

PRELIMS

History

Maulana Barkatullah Bhopali

Context

A proposal to rename Barkatullah University, Bhopal, has brought renewed attention to the life and contributions of Maulana Barkatullah, a prominent revolutionary of India's freedom struggle.

About Maulana Barkatullah

- **Birth & Education:** Born on **7 July 1854** in Bhopal; pursued higher studies in Bombay and London.
- **Scholar & Teacher:** Islamic scholar, journalist, polyglot and educator; taught in Liverpool and later at the University of Tokyo.
- **Freedom Fighter in Exile:** Spent most of his life outside India working for independence.
- **Nationalist Vision:** Advocated Hindu-Muslim unity and opposed British divide-and-rule policies.

Contributions

- **Overseas Revolutionary Network:** Mobilised support for India's freedom across Europe, America and Asia through speeches, writings and political outreach.
- **Revolutionary Journalism:** Published journals such as **The Islamic Fraternity** and **El Islam** to spread anti-colonial ideas.
- **Ghadar Movement:** Associated with the Ghadar Party and supported armed resistance against British rule.
- **World War I Activities:** Worked with Indian revolutionaries in Germany and

attempted to mobilise Indian prisoners of war against the British Empire.

- **Provisional Government of India (1915):** Served as **Prime Minister** of India's first Government-in-Exile established at Kabul along with Raja Mahendra Pratap (President) and Maulana Ubaidullah Sindhi; hence often called the "**First Prime Minister of India**".
- **International Diplomacy:** Sought support from Germany, Turkey, Afghanistan and Soviet Russia for India's independence movement.
 - Met Vladimir Lenin in 1919 and advocated cooperation against imperialism.
- **Recognition:** Bhopal University was renamed **Barkatullah University** in **1988** in his honour.

Birsa Munda

Context

Marking the 124th death anniversary of revolutionary tribal leader Birsa Munda, Jharkhand Chief Minister Champai Soren paid his tributes

About Birsa Munda

- Revered as "Dharti Aba" (Father of the Earth), he was tribal leader, freedom fighter, and spiritual healer
- Born 15 November 1875, Khunti district, Chotanagpur Plateau (present-day Jharkhand); belonged to the Munda tribe
- Combined religious reform with political rebellion-unique feature of his leadership
- Died in British custody in 1900, aged just 25

About Ulgulan-The Great Tumult (1899–1900)

- **Causes:**
 - British introduced the **zamindari system**, displacing the traditional **Khuntkatti system** (communal land ownership recognising Mundas as original cultivators)
 - Colonial **Forest Laws** restricted tribal access to traditional forest resources
 - Exploitation by local landlords (*dikus*) and missionaries further eroded tribal autonomy and cultural identity
- **Nature of Uprising:**
 - Armed tribal uprising against British colonial administration, zamindars, and missionaries
 - Birsa articulated the concept of "**Munda Raj**"- autonomous tribal self-rule
 - **Dombari Buru Massacre (1899):** British forces opened fire on Birsa's followers gathered at Dombari Buru, resulting in a major tribal massacre.

1.Chotanagpur Tenancy (CNT) Act, 1908

- Enacted as a response to the Ulgulan Movement.
- Protects the Khuntkatti land tenure system.
- Prohibits transfer of tribal land to non-tribals, safeguarding Adivasi land rights.

2.Khuntkatti:

- Also known as Bhuinhari among Oraons, was the traditional Adivasi system of collective land ownership and governance prevalent among the Mundas of the Chotanagpur region.
- Under the system, the descendants of the original settlers who cleared forests and established a village, known as Khuntkattidars, held collective rights over the village territory.

3.Birsait Faith

- **Origin:** Emerged after Birsa distanced himself from Christian missionary institutions.
- **Core Philosophy:** Combined elements of Sarnaism, Hinduism, and monotheism.
- **Key Features:** Promoted worship of one

supreme creator, rejected witchcraft, and encouraged a nature-centric lifestyle. Followers regarded Birsa as a messianic figure.

Gyan Bharatam Mission

Context

The Gyan Bharatam survey has mapped over one crore manuscripts across India.

About Gyan Bharatam Mission

- **Nodal Ministry:** Ministry of Culture
- **Objective:** National mission to survey, document, and conserve over one crore manuscripts across India.
- **Focus:** Digital preservation, cataloguing, and sharing of India's manuscript heritage.
- **Manuscripts Covered:** Includes palm-leaf, birch bark, and paper manuscripts in Sanskrit, Persian, and regional languages.

