



1. IIT Patna Launched Bihar's first Param Rudra supercomputer

- **Historic First for Bihar:** It is the first supercomputer to be established in any institute or government office in Bihar. Its presence at the Aryabhata Supercomputing Centre (ASC) makes IIT Patna a central hub for high-end research in the region.
- **State-of-the-Art Power:** The system delivers a peak performance of 838 TeraFLOPS. It is built with 180 compute nodes using indigenous "Rudra" servers, high-end Intel Xeon CPUs, and NVIDIA A100 GPUs for AI-accelerated workloads.
- **Indigenous "Make in India" Tech:** Developed under the National Supercomputing Mission (NSM) by C-DAC, the system features Indian-made server boards, cooling technologies, and a specialized software stack, reducing dependence on foreign hardware.
- **Multi-Disciplinary Research:** The facility is designed to support 10 different academic departments, enabling complex simulations in fields like Quantum Computing, AI/Data Science, Climate Modeling, and Drug Discovery.
- **Regional Impact:** Beyond IIT Patna, a portion of its computing capacity will be shared with neighboring academic and research institutions, fostering a collaborative scientific ecosystem across Eastern India and Purvanchal.



2. First Made-in-India MRI Scanner Developed with Zoho Support

- **Helium-Free "Dry Magnet" Technology:** Unlike traditional MRI machines that require expensive and scarce liquid helium for cooling, this scanner uses a cryogen-free, conduction-cooled design. This makes the system more sustainable and easier to maintain in areas with limited infrastructure.



- **Significant Cost Reduction:** The indigenous production and simplified cooling system make the scanner approximately 40% cheaper to build than imported models from global giants like Siemens or GE. This is expected to halve the cost of individual MRI scans for patients.
- **Lightweight and Mobile:** While standard MRI machines weigh around 6 tonnes, the VoxelGrids scanner is significantly lighter at 2–3 tonnes. This compact design allows it to be mounted on mobile platforms for use in rural and remote regions.
- **Flexible "Pay-Per-Use" Model:** To help smaller hospitals that cannot afford the high upfront capital expenditure, the developers introduced a pay-per-use business model. This democratizes access to advanced diagnostics beyond Tier-1 cities.

3. India's First Ever Weapon Database to Curb Terror Launches By Centre

- **Centralized Tracking System:** Developed and hosted by the National Investigation Agency (NIA), this is a national-level repository that tracks government-owned firearms that have been lost, stolen, or looted from state police and Central Armed Police Forces (CAPFs).
- **Real-Time Inter-State Coordination:** The database features a digital interface accessible by all state police forces, paramilitary units, and central agencies. This ensures that a weapon stolen in one state and recovered in another can be instantly traced and linked to its origin.
- **Comprehensive Regional Coverage:** The system integrates data from all States and Union Territories, with a specific focus on high-risk zones, including Jammu & Kashmir, the North-East, and Naxal-affected regions, where weapon looting is a frequent tactic of extremist groups.
- **Assault on Organized Crime:** The database was launched alongside the Organized Crime Network Database (OCND). Together, they aim to dismantle the nexus between local criminal syndicates (who often handle stolen arms) and international terror networks.
- **Data-Driven Investigation:** By providing detailed records on recovery patterns and movement, the database allows investigators to conduct "watertight" forensic and intelligence analysis, moving India closer to its "Zero-Terror Policy" goal.



4. Anu Garg became Odisha's First Woman Chief Secretary

- **Breaking the Glass Ceiling:** Anu Garg is the first woman to hold the post of Chief Secretary in Odisha's history. This follows her previous milestone in 2023, when she became the state's first woman Development Commissioner.
- **Distinguished Career (1991 Batch):** A 1991-batch IAS officer of the Odisha cadre, she brings over 34 years of administrative experience. She has served in crucial departments including Water Resources, Health & Family Welfare, and Women & Child Development.
- **High-Level Experience at the Centre:** Her career includes significant stints at the national level, most notably serving as Joint Secretary in the Prime Minister's Office (PMO) between 2012 and 2015, and as Joint Secretary in the Ministry of Textiles.



- **Academic & Global Expertise:** She is an alumna of Lady Shri Ram College and holds a Master of Public Health from Johns Hopkins University, USA. Her expertise in public health was utilized when she served as a member of the Planning Commission's expert group on Universal Health Coverage.

5. China Opens World's Longest Expressway Tunnel in Xinjiang

- **Record-Breaking Length:** The tunnel spans 22.13 kilometers, making it the longest expressway tunnel in the world. It also holds the record for the deepest vertical shaft for a highway tunnel, reaching a maximum burial depth of 1,112 meters.
- **Drastic Travel Time Reduction:** By cutting through the formidable Tianshan Mountains, the tunnel reduces a dangerous mountain journey that previously took several hours to just 20 minutes. It serves as a vital link between the regional capital Urumqi (North) and Korla (South).
- **Part of the G0711 Expressway:** The tunnel is the centerpiece of the 324.7 km Urumqi-Yuli Expressway. The total project, built over five years with an investment of approximately 46.7 billion yuan (\$6.63 billion), reduces the overall drive between Urumqi and Korla from 7 hours to about 3 hours.
- **Conquering "The Road of Death":** The tunnel replaces a treacherous high-altitude pass (Shengli Pass) known for extreme weather and frequent accidents. It enables all-weather transportation through a region that faces extreme cold, high seismic intensity, and 16 different geological fault zones.



