

May - 25

TNPSC BITS

- ❖ Taiwan Travelogue by Taiwanese novelist, essayist, and cultural critic Yáng Shuāng-zǐ, translated into English by Lin King, won the International Booker Prize in 2026.
- ❖ Gp Capt. K.K. Venugopal became the first Indian test pilot to be elected as a Fellow of the Society of Experimental Test Pilots (SETP) in 2026.
- ❖ Garden Reach Shipbuilders & Engineers launched the Next Generation Offshore Patrol Vessel (NGOPV) Yard 3039 'INS Sanghmitra' for the Indian Navy in Kolkata, West Bengal.
- ❖ The Ministry of Social Justice and Empowerment launched the JEEVAN (Joint Elderly Empowerment & Virtual Assistance Network) mobile application for senior citizens.
 - The app aims to improve the safety, healthcare access, welfare, dignity, and social inclusion of elderly people.
- ❖ The SHATAYU (Senior Holistic Care Assistance and Training for Your Utility) Geriatric Caregiver Dashboard was launched during a national workshop on “Creating a Well-Functioning Care Economy” in New Delhi to strengthen caregiving services for senior citizens in India.
 - The dashboard helps senior citizens find the availability of geriatric caregivers in different districts and states.
- ❖ World Metrology Day is observed every year on 20 May to highlight the importance of measurement science in daily life.
 - The theme for the year 2026 is “Metrology: Building Trust in Policy Making”.

NATIONAL NEWS

Supreme Court on Stray Dogs

- ❖ The Supreme Court of India allowed civic authorities to take legal action, including euthanasia, against rabid, incurably ill, or highly dangerous stray dogs under the Animal Birth Control (ABC) Rules, 2023.
- ❖ The Court said Article 21 of the Constitution protects citizens' right to life and safety from stray dog attacks.
- ❖ It also stated that Article 19(1)(d) gives citizens the right to move freely in public places without fear.

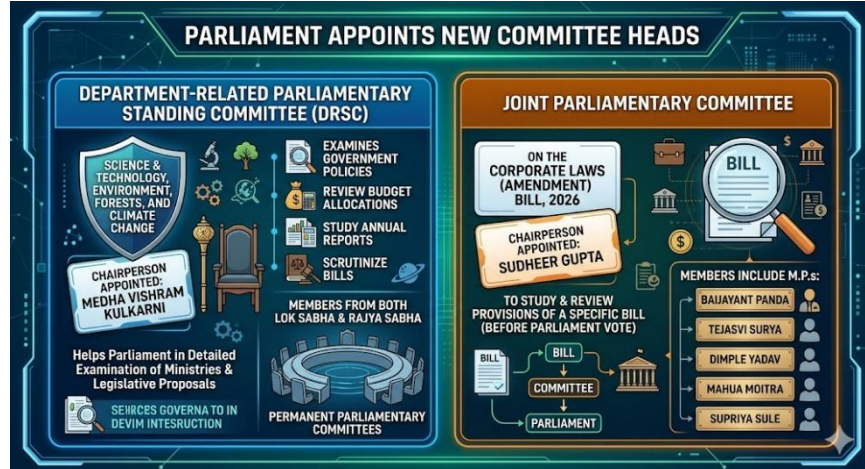
- ❖ The Court directed every State and Union Territory to establish at least one Animal Birth Control (ABC) centre in each district with trained veterinary staff.
- ❖ States were instructed to ensure the availability of anti-rabies vaccines and immunoglobulin in government hospitals.
- ❖ The Animal Birth Control (ABC) Rules, 2023, under the Prevention of Cruelty to Animals Act, 1960, allow euthanasia only for rabid, terminally ill, or fatally injured dogs.



