Branch, Office No.302, 3rd Floor, Sign  
Chambers, 1A, Adhavon Mukherjee Road, Garia Park,  
Sewampet, Bhowanipore, Kolkata, West Bengal 700021

Visit Now  
[www.aptipus.in](http://www.aptipus.in)



## Concept & Purpose

- **Definition:** Collaboration between government and private entity for delivering public assets/services.
- **Goal:** Mobilize private investment, improve efficiency, share risks.
- **Need:** Bridge India's huge infrastructure funding gap and enhance service delivery.

### Core PPP Models (Part I)

- **BOT (Build-Operate-Transfer):** Private builds, operates, transfers to govt after concession.
- **DBFOT (Design-Build-Finance-Operate-Transfer):** BOT variant with private financing.
- **BOOT (Build-Own-Operate-Transfer):** Private owns & operates before transfer.
- **BOO (Build-Own-Operate):** Private builds, owns, operates—no transfer.



Contact Us  
8820341777, 8100765577, 9938386166

Salt Lake Branch, Office No.407, 4th Floor,  
Ad.112, APTI Vimantran Mkt, Ad Block,  
Bishnupur, Kolkata, West Bengal  
700091

Dhakuria Branch, Plot No.2280, Bjp  
Ad.112, APTI Vimantran Mkt, Ad Block,  
Bishnupur, Kolkata, West Bengal  
700091

Dighi Road Branch, Office No.302, 3rd Floor, Sign  
Chambers, 1A, Adhavon Mukherjee Road, Garia Park,  
Sewampet, Bhowanipore, Kolkata, West Bengal 700021

Visit Now  
[www.aptipus.in](http://www.aptipus.in)

### Core PPP Models (Part II)

- **HAM (Hybrid Annuity Model):** Govt pays 40%, private 60%; returns via annuities.
- **BOLT (Build-Own-Lease-Transfer):** Private leases asset to govt, then transfers.
- **BLT (Build-Lease-Transfer):** Govt leases from private before final transfer.
- **LDOT (Lease-Develop-Operate-Transfer):** Private upgrades existing facility, operates, transfers.
- **O&M/Management Contract:** Govt retains ownership; private handles operation/maintenance.



Contact Us  
8820341777, 8100765577, 9938386166

Salt Lake Branch, Office No.407, 4th Floor,  
Ad.112, APTI Vimantran Mkt, Ad Block,  
Bishnupur, Kolkata, West Bengal  
700091

Dhakuria Branch, Plot No.2280, Bjp  
Ad.112, APTI Vimantran Mkt, Ad Block,  
Bishnupur, Kolkata, West Bengal  
700091

Dighi Road Branch, Office No.302, 3rd Floor, Sign  
Chambers, 1A, Adhavon Mukherjee Road, Garia Park,  
Sewampet, Bhowanipore, Kolkata, West Bengal 700021

Visit Now  
[www.aptipus.in](http://www.aptipus.in)

### Takeaways

- **Flexibility:** Models differ by ownership, risk, and revenue sharing.
- **Relevance:** Used across roads, ports, airports, urban infra, health, education.
- **Essence:** Choose model matching sectoral needs and public interest.
- **Key focus:** Balanced risk, transparency, and accountability.



Contact Us  
8820341777, 8100765577, 9938386166

Salt Lake Branch, Office No.407, 4th Floor,  
Ad.112, APTI Vimantran Mkt, Ad Block,  
Bishnupur, Kolkata, West Bengal  
700091

Dhakuria Branch, Plot No.2280, Bjp  
Ad.112, APTI Vimantran Mkt, Ad Block,  
Bishnupur, Kolkata, West Bengal  
700091

Visit Now  
[www.aptipus.in](http://www.aptipus.in)



## Digital Arrest

A New-Age Cybercrime Menace



### What is a Digital Arrest?

- A cyber scam using fake calls/video chats by impostors posing as officials (CBI, ED, Police).
- Victims are told they're under probe and shown forged court/agency documents.
- Asked to transfer money to a "safe" account while staying isolated at home.
- Creates psychological detention through fear and manipulation.