What is a Manuscript?

- A handwritten composition on materials such as palm leaf, birch bark, cloth, paper, or metal — at least 75 years old and carrying significant historical, scientific, or aesthetic value.
- Unlike printed books or administrative records, manuscripts embody knowledge content spanning philosophy, medicine, astronomy, literature, and the arts.
- Found in hundreds of languages and scripts; a single language may appear in multiple scripts (e.g., Sanskrit in Devanagari, Oriya, and Grantha).
- India's manuscript wealth is estimated at over five million works.

Science & Tech

First Molecular Evidence from Homo erectus

Context

Scientists recovered the first molecular evidence from Homo erectus fossils using proteins preserved in 400,000-year-old teeth from China.

About the Discovery

- **Method:** Used **acid etching** to extract enamel proteins without significantly damaging the fossils.
 - In acid etching technique a dilute acid was used to release proteins from tooth enamel.
- **Why Proteins?** DNA degrades rapidly after death, whereas enamel proteins can survive much longer.
- **Key Finding:** Identified a unique protein variant in Homo erectus and another shared with **Denisovans**.
 - Denisovans are an extinct human lineage whose DNA survives in some Asian and Oceanian populations.
- **Implication:** Suggests possible genetic links or interbreeding between Homo erectus-related populations and Denisovans.
- **Significance:** First successful recovery of molecular information from Homo erectus fossils.

About Homo erectus

- **Timeline:** Lived about **1.9 million–110,000 years ago**.
- **Importance:** Among the first human species to spread widely outside Africa.
- **Traits:** Upright posture, larger brain and advanced stone-tool use.

- **Famous Fossil: Turkana Boy** (Kenya), the most complete Homo erectus specimen known.

Pyroprocessing

Context

Pyroprocessing has emerged as an important industrial technique and is extensively employed in several sectors worldwide.

About Pyroprocessing

- Pyroprocessing refers to the transformation of solid materials through physical or chemical changes induced by very high temperatures.
- It is a dry thermal treatment process that requires significant energy input. The technology is predominantly used in the cement, metallurgical, and nuclear energy industries.

Major Applications of Pyroprocessing

- **Cement Industry:** Used in rotary kilns to calcine limestone and fuse raw materials into clinker for manufacturing cement.
- **Metallurgical Industry:** Used in high-temperature roasting and smelting to extract and refine metals like copper, zinc, and lead from their ores.
- **Nuclear Energy Sector:** Used in high-temperature molten salt baths to safely separate, treat, and recycle spent nuclear fuel.

IMI-Resistant Mustard Hybrids

Context

Indian farmers are set to begin wide-scale cultivation of IMI-resistant mustard hybrids in the 2026-27 rabi season to combat the parasitic weed Orobanche.

About IMI-Resistant Hybrids

- Developed through **mutation breeding** (not GM crops), preserving natural mutations rather than introducing foreign genes.
- Based on the enzyme **Acetolactate Synthase (ALS)**, essential for plant growth.
- Normal mustard is killed by Imidazolinone (IMI) herbicides as they inhibit ALS; in these hybrids, a single DNA change makes ALS resistant to the herbicide.
- Farmers can spray IMI herbicides directly over the field, killing only weeds including Orobanche through the soil where manual weeding cannot reach.

1. **Mutation Breeding:** Inducing mutations in a crop's DNA using physical or chemical agents to develop desirable traits, without inserting foreign genes; not regulated as genetic modification.
2. **Orobanche (Phelipanche):** An obligate root holoparasite with no chlorophyll; entirely dependent on host plants for water and nutrients; attached underground making manual removal ineffective.

Sagittarius A*

Context

A new study using the ALMA telescope (Chile) has provided the first definitive evidence of an active wind blowing from Sagittarius A*

Key Findings

- **Formation of the Wind:** Gas swirling near the black hole heats into a superhot plasma, just 1g of which can push away 100 kg of surrounding gas, forming the wind.
- **Significance:** The wind regulates star formation, preventing runaway supernovae from stripping the galaxy of gas needed for its long-term evolution.

- **Sagittarius A (Sgr A):** It is the supermassive black hole located exactly at the Galactic Center of the Milky Way.
 - Situated roughly 27,000 light-years from Earth in the direction of the Sagittarius constellation, it is roughly 4.3 million times more massive than our Sun
- **ALMA (Atacama Large Millimeter/submillimeter Array):** A high-precision radio telescope array located in the Atacama Desert, Chile, used to observe cold gas, dust, and molecular clouds in space.