New Committee Heads

- ❖ Medha Vishram Kulkarni was appointed as the Chairperson of the Department-related Parliamentary Standing Committee on Science and Technology, Environment, Forests and Climate Change.
- ❖ The committee examines government policies, budget allocations, annual reports, and bills related to science, technology, environment, forests, and climate change.
- ❖ Department-related Parliamentary Standing Committees help Parliament in detailed examination of ministries and legislative proposals.
- ❖ These committees consist of members from both Lok Sabha and Rajya Sabha and function as permanent parliamentary committees.
- ❖ Sudheer Gupta was appointed as the Chairperson of the Joint Committee on the Corporate Laws (Amendment) Bill, 2026.

- ❖ The Joint Committee was formed to study and review the provisions of the Corporate Laws (Amendment) Bill, 2026 before it is passed by Parliament.
- ❖ Members of the committee include MPs such as Bajjayant Panda, Tejasvi Surya, Dimple Yadav, Mahua Moitra, and Supriya Sule.



India at ITU Council 2026



- ❖ India participated in the International Telecommunication Union (ITU) Council 2026 meeting held in Geneva, Switzerland.
- ❖ India's proposal to host the ITU Plenipotentiary Conference (PP)-2030 was accepted by the ITU Council.
- ❖ India announced voluntary support for work related to 6G, Artificial Intelligence (AI), and Digital Public Infrastructure (DPI).

- ❖ The International Telecommunication Union is the United Nations (UN) agency for global telecom and digital cooperation.
- ❖ India has been a member of the ITU Council since 1952.

Fourth S-400 Air Defence System

- ❖ India is set to receive the fourth squadron of the S-400 Triumph air defence missile system from Russia.
- ❖ India signed a 5.43 billion US dollar agreement with Russia in 2018 to procure five S-400 air defence squadrons.
- ❖ The S-400 Triumph is a long-range surface-to-air missile system designed to destroy aircraft, cruise missiles, and ballistic missiles.
- ❖ The fourth S-400 squadron is expected to be deployed in Rajasthan for air defence coverage along the western border.
- ❖ The fifth and final squadron under the original agreement is expected to be delivered by November 2026.



SCIENCE AND TECHNOLOGY NEWS

AI Genome Editing for Crops - Plant-OpenCRISPR1

- ❖ Scientists developed "Plant-OpenCRISPR1," the world's first Artificial Intelligence (AI)-designed genome-editing platform for crops.

- ❖ The platform was developed by the Central Rice Research Institute under the Indian Council of Agricultural Research.
- ❖ The research was carried out in Cuttack using rice as a model crop for validation.
- ❖ Plant-OpenCRISPR1 supports advanced gene knockout, base editing, and prime editing in plants.
- ❖ The technology uses Artificial Intelligence-designed enzymes instead of naturally occurring microbial proteins used in traditional CRISPR systems.
- ❖ The platform is expected to improve crop breeding, agricultural productivity, and precision genome editing in plants.

INDIA DEVELOPS WORLD'S FIRST AI-DESIGNED GENE EDITOR FOR CROPS

Developed By
Indian scientists at ICAR – Central Rice Research Institute (CIRRI)

Breakthrough
Created the world's first AI-designed gene-editing tool for plants – Plant-OpenCRISPR1 (POC1)

First Tested In
Rice plants (*Oryza sativa*)

Year
2025

What's New?
An AI-powered platform that can edit plant DNA accurately and efficiently to develop crops with better yield, strong disease resistance, climate resilience and improved nutrition.

The infographic features a central image of a hand holding a small green plant in a petri dish, with a glowing DNA double helix in the background. Below this, a photograph shows three scientists in white lab coats working in a laboratory, with one scientist using a microscope.

The SMILE Mission

- ❖ The European Space Agency and the Chinese Academy of Sciences launched the SMILE (Solar wind Magnetosphere Ionosphere Link Explorer) mission, their first fully joint space mission.
- ❖ The mission carries the world's first space-borne Soft X-ray Imager (SXI) to study the interaction between solar wind and Earth's magnetosphere.
- ❖ SMILE aims to capture global X-ray and ultraviolet images of Earth's magnetic shield during solar activity and space weather events.
- ❖ The mission includes four scientific payloads: Soft X-ray Imager (SXI), Ultraviolet Aurora Imager (UVI), Light Ion Analyser (LIA), and Magnetometer (MAG).