6. Karnataka's Tilottama Sen crowned National Champion at National Shooting Championships

- **Champion in 50m Rifle 3-Positions:** Tilottama was crowned the National Champion in the Women's 50-metre Rifle Three Positions event. This victory is significant as she transitioned successfully into this physically demanding event (involving kneeling, prone, and standing positions) alongside her primary 10m Air Rifle discipline.
- **Youngest Olympic Quota Holder:** Tilottama rose to fame as the youngest Indian shooter to secure a Paris 2024 Olympic quota place for the country (achieved in 2023 at the age of 15). While she narrowly missed out on the final Olympic squad after selection trials, her national title reaffirms her status as a top-tier athlete.
- **Dominant Performance:** She topped the podium with a final score of 466.9. She showed exceptional consistency throughout the competition, having also topped the qualification round with a high score of 591.
- **Tough Competition:** In the final at the MP State Shooting Academy, she outperformed seasoned shooters, including Kerala's Vidarsa K. Vinod (Silver) and veteran Olympian/Railways' star Ayonika Paul (Bronze).



7. England registers historic win by defeating Australia in 4th Ashes Test

- **Ending a 15-Year Jinx:** This was England's first Test win on Australian soil since January 2011. It ended an 18-match winless streak (16 losses and 2 draws) in Australia, a drought lasting exactly 5,468 days.
- **A Two-Day Shootout:** In a chaotic display of bowling dominance, the match was completed in just two days. A total of 36 wickets fell in less than 145 overs, making it one of the shortest Test matches in cricket history.
- **The "Josh Tongue" Show:** England's young pacer Josh Tongue was named Player of the Match after taking a career-best 7 wickets (5/45 in the first innings and 2/44 in the second). He also became the first England bowler since 1998 to take a five-wicket haul at the MCG.
- **Low-Scoring Drama:** The pitch was heavily criticized for being overly favorable to bowlers. No batsman from either side managed to score a half-century—a rare occurrence in Australian Test history. Australia was bundled out for 152 and 132, while England scored 110 and 178/6.
- **Successful Fourth-Innings Chase:** Chasing a tricky target of 175 on a volatile deck, England's aggressive "Bazball" approach saw them reach the total in just 32.2 overs. Key contributions came from Jacob Bethell (40) and Zak Crawley (37), before Harry Brook guided them home.



8. PV Sindhu Elected Chair of BWF Athletes Commission (2026–2029)

- **Direct Voice in Governance:** As the newly elected Chair, Sindhu will also serve as a member of the BWF Council. This gives her a full voting seat and a direct platform to represent players' interests in the global decision-making and policy-shaping of the sport.
- **Vast Commission Experience:** Sindhu is no stranger to athlete advocacy; she has been an active member of the BWF Athletes' Commission since 2017 and has served as a BWF Integrity Ambassador since 2020.
- **Succeeding a Legend:** She takes over the leadership role from the outgoing Chair, Greysia Polii (the Tokyo 2020 Olympic gold medalist from Indonesia), whose term concludes at the end of 2025.
- **Global Leadership Team:** Sindhu will lead a high-profile commission that includes Deputy Chair Debora Jille (Netherlands) and elite stars like reigning Olympic champion An Se-young (South Korea), Jia Yifan (China), and Doha Hany (Egypt).



9. Coal India appoints CMD B. Sairam as Chief Executive Officer

- **Leadership Consolidation:** This is a historic move as B. Sairam becomes the first person to hold the dual title of CMD and CEO in the history of Coal India. The appointment, effective retrospectively from December 15, 2025, aligns with SEBI regulations to strengthen corporate governance.
- **Seasoned Mining Veteran:** Sairam is a 1991-batch mining professional with over 33 years of experience. A graduate of NIT Raipur with an MBA in Energy Management from the NTPC School of Business, he has spent his entire career navigating the complexities of the Indian coal sector.
- **Proven Track Record at Subsidiaries:** Before taking the helm at CIL, he served as the CMD of Northern Coalfields Limited (NCL) and Director (Technical) at Central Coalfields Limited (CCL). He is credited with executing one of the industry's largest rehabilitation programs during the Jayant expansion project.
- **Strategic Production Targets:** His elevation comes at a critical juncture as Coal India aims for an ambitious production target of 875 million tonnes for the 2025–26 fiscal year to ensure national energy security and reduce reliance on imports.



10. International Day of Epidemic Preparedness is observed on December 27

- **Origin and Mandate:** The day was officially designated by the United Nations General Assembly on December 7, 2020 (Resolution A/RES/75/27). It was first observed on December 27, 2020, to honor the birth anniversary of Louis Pasteur, the pioneer of vaccinations and microbiology.
- **Focus on the "One Health" Approach:** A primary goal is promoting the "One Health" concept, which recognizes the interconnectedness of human health, animal health, and the environment. This is critical since the majority of emerging infectious diseases are zoonotic (jumping from animals to humans).
- **The "7-1-7" Global Target:** For 2025, health organizations have emphasized the 7-1-7 framework: detecting an outbreak within 7 days, notifying authorities within 1 day, and initiating an effective response within 7 days.
- **Closing the "Equity Gap":** The day highlights the urgent need for equitable access to medical countermeasures. It advocates for regional vaccine manufacturing and decentralized diagnostic labs to ensure that low-income nations aren't "last in line" during the next pandemic.
- **Focus on "Disease X":** Preparedness efforts are no longer just for known threats like Influenza or Ebola. The day encourages investment in flexible systems capable of responding to "Disease X"—a hypothetical, unknown pathogen that could cause a future international epidemic.



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