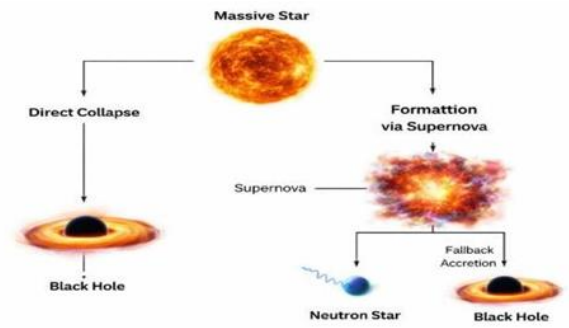


Figure 2. Simplified schematic representation of stellar evolution pathways leading to black hole formation. Massive stars

Floating Solar Energy Potential in India

Context

NISE (autonomous institute under MNRE) released India's first comprehensive national assessment "Solar PV Potential of India (Floating Solar)", estimating 102.18 GW of floating solar potential across India's reservoirs.

About Floating Solar Energy Potential

- **Top States with Floating Solar Energy Potential:** Maharashtra (16.28 GW), Madhya Pradesh, Karnataka, Odisha and Telangana
- **Advantages**
 - Land-neutral-no acquisition required
 - Reduces water evaporation from reservoirs

- Existing grid infrastructure near reservoirs reduces transmission costs
- Dual use of water bodies for fisheries/irrigation alongside power generation
- **Challenges**
 - Higher upfront cost: ~25% more expensive than ground-mounted systems (due to floats, anchoring, waterproofing)
 - Structural issues observed at Omkareshwar park: loosening float joints, misaligned platforms, uneven buoyancy, electric cable breakages
 - No national-level cost assessment exists for realising the 102 GW potential

1. Omkareshwar park

- Located on River Narmada, Khandwa district, Madhya Pradesh
- India's largest floating solar park, currently 278 MW, to be scaled up to 600 MW

Economy

Measures to Deepen G-Sec Market and Boost Foreign Investment

Context

The Union Government has unveiled a comprehensive package of capital market reforms aimed at strengthening the Government Securities (G-Sec) market and enhancing Foreign Portfolio Investment (FPI) inflows into India's equity and debt markets.

Major Reforms Announced

- **Liberalisation of Equity Investments by Foreign Individuals:** Amendment to the Foreign Exchange Management (Non-Debt Instruments) Rules, 2019. The Key changes are:
 - Individuals residing outside India (other than NRIs and OCIs) can now directly

invest in listed Indian equities through the Portfolio Investment Scheme (PIS).

- The investment limit for a single foreign individual in a listed company has been raised from 5% to 10%.
- The aggregate ceiling for all such foreign individuals in a company has been increased from 10% to 24%.
- Investments will be facilitated through the existing digital onboarding framework used by NRIs and OCIs.
- **Reforms in the Government Securities (G-Sec) Market:** Comprehensive review of the regulatory framework governing FPI investments in sovereign debt. The key changes are:
 - Abolition of short-term investment limits, concentration limits, and security-wise caps for FPIs investing in G-Secs.
 - Overall investment ceilings remain unchanged at 6% of outstanding Central Government Securities and 2% of State Government Securities.
 - Separate 'General' and 'Long-Term' investment categories have been merged, providing greater flexibility to investors.
- **Tax Exemption for FPI Investments in Government Securities:** Introduction of a tax-free framework for foreign investments in sovereign debt. The key changes are:
 - FPIs will receive a complete exemption from income tax on interest income and capital gains earned from investments in Government Securities.
 - The exemption will apply to earnings accrued on or after 1 April 2026.
 - The benefit is also extended to the Bank for International Settlements (BIS).

FCNR(B) Deposits

Context

The Reserve Bank of India (RBI) announced a special swap scheme for **Foreign Currency**

Non-Resident Bank (FCNR(B)) deposits until September 2026, allowing banks to mobilise fresh foreign capital into Indian markets.

About FCNR(B) Deposits

- Opened in India by Non-Resident Indians (NRIs) and Overseas Citizens of India (OCI).
- Maintained in foreign currencies such as the US dollar, pound sterling, euro, Japanese yen, and Canadian dollar
- There is no exposure to Rupee depreciation
- The funds and the Interest earned is exempt from income tax in India as long as the depositor qualifies as a non-resident under Indian tax laws.