**Contact Us**  
8820341777, 8100765577, 9938386166

Salt Lake Branch: Office No. 407, 4th Floor, A-101, AMB-Gaurav Mall, AC Block, Sector 6, Salt Lake, Kolkata, West Bengal 700091

**Visit Now**  
[www.aptiplus.in](http://www.aptiplus.in)

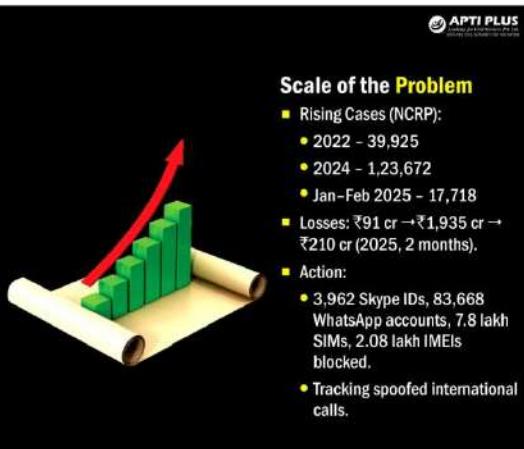
Bloushawar Branch: Plot No. 2280, B-99, Bloushawar College, Jayanagar, Bloushawar, Gobindpur, Dist. Purulia, West Bengal 723112

**Contact Us**  
8820341777, 8100765577, 9938386166

Salt Lake Branch: Office No. 407, 4th Floor, A-101, AMB-Gaurav Mall, AC Block, Sector 6, Salt Lake, Kolkata, West Bengal 700091

**Visit Now**  
[www.aptiplus.in](http://www.aptiplus.in)

Bloushawar Branch: Plot No. 2280, B-99, Bloushawar College, Jayanagar, Bloushawar, Gobindpur, Dist. Purulia, West Bengal 723112



### Scale of the Problem

- Rising Cases (NCRP):
  - 2022 - 39,925
  - 2024 - 1,23,672
  - Jan-Feb 2025 - 17,718
- Losses: ₹91 cr → ₹1,935 cr → ₹210 cr (2025, 2 months).
- Action:
  - 3,962 Skype IDs, 83,668 WhatsApp accounts, 7.8 lakh SIMs, 2.08 lakh IMEs blocked.
  - Tracking spoofed international calls.



### Judicial Response

- Supreme Court (Oct 2025): Suo motu action; termed it a "grave assault on rule of law."
- Rajasthan HC: Called it "sophisticated cyberfraud."
- Delhi HC: Denied bail; flagged rising difficulty in tracking such crimes.
- Bombay HC: Criticised police delay; directed better cybercrime training.

**Contact Us**  
8820341777, 8100765577, 9938386166

Salt Lake Branch: Office No. 407, 4th Floor, A-101, AMB-Gaurav Mall, AC Block, Sector 6, Salt Lake, Kolkata, West Bengal 700091

**Visit Now**  
[www.aptiplus.in](http://www.aptiplus.in)

Bloushawar Branch: Plot No. 2280, B-99, Bloushawar College, Jayanagar, Bloushawar, Gobindpur, Dist. Purulia, West Bengal 723112

**Contact Us**  
8820341777, 8100765577, 9938386166

Salt Lake Branch: Office No. 407, 4th Floor, A-101, AMB-Gaurav Mall, AC Block, Sector 6, Salt Lake, Kolkata, West Bengal 700091

**Visit Now**  
[www.aptiplus.in](http://www.aptiplus.in)

Bloushawar Branch: Plot No. 2280, B-99, Bloushawar College, Jayanagar, Bloushawar, Gobindpur, Dist. Purulia, West Bengal 723112



### Way Forward

- Boost digital literacy and public awareness.
- Strengthen Cyber Helpline 1930 & NCRP portal.
- Ensure inter-agency coordination (MHA, CERT-In, State Police).
- Use AI tools to trace spoofed numbers and fake accounts.
- Restore public trust through swift detection and prosecution.