- ❖ The 2,600-kg satellite will operate in a highly elliptical orbit about 1.21 lakh km above Earth's North Pole.
- ❖ The mission will help improve space weather forecasting and protect satellites, Global Positioning System (GPS), power grids, and communication systems from solar storms.



SMILE

DIVISION OF WORK

Both **CAS** and **ESA** play active roles in all phases of the mission, each with defined key responsibilities.

CAS RESPONSIBILITY

- **Instruments:** Ultraviolet Imager, Magnetometer, Light Ion Analyzer
- **Platform:** Power, steering, support systems
- **Integration & Test:** Assembly and testing at ESTEC
- **Operations:** Satellite and instruments in orbit

ESA RESPONSIBILITY

- **Instruments:** Soft X-ray Imager
- **Payload Module:** Carries three instruments
- **Integration & Test:** Facilities at ESA Technical Center, Netherlands
- **Launch Vehicle:** Vega-C rocket from Europe's Spaceport, French Guiana

ENVIRONMENT NEWS

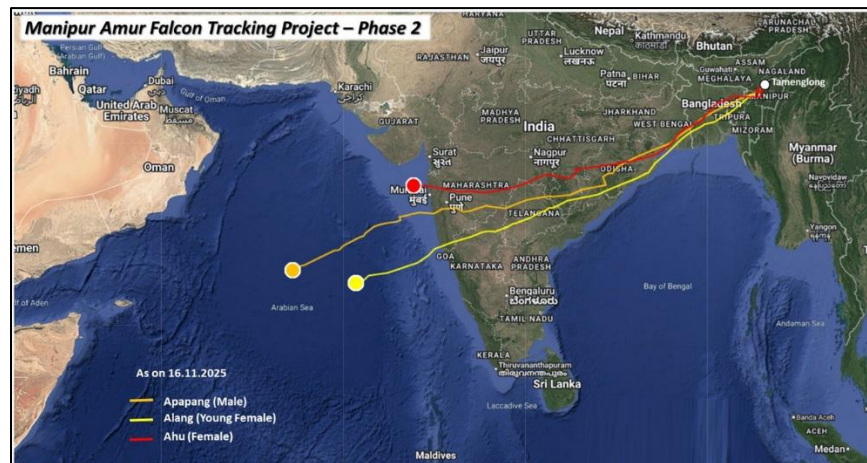
India's First Algae Tree

- ❖ India's first solar-powered "Algae Tree" was installed in Bhopal to help control air pollution.
- ❖ The Algae Tree has been installed at Swami Vivekananda Park in Bhopal, Madhya Pradesh.
- ❖ The device uses microalgae technology to absorb carbon dioxide and release oxygen through photosynthesis.
- ❖ One Algae Tree can absorb carbon dioxide equal to nearly 25 adult trees.

- ❖ The system can reduce PM2.5 air pollutants by around 45–55% within a 15-metre area.