About the Swap Scheme

- Banks can mobilise **3- to 5-year FCNR(B) deposits** and swap them with the RBI at a concessional rate, with RBI absorbing the **hedging** cost (the risk arising from currency value fluctuations)
- Makes FCNR(B) deposits a more attractive overseas funding source for lenders.
- RBI may attract an additional **\$70 billion** in foreign capital through this scheme.

1. **NRE (Non-Resident External)**: Deposit of foreign income converted into rupees; cannot be held in foreign currency.
2. **NRO (Non-Resident Ordinary)**: Rupee-denominated current/savings account; best for NRIs earning income within India (pension, rent). Foreign deposits accepted but converted to rupees.

Polity

Election Symbols

Context

The image of a cockroach used by the satirical Cockroach Janata Party (CJIP) triggered debate over whether a political party can use a cockroach as its election symbol.

How Are Election Symbols Allotted?

- Governed by the **Election Symbols (Reservation and Allotment) Order, 1968**.
- **Recognised national and state parties** are allotted reserved symbols by the EC- e.g., lotus for BJP, hand for Congress.
- **Unrecognised registered parties** and **independent candidates** can request a symbol from the EC's list of "**free symbols**", but are not assured of getting their preferred choice.

What Symbols Are on the Free List?

- The EC maintains a list of free symbols, revised periodically, including fruits, vegetables, household appliances, farm equipment, and sports equipment.
 - The latest list (May 2025) has 184 symbols
- Certain symbols like the **apple** can be allotted freely except in Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, Puducherry, Tamil Nadu, Kerala, and Karnataka where it is reserved for a recognised state party.
- Two different recognised parties in two different states **can share the same election symbol**; there is no rule against it, and they are unlikely to contest against each other.

Can a Creature Be an Election Symbol?

- Following representations from animal welfare activists in the 1990s, the EC **stopped allotting animals** as election symbols.
- Legacy animal symbols that are still retained include the Elephant (Bahujan Samaj Party -

BSP, though barred in Assam) and the Lion (All India Forward Bloc).

EAC-PM Working Paper on Delimitation of Lok Sabha Constituencies

Context

Economic Advisory Council to the Prime Minister (EAC-PM) released a working paper recommending multi-factor criteria for "targeted" splitting of seats in India's next delimitation exercise.

Key Recommendations

- Advocates targeted splitting of constituencies (not uniform) based on joint demographic + linguistic profile, not size alone
- Recommends splitting 170 out of 543 existing seats- 59 for two-way split, 111 for three-way split
- Proposes expanding Lok Sabha to 824 seats (from current 543)
- Delimitation Commission, to be constituted after the 2027 Census, should use updated demographic and linguistic data for final calculations.
- ECI + Ministry of Statistics to time delimitation with a **fresh booth rationalisation cycle**
- **2027 Census tabulations** and gender-disaggregated electoral statistics to be released on schedule
- Women-only polling booths and **women-targeted voter roll update drives** to address residual urban women turnout gap.

IR

External Affairs Minister of Nepal visit to India

Context

Nepal's External Affairs Minister visited India, during which several key bilateral initiatives were launched

Key Outcomes

- **UPI-NPI Linkage:** India's Unified Payments Interface (UPI) linked with Nepal's National Payments Interface (NPI) to facilitate cross-border remittances.
- **Earthquake Reconstruction Assistance:** India handed over 72 health facilities and 12 cultural heritage sector projects to Nepal.
- **MoU — Digital India Bhashini & Kathmandu University:** For co-creating a National Digital Infrastructure for a "Voice First" Language Translation platform.
- **India-Nepal Mutual Legal Assistance Agreement (MLAA):** Implementation welcomed in Criminal Matters for enhanced legal cooperation.

Society and Social Justice

Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)

Context

PMSMA completed 10 years of implementation in 2026.

