

20th January 2025

First Astronomical Observatory of Eastern India

Recently the first astronomical observatory of eastern India was inaugurated.

Key Points:

- ❖ It has been inaugurated in the **Garpanchkot hills in Purulia district of West Bengal**.
- ❖ This observatory is located at an altitude of **600 meters** above ground level.
- ❖ This observatory has been established by **S N Bose Center for Basic Sciences**, an autonomous institute of the Department of Science and Technology.
- ❖ The observatory has a 14-inch diameter telescope and soon a 1 meter diameter telescope will also be installed in it.
- ❖ **Significance:** It will help in scientific observation of celestial bodies and students will get training in handling telescopes and recording data.

US Spacewalk 91

NASA astronauts Sunita Williams and Nick Hague lifted off from the International Space Station (ISS) on **January 16, 2025** for a crucial mission.

Key Points:

- ❖ The mission, named **US Spacewalk 91**, is Williams' eighth spacewalk and Hague's fourth.
- ❖ The pair began a **six-and-a-half-hour operation** to repair critical systems.
- ❖ **Major tasks:** The mission's tasks included maintaining equipment for station orientation and upgrading the NICER telescope.

- They also replaced the reflector on the docking adapter and prepared equipment for future work on the ISS.

Background

- ❖ Sunita and Bush Wilmore went on Boeing NASA's **joint 'Crew Flight Test Mission'**. Sunita was the pilot of the spacecraft. Bush Wilmore who went with her was the commander of this mission.
- ❖ Both of them had to **return to Earth after staying for 8 days** in the International Space Station (ISS).
- ❖ **Objective:** The main objective of this mission was to prove the spacecraft's ability to take astronauts to the space station and bring them back.
- ❖ **Failure to return:** The spacecraft started malfunctioning right after the launch, in just 25 days there were 5 helium leaks in the spacecraft's capsule. And 5 thrusters in it had stopped working.

Amendment to the Cable Television Networks Rules, 1994 (the Rules)

The Ministry of Information and Broadcasting has issued a notification amending the Cable Television Networks Rules, 1994 (Rules) to simplify the Local Cable Operator (LCO) registration process.

Key Points:

- ❖ **Online Registration:** LCO registrations will be completely online and the Ministry will be the registering authority.
 - Earlier, the LCO registration **process was done in offline mode at the local Head Post Office** of the LCO office area and the Head Postmaster was their registering authority.

- LCO Registration Certificates will be issued in real time.
- ❖ **Revised rules regarding LCO registration: -**
 - LCOs are required to apply online for fresh registration or renewal of registration on MIB's Broadcasting Services Portal.
 - LCO registration shall be **granted or renewed for a period of five years**.
 - The processing fee for registration or renewal is **Rs.5000**.
 - LCO registration shall be **valid for operations throughout India**.
 - Application for renewal of **registration should be made at least 90 days** before the expiry of registration.
 - LCOs may appeal against the decision of the registering authority i.e. designated section officer **refusing registration or renewal of registration within 30 days**.

Upper Karnali Hydroelectric Project

Recently the partnership for the Upper Karnali Hydroelectric Project was finalised.

Key Points:

- ❖ **Indian Renewable Energy Development Agency Ltd (IREDA)** signed a joint venture agreement with SJVN, GMR and Nepal Electricity Authority (NEA) for development of **900 MW** Upper Karnali Hydroelectric Project in Nepal.
- ❖ The agreement provides for the development, construction, operation and maintenance of the project under the **Build-Own-Operate-Transfer (BOOT) model**.

- ❖ **Planning Period:** The project duration is fixed at **25 years** from the commercial operation date.
- ❖ **Objective:** The initiative aims to strengthen regional energy security and accelerate renewable energy development.

9th Foundation Day of Startup India

The 9th Foundation Day of Startup India was celebrated on January 16, 2025.

Key Points:

- ❖ Startup India is a transformational initiative launched in 2016 to promote entrepreneurship and innovation.
- ❖ **Significance:** Startups are the agents of change shaping a better future for the country.
- ❖ Designated as National Startup Day, this milestone marks India's remarkable journey towards becoming the **world's third largest startup ecosystem**.
- ❖ India has 1,59,157 startups as of January 15, 2025, up from around 500 in 2016. These startups are generating **17.2 lakh direct jobs**.
- ❖ These startups have received a total funding of Rs 13 trillion from the government so far.

STEM:

- ❖ India is producing the largest number of STEM graduates (**43% of graduates are women**). Women are at the heart of India's growth story. The government is empowering women-led startups through targeted initiatives like the Women Entrepreneurship Platform.

Startup Mahakumbh

- ❖ The **second edition of Startup Maha Kumbh** was inaugurated at the event.

- ❖ It will start in April in which around **2,500 startups** will participate.

IMPACT Factbook

- ❖ DPIIT also launched the IMPACT Factbook (Empowering a Resilient and Agile India for the Growth of Visionary Startups), which is the ultimate guide to India's thriving startup ecosystem and its growth story from 2016-2024.

Bhargavastra: Micro-Missile System

India has tested its first indigenously developed micro-missile system designed to counter swarm drone threats.

Key Points:

- ❖ A new micro-missile system being developed for the Indian Army has successfully engaged virtual targets beyond **2.5 km**.
- ❖ The missile offers a cost-effective solution against large-scale drone attacks, which continue to pose a security challenge.
- ❖ Bhargavastra has been developed by **Economic Explosives Limited (EEL)**, a subsidiary of Nagpur-based Solar Group.
- ❖ **Speciality:**
 - 'Bhargavastra' demonstrates the capability to detect small aerial vehicles at a range of over **6 km** and **neutralise them using guided precision weapons**.
 - The system has the capability to launch over **64 precision missiles simultaneously**.
 - Economic Explosives Limited This mobile platform-mounted system is being developed to ensure rapid deployment in threatened areas.
 - Its design is suitable for **operations on various terrains, including high-altitude areas**.