Amur Falcon Tracking Project

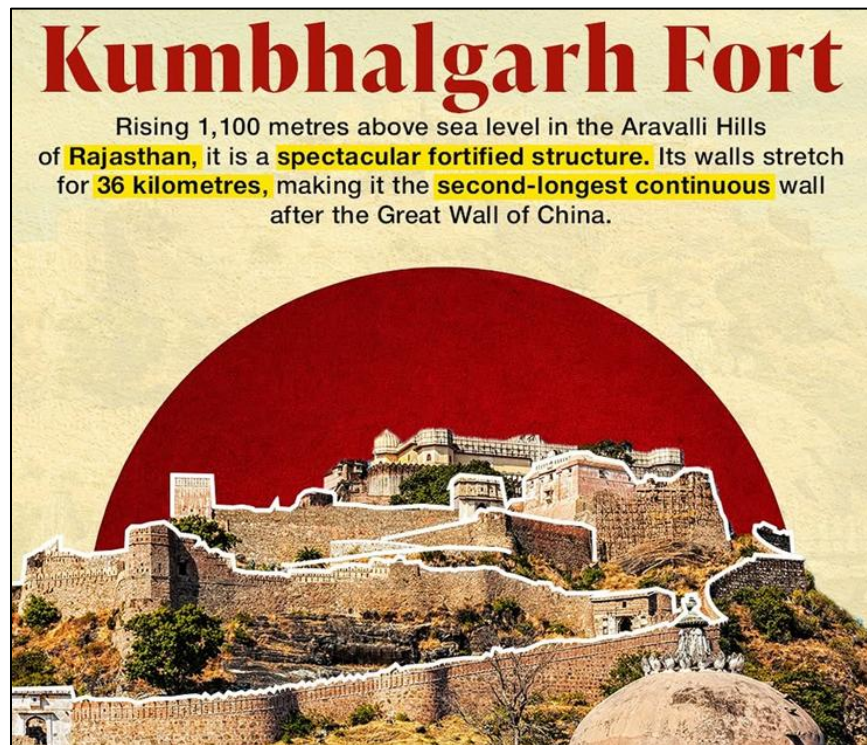


- ❖ Two Amur Falcon birds named Apapang and Alang, tagged with satellite transmitters in Manipur in November 2025, are returning from Southern Africa to East Asia during spring migration.
- ❖ The project is carried out by the Wildlife Institute of India and the Manipur Forest Department with support from the Ministry of Environment, Forest and Climate Change (MoEFCC).

- ❖ Amur Falcon is a long-distance migratory raptor (bird of prey) that travels nearly 6,000 km in about six days, including crossing the Arabian Sea.
- ❖ Its breeding grounds are in Northern China and Far-East Russia, while its wintering grounds are in Eastern and Southern Africa.
- ❖ The species is listed as “Least Concern (LC)” in the IUCN Red List and is protected under the Wildlife (Protection) Act, 1972.

STATE NEWS

Kumbhalgarh Fort – Great Wall of India



- ❖ Kumbhalgarh Fort was recognised in a UNESCO survey for having the world’s second longest continuous wall after the Great Wall of China.
- ❖ Kumbhalgarh Fort is located in the Aravalli Hills of Rajasthan, about 84 km from Udaipur.
- ❖ The fort was built by Rana Kumbha between 1443 and 1458 AD, and the architect was Mandan.
- ❖ The fort wall is around 36 km long and 15–25 feet wide, with seven strong gates called “pols.”
- ❖ UNESCO declared it a World Heritage Site in 2013 under the “Hill Forts of Rajasthan.”

- ❖ The fort has more than 360 temples and is also known as the birthplace of Maharana Pratap.

India's First AI-Powered Phygital Banking Branch

- ❖ India's first Artificial Intelligence (AI)-powered "phygital" banking branch was inaugurated in Guwahati by Assam Chief Minister Himanta Biswa Sarma.
- ❖ "Phygital" banking combines physical banking services with digital technology to provide faster and easier customer services.
- ❖ The branch includes AI-enabled self-service kiosks, paperless cash deposits and withdrawals, and digital onboarding systems.



SHE-MART Initiative

- ❖ The Ministry of Rural Development held a national consultation in Bhubaneswar to finalise operational guidelines for the SHE-MART initiative.
- ❖ SHE-MART stands for Self Help Entrepreneurs – Marketing Avenues for Rural Transformation.
- ❖ The initiative aims to support women-led rural businesses and improve market access for Self-Help Groups (SHGs).

- ❖ SHE-MART was announced in the Union Budget 2026–27 and is implemented under Deendayal Antyodaya Yojana–National Rural Livelihoods Mission (DAY-NRLM).
- ❖ The scheme will establish women-managed retail stores, aggregation hubs, and digital commerce systems linked with the Open Network for Digital Commerce (ONDC).
- ❖ The initiative supports the government’s target of creating three crore “Lakhpati Didis” by 2029.