About PMSMA

- **Nodal Ministry:** Ministry of Health and Family Welfare, implemented through the National Health Mission (NHM)

- **Objective:** Provide free, high-quality antenatal care to pregnant women for safer pregnancies through early risk detection and timely intervention.
- **Features**
 - **Beneficiary:** Pregnant women in 2nd & 3rd trimesters; priority to high-risk cases and dropouts.
 - **Schedule:** 9th of every month at designated government health facilities.
 - **Doctor Volunteer System:** Private doctors volunteer on the 9th; recognised via 'IPledgeFor9' Achievers Awards.
 - **Service:** Includes clinical examinations, laboratory investigations (blood/urine tests), ultrasonography, medicines, and counselling on nutrition and birth planning.
- **Extended PMSMA Strategy (2022):** Strengthens follow-up care to track high-risk pregnancies until safe delivery, backed by financial incentives for beneficiaries and ASHA workers, and SMS alert systems.
- **Impact & Achievements**
 - Antenatal services provided to over **7.50 crore** pregnant women.
 - **Maternal Mortality Ratio (MMR)** declined from **130** (2014–16) to **87 per lakh live births** (2022–24).

Convergence with Allied Maternal Health Schemes

- **Janani Suraksha Yojana (JSY):** Promotes institutional deliveries; benefited over 11.96 crore women since 2014–15.
- **Janani Shishu Suraksha Karyakram (JSSK):** Provides free healthcare to pregnant women and newborns; over 18.05 crore beneficiaries.
- **SUMAN, POSHAN Abhiyaan, PMMVY, and LaQshya:** Collectively address nutrition, maternity benefits, and labour room quality.

Geography & Environment

Fish Survival Bioassay Test for Caustic Soda Industry

Context

Environment (Protection) Second Amendment Rules, 2025 mandate caustic soda plants using MCT to pass a fish-survival bioassay test for wastewater toxicity.

About the Rule

- Requires **laboratory-based bioassay testing** to measure the **combined toxicity** of industrial wastewater discharged by MCT-based caustic soda plants
- Bioassay test = measures cumulative/combined effect of all pollutants in wastewater on living organisms (fish)

About Membrane Cell Technology (MCT)

- Uses a **selective ion-exchange membrane** to separate the cathode and anode chambers during chlor-alkali electrolysis
- Considered **cleaner and less polluting** than older **mercury cell** and **diaphragm cell** processes
- MCT is the modern standard process for the Chlor-Alkali Industry (Produces chlorine, caustic soda, and hydrogen through electrolysis of brine)
- Produces high-purity caustic soda with lower energy consumption and zero mercury discharge

About Caustic Soda

- Sodium Hydroxide (NaOH)
- One of India's most widely used industrial chemicals
- **Applications:** Soap & detergents, paper & pulp, textiles, aluminium refining, petrochemicals, water purification

Hindu Kush Himalaya (HKH)

Context

ICIMOD and the Institute of Atmospheric Physics (Chinese Academy of Sciences) released the HKH Monsoon Outlook 2026, warning of below-normal rainfall and above-normal temperatures driven by El Niño.

About the HKH Region

- The mountain arc stretches **3,500 km** across 8 countries: Afghanistan, Pakistan, India, Nepal, China, Bangladesh, Myanmar, and Bhutan.
- Known as the "Third Pole," it holds the largest volume of ice and snow outside the Arctic and Antarctica, serving as the source of 10 major Asian river systems.
- Supports food and livelihood security of **~2 billion people** across Asia.
- **Major threats in HKH region:** Below-normal rainfall (El Niño-driven monsoon suppression), above-normal temperatures accelerating glacier/snowmelt, heightened GLOF risk, reduced snow persistence lowering seasonal water buffers, and short intense rainfall events triggering floods and landslides.

Places in News

Lisima Plateau (Angola)

News

Recent biodiversity surveys on the **Lisima Plateau** in Angola discovered several potential new species, highlighting the region's ecological importance.

About Lisima Plateau

- **Location:** Remote highland plateau in Angola, south-central Africa.

- **Hydrological Importance:** Forms the headwaters of major river systems i.e. **Congo, Zambezi, Okavango and Kwango** rivers.
 - **Okavango River** is one of the few major rivers that does not drain into the sea; it terminates in the Okavango Delta.
 - **Kwango River:** A major tributary of the Congo River



- **Biodiversity Hotspot:** Considered one of Africa's least-explored biodiversity regions, with many species potentially new to science.