Space Docking

India has achieved success in space docking.

Key Points:

- ❖ India became the fourth country after the US, China and Russia to carry out successful space docking of 2 satellites.
- ❖ The docking operation of the Space Docking Experiment (SPADEX) mission was successfully completed on **January 16, 2025**.
- ❖ **Docking:** Docking is a process of connecting two separate free-flying space vehicles.



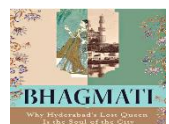
SPADEX Space Mission

- ❖ ISRO launched the mission on December 30, 2024 with the successful launch of the Spadex spacecraft using the Polar Satellite Launch Vehicle (PSLV)-C60 from the Satish Dhawan Space Centre in Sriharikota.
 - The Spadex mission consists of two small satellites, SDX01, which is the chaser, and SDX02, which is the target, each **weighing about 220 kg**.
 - The two satellites, target and chaser, were in the same orbit at a distance of 20 km, known as "Far Rendezvous", and then came close to dock.
 - After docking, the two satellites will operate as a single spacecraft.

Book IN News

Bhagmati: Why Hyderabad's Lost Queen Is the Soul of the City

- ❖ The author of this book is **Maupia Basu**.



- ❖ In this book, she presents both documented history and oral folklore about the construction of the **600 feet long Purana Pul** (which is 54 feet above the Musi river bed), the founding of Bhagnagar in honour of Bhagmati, and how Hyderabad got its name.
- ❖ Legend has it that the Purana Pul (or Old Bridge) in the old city of Hyderabad was built by Ibrahim Qutb Shah in 1578 when his son **Muhammad Quli Qutb Shah** crossed the Musi River under turbulent conditions to meet his lover Bhagmati.
- ❖ However, some historians refute this statement.

Person In News- Sports

PV Sindhu

- ❖ Two-time Olympic medallist PV Sindhu recently signed a multi-year partnership with **Puma India** as the brand ambassador.
- ❖ To mark the occasion, the company changed the spelling of its brand signage across various stores to '**PVMA**', leading to speculation that this might be a spelling mistake.



Person In News- Appointments

Justice Vinod Chandran

- ❖ Chief Justice of India (CJI) Sanjiv Khanna administered the oath of office to former Chief Justice of Patna High Court Vinod Chandran as a **judge of the Supreme Court**.

- ❖ With the swearing-in of Justice Chandran, the number of judges in the **Supreme Court has increased to 33**. The total sanctioned strength of judges, including the Chief Justice, is 34.



Ashok Chandra

- ❖ Ashok Chandra has taken over as MD and CEO of Punjab National Bank (PNB). He has replaced Atul Kumar Goel.



Binod Kumar

- ❖ Binod Kumar has been appointed MD and CEO of Indian Bank.



Important News- Other States

Odisha

- ❖ **Odisha signed eight MoUs with various Singaporean entities** during the two-day visit of Singapore President Tharman Shanmugaratnam to the state.
- ❖ The MoUs pertained to IT education, skill development, research and development in sustainable energy, consultancy services and development of production facilities for green hydrogen and its derivatives.
- ❖ The Odisha government announced a **monthly pension of Rs 20,000** for those who were jailed during the Emergency imposed by then Prime Minister Indira Gandhi in 1975.
- ❖ The pension scheme, effective from January 1, complies with the pledge made by **Chief Minister Mohan Charan Majhi** on Independence Day.

Punjab

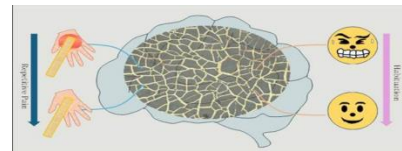
- ❖ SHE COHORT 3.0 (Startup Handholding and Empowerment – Cohort 3.0) launched in Punjab.
- ❖ The initiative will enable ambitious women startups and students to build and scale technology-based enterprises with the support of business incubators and ecosystem enablers.

Miscellaneous

- ❖ Filmmaker **Payal Kapadia** has achieved a historic feat by becoming the first Indian director to be nominated in the Best Director (Motion Picture) category for her film **All We Imagine as Light** at the 82nd Golden Globe Awards. The film is also nominated for Best Motion Picture – (Non-English Language).
- ❖ The International Monetary Fund (IMF) has retained India's growth forecast for fiscal years 2026 and 2027 at 6.5 per cent, according to the global economic body's World Economic Outlook report.
- ❖ According to Railway Minister Ashwini Vaishnav, **Indian Railways has developed the world's highest horsepower hydrogen-powered train engine**. The engine has a capacity of 1,200 horsepower, which is much more than the 500-600 horsepower of similar engines made by only four other countries that have developed such technology.

- ❖ Scientists at the Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bengaluru, **using a silver wire network** on a stretchable material, have developed a device that senses tension, mimicking the sensation of pain and adapts its electrical response accordingly.

- By recreating pain-like responses, this device paves the way for future smart wearable systems that could help doctors detect stress.



- ❖ Chronic Wasting Disease, also known as **Zombie Deer Disease**, affects deer, elk, moose and reindeer, causing severe neurological symptoms. It has been found in many US states. There is **no known cure, vaccine or treatment for the disease**.

- Researchers have warned that the **virus can also spread to humans through consumption of infected meat**.
- Since its discovery in 1967, CWD has spread geographically and increased in prevalence locally.

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