**Contact Us**  
8820341777, 8100765577, 9938386166

Salt Lake Branch: Office No. 407, 4th Floor, A-101, AMB-Gaurav Mall, AC Block, Sector 6, Salt Lake, Kolkata, West Bengal 700091

**Visit Now**  
[www.aptiplus.in](http://www.aptiplus.in)

Bloushawar Branch: Plot No. 2280, B-99, Bloushawar College, Jayanagar, Bloushawar, Gobindpur, Dist. Purulia, West Bengal 723112

**Contact Us**  
8820341777, 8100765577, 9938386166

Salt Lake Branch: Office No. 407, 4th Floor, A-101, AMB-Gaurav Mall, AC Block, Sector 6, Salt Lake, Kolkata, West Bengal 700091

**Visit Now**  
[www.aptiplus.in](http://www.aptiplus.in)

Bloushawar Branch: Plot No. 2280, B-99, Bloushawar College, Jayanagar, Bloushawar, Gobindpur, Dist. Purulia, West Bengal 723112



## Cloud Seeding

### Science of Making Rain

**Contact Us**  
8820341777, 8100765577, 9936386166

Sign Road Branch, Office No. 407, 4th Floor, 88ft Road, 100ft Main Road, Sector 1, Shantinagar, Kolkata, West Bengal 700011

**Visit Now**  
[www.aptilus.in](http://www.aptilus.in)

Sign Road Branch, Office No. 302, 3rd Floor, 120ft Main Road, Sector 1, Shantinagar, Kolkata, West Bengal 700011



### What is Cloud Seeding?

- A weather modification technique to enhance rainfall.
- Involves dispersing chemicals like silver iodide, potassium iodide, sodium chloride, or dry ice into clouds.
- Purpose: Stimulate condensation and droplet formation to trigger precipitation.

**Contact Us**  
8820341777, 8100765577, 9936386166

Sign Road Branch, Office No. 206, 2nd Floor, AG 112, APTI PLUS, Sector 1, Shantinagar, Kolkata, West Bengal 700011

**Visit Now**  
[www.aptilus.in](http://www.aptilus.in)

Sign Road Branch, Office No. 206, 2nd Floor, AG 112, APTI PLUS, Sector 1, Shantinagar, Kolkata, West Bengal 700011



### How It Works

- Chemicals act as cloud condensation or ice nuclei.
- Water vapor condenses around these particles, forming raindrops.
- Delivered via aircraft, rockets, or ground-based generators.
- Requires existing moisture-bearing clouds – cannot create clouds from clear sky.

**Contact Us**  
8820341777, 8100765577, 9936386166

Sign Road Branch, Office No. 206, 2nd Floor, AG 112, APTI PLUS, Sector 1, Shantinagar, Kolkata, West Bengal 700011

**Visit Now**  
[www.aptilus.in](http://www.aptilus.in)

Sign Road Branch, Office No. 302, 3rd Floor, 120ft Main Road, Sector 1, Shantinagar, Kolkata, West Bengal 700011



### Applications

- Enhance rainfall in drought-prone areas.
- Increase snowfall for water reservoirs.
- Disperse fog near airports.
- Reduce hail or suppress storms (used in China, UAE, USA, India trials in Maharashtra, Karnataka).

**Contact Us**  
8820341777, 8100765577, 9936386166

Sign Road Branch, Office No. 206, 2nd Floor, AG 112, APTI PLUS, Sector 1, Shantinagar, Kolkata, West Bengal 700011

**Visit Now**  
[www.aptilus.in](http://www.aptilus.in)

Sign Road Branch, Office No. 206, 2nd Floor, AG 112, APTI PLUS, Sector 1, Shantinagar, Kolkata, West Bengal 700011



### Concerns

- Ineffective without suitable clouds.
- Results uncertain and vary with weather conditions.
- Temporary impact on rainfall or pollution.
- Environmental concerns over chemical residues.
- Expensive and logistically challenging.

**Contact Us**  
8820341777, 8100765577, 9936386166

Salt Lake Branch, Office No. 407, 4th Floor, AG 112, APTI PLUS, Sector 1, Shantinagar, Kolkata, West Bengal 700011

**Visit Now**  
[www.aptilus.in](http://www.aptilus.in)

Sign Road Branch, Office No. 206, 2nd Floor, 120ft Main Road, Sector 1, Shantinagar, Kolkata, West Bengal 700011

**Contact Us**  
8820341777, 8100765577, 9936386166

Eigen Road Branch, Office No. 302, 3rd Floor, 88ft Main Road, Sector 1, Shantinagar, Kolkata, West Bengal 700011

**Visit Now**  
[www.aptilus.in](http://www.aptilus.in)

Eigen Road Branch, Office No. 302, 3rd Floor, 88ft Main Road, Sector 1, Shantinagar, Kolkata, West Bengal 700011