DEFENCEHQ
— THE TIMES OF INDIA

C-295

SPECIFICATIONS

RANGE

5,750 km



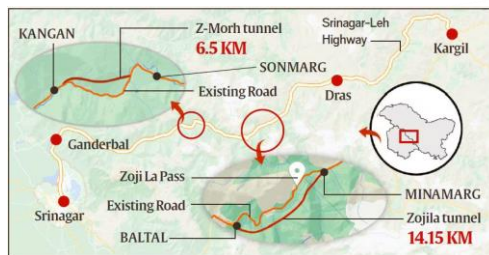
<p>PAYLOAD 9,000 kg</p> <p>CAPACITY 70 soldiers, 48 paratroops, 24 stretchers</p> <p>CRUISING SPEED 480 km/h</p>	<p>SERVICE CEILING 25,000 ft</p> <p>TAKE-OFF RUN 670 m</p> <p>LANDING RUN 320 m</p>
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- **Recent Discoveries:** Surveys recorded potential new species of spiders, dragonflies, damselflies, butterflies and other insects.
- **Conservation Status:** Large parts of the plateau have received conservation recognition, including designation of **Lisima Lya Mwono** as a **Ramsar Wetland of International Importance**.
- **Threats:** Remoteness has preserved the ecosystem, but habitat degradation, future land-use changes and remnants of past conflicts remain concerns.

Zojila Tunnel

News:

The Zojila Tunnel achieved its



final breakthrough with the last blasting from the Kargil side.

About Zojila Tunnel

- World's longest single-tube bi-directional road tunnel above 11,500 feet.
- Connects Ganderbal district (Kashmir) with Drass district (Ladakh/Kargil).
- Located in Seismic Zone IV - high seismic sensitivity.
- **Significance:**
 - Enables year-round all-weather connectivity between Kashmir Valley and Ladakh- first time ever.
 - Strengthens strategic and military logistics along the Line of Actual Control (LAC).

Zojila Pass (Ladakh, Great Himalayas): High mountain pass on NH-1 (Srinagar-Leh Highway) at ~3,528 m

Mains

Ordinance and Judicial appointments

Context

A constitutional debate has emerged following the issuance of a Presidential Ordinance under Article 123 increasing the sanctioned strength of the Supreme Court from 34 to 38 judges.

What is an Ordinance?

- An Ordinance is a temporary law issued by the Executive when immediate legislative action is required and Parliament is not in a position to enact a law.
- Although promulgated by the President, it has the same legal force as an Act of Parliament for a limited period.
- The Supreme Court has consistently held that the ordinance-making power is an exceptional and emergency power intended to address urgent situations.

Evolution of the Ordinance Power in India

- The concept of ordinance-making was introduced through the Indian Councils Act, 1861 after the Revolt of 1857 to strengthen the authority of the Viceroy.
- Subsequently, the Government of India Act, 1935 empowered the Governor-General to promulgate ordinances.
- This framework was incorporated into the Constitution through Article 123, which vests ordinance-making authority in the President.

Key Features of an Ordinance

- An ordinance carries the same legal status and effect as a law enacted by Parliament.
- It may operate retrospectively, taking effect from a date prior to its promulgation.
- It can amend, repeal, or modify existing laws enacted by Parliament.
- Taxation laws may also be introduced or altered through an ordinance.
- An ordinance cannot be used to amend the Constitution.
- Like parliamentary legislation, it remains subject to constitutional limitations, particularly the provisions relating to Fundamental Rights under Part III.

Constitutional Provisions

- **Article 124(1):** Empowers Parliament to determine the number of judges in the Supreme Court through legislation.
- **Article 123:** Authorizes the President to promulgate Ordinances when Parliament is not in session. Such Ordinances have the force of law but cease to operate six weeks after Parliament reconvenes unless replaced by an Act.

Recent developments

- After the promulgation of the Ordinance, judges were sworn into the Supreme Court.
- Two appointments filled vacancies that already existed within the sanctioned strength of 34 judges.

- The remaining three appointments were made against the additional posts temporarily created through the Ordinance.

Associated Constitutional and Institutional Concerns

- **Departure from Judicial Caution on Ordinance-Making:** The use of an Ordinance to alter the Supreme Court's composition raises questions about adherence to the Court's own jurisprudence discouraging executive law-making as a substitute for legislative action.
 - Eg: In the case of D.C. Wadhwa v. State of Bihar, the Court criticized repeated reliance on Ordinances as a constitutional impropriety.
- **Perceived Impact on Separation of Powers:** Judges occupying posts created by a temporary executive measure may face concerns regarding institutional independence, particularly when matters involving the Union Government come before the Court.
- **Uncertainty if the Ordinance Lapses:** Should Parliament fail to enact a replacement statute, the status of judges appointed to Ordinance-created positions would enter uncharted constitutional territory.
 - Eg: The de facto doctrine recognized in Gokaraju Rangaraju v. The state of Andhra Pradesh may protect past judicial decisions.
- **Implications for Judicial Independence:** Allowing the executive to temporarily determine the Court's sanctioned strength could be viewed as inconsistent with the judiciary's longstanding efforts to preserve institutional autonomy
 - Eg: In the Supreme Court Advocates-on-Record Association v. Union of India, the Court invalidated the National Judicial Appointments Commission framework to safeguard judicial primacy in appointments.

Way Forward

- **Early Legislative Approval:** Parliament should promptly enact legislation replacing the Ordinance to remove uncertainty surrounding the newly created posts.
- **Parliamentary Route for Future Expansion:** Changes in the strength of the Supreme Court should ordinarily be undertaken through regular legislation rather than temporary executive measures.
- **Institutional Guidelines by the Collegium:** The Collegium may consider refraining from recommending appointments against Ordinance-created posts until such positions receive statutory backing.
- **Safeguarding Institutional Credibility:** To avoid perceptions of conflict of interest, judges occupying temporary posts could exercise caution in participating in sensitive constitutional matters involving the Union Executive until the legal status of their positions is settled.

Scaling India's Solar Power Schemes

Context

India has rapidly scaled solar capacity, adding over 50 GW in 2025 alone, more than any country except China, with solar now accounting for ~30% of total installed electricity capacity.

What Is the Current Status of India's Flagship Solar Schemes?

- **PM Suryaghar Yojana:** Against a target of 1 crore household installations, only 40.52 lakh households have been connected so far.

- Gujarat, Maharashtra, Kerala, and Rajasthan account for nearly 70% of the 31 lakh rooftop installations, while Bihar, Jharkhand, West Bengal, and Tamil Nadu report critically low adoption rates.
- **PM-KUSUM:** Against 14 lakh pump installations targeted, only 10.9 lakh had been installed by March 2025.

What Are the Key Challenges Hindering Adoption?

- **Perverse Subsidy Structure:** Free or heavily subsidised electricity in states like Punjab (which spent over ₹8,000 crore on power subsidies) eliminates the financial incentive to invest in upfront solar installation.
- **High Upfront Capital Cost:** Solar equipment costs several lakh rupees, recoverable only over time through bill savings and surplus power sales-disproportionately affects low-income households without access to affordable credit.
- **Low State Capacity and Implementation Gaps:** Poor-performing states reveal systemic weaknesses in distribution company (DISCOM) readiness, grid integration capacity, and ground-level awareness programmes.
- **Demand-Supply Mismatch at Peak Hours:** April-May 2026 peak demands were met largely through solar output, revealing dangerous grid over-dependence on a single intermittent source with no storage backup.

What Is the Way Forward?

- **Rationalise Competing Subsidies:** States offering free electricity must be incentivised through GST-linked fiscal transfers to phase out subsidies that structurally undermine solar adoption.
- **Expand Affordable Financing:** Low-cost credit products, collateral-free green loans, and BNPL (buy-now-pay-later) models for rooftop equipment can decouple upfront cost barriers from long-term savings incentives.
- **Strengthen DISCOM Readiness:** Grid upgradation, net-metering infrastructure, and real-time procurement capacity must be built in low-adoption states before demand-side interventions alone can succeed.
- **Mandate Performance-Linked State Targets:** Scheme funds should be disbursed on a performance-linked basis, with low-adoption states required to submit grid-readiness and awareness plans before receiving the next tranche.
- **Integrate Storage to Manage Peak Demand:** Pairing rooftop solar with affordable battery storage, supported through KUSUM-linked incentives, can smooth the demand-supply mismatch during peak periods.

PRE FACT BOX

PM Suryaghar Yojana

- Target: Install rooftop solar on **1 crore households**
- Provides households with up to 300 units of free electricity every month by subsidizing the installation of grid-connected rooftop solar systems
- **Nodal Ministry:** Ministry of New and Renewable Energy (MNRE)

PM-KUSUM (Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan)

- Three components:
 - **Component A:** 10 GW decentralised ground-mounted solar plants
 - **Component B:** 20 lakh standalone solar pumps
 - **Component C:** Solarisation of 15 lakh grid-connected pumps
- Allows farmers to sell surplus power to DISCOMs, converting them from energy consumers to energy producers
- **Nodal Ministry:** Ministry of New and Renewable Energy (MNRE)