

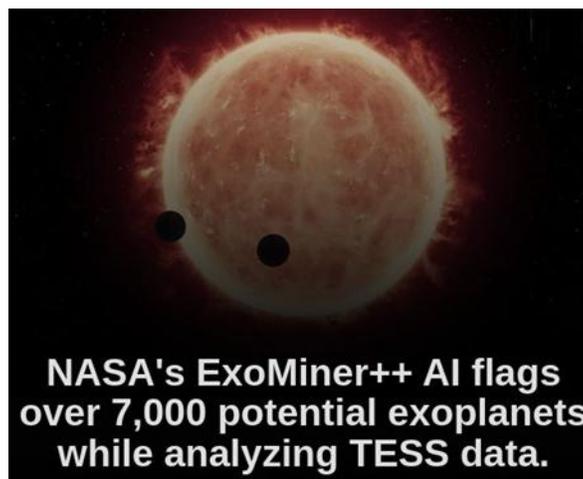
February - 11

## TNPSC BITS

- ❖ Adampur Airport in Punjab was renamed Guru Ravidas Ji Maharaj Ji Airport, during Guru Ravidas' birth anniversary event in Jalandhar.
- ❖ Devika Sihag, a badminton player from Haryana, won her first Badminton World Federation (BWF) Super 300 title at the Thailand Masters 2026.
- ❖ India participated as a Partner Country at Gulfood 2026 in Dubai for the first time, with participation led by APEDA (Agricultural and Processed Food Products Export Development Authority).
- ❖ OpenAI announced that GPT-4o and related models will be retired on February 13, 2026, with GPT-5.2 becoming the new professional standard.
- ❖ The Indian Air Force's Pechora surface-to-air missile system has been fully digitised to improve air defence capability.
  - Pechora is a surface-to-air missile system inducted into the Indian Air Force in the 1970s.
- ❖ Cardinal Poola Anthony, Archbishop of Hyderabad, has been elected president of the Catholic Bishops' Conference of India (CBCI).
  - He becomes the first Dalit prelate to lead India's nearly two crore Catholics.

## SCIENCE AND TECHNOLOGY NEWS

### Artificial Intelligence Model - ExoMiner++

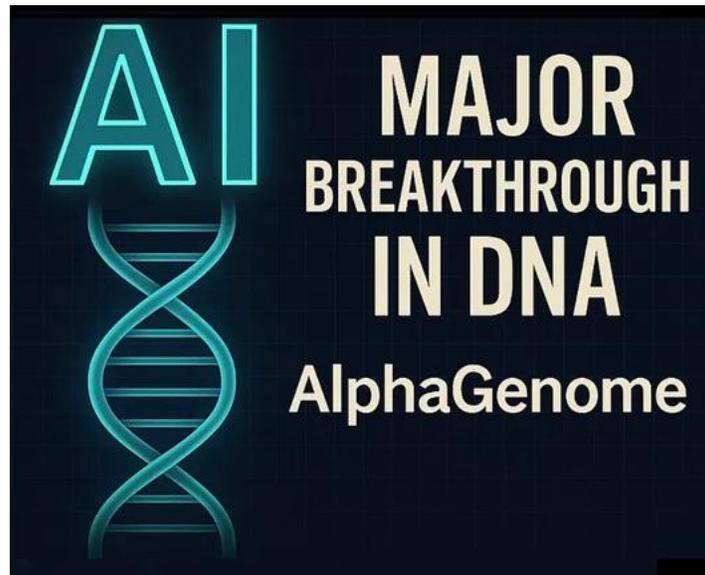


- ❖ The National Aeronautics and Space Administration (NASA) released ExoMiner++, an open-source artificial intelligence model to detect exoplanets.

- ❖ ExoMiner++ is a deep-learning model developed by NASA to identify planets outside the solar system.
- ❖ It works by analysing changes in a star's brightness when a planet passes in front of it.
- ❖ The model helps distinguish real planets from false signals such as binary stars or background objects.

### **Artificial Intelligence Tool - AlphaGenome**

- ❖ Google DeepMind launched AlphaGenome, an artificial intelligence tool that predicts how genetic mutations affect gene regulation and human diseases.
- ❖ AlphaGenome analyses long DNA sequences to study the impact of genetic variations.
- ❖ It mainly focuses on non-coding DNA regions, which form about 98% of the human genome.
- ❖ The tool can analyse up to one million DNA base pairs at once.
- ❖ It helps scientists study gene expression, RNA splicing, and mutation-related diseases.



### **Solar Radiation Storm**

- ❖ A rare red aurora was observed over Hanle, Ladakh, after a powerful solar flare triggered a geomagnetic storm.
- ❖ The event followed an X-class solar flare, the strongest type of solar eruption.

- ❖ The flare produced a Coronal Mass Ejection (CME) that struck Earth's magnetosphere, causing a G4-level geomagnetic storm (severe).
- ❖ The red aurora occurred due to excited oxygen atoms at very high altitudes (above 300 km).
- ❖ Data from the Aditya-L1 mission showed strong compression of Earth's magnetosphere during the storm.
- ❖ Solar radiation storms can disrupt satellites, GPS, communication systems, and power grids.



### **MoM-z14**



- ❖ The James Webb Space Telescope (JWST) discovered the most distant galaxy named MoM-z14.
- ❖ MoM-z14 existed about 280 million years after the Big Bang.

- ❖ The galaxy's light travelled more than 13.5 billion years to reach Earth.
- ❖ Scientists found high nitrogen levels, indicating early star formation in the galaxy.

### **Helix Nebula**

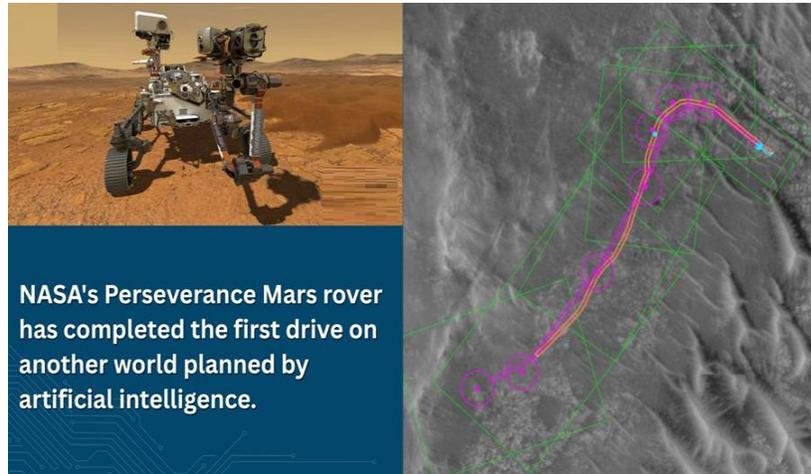
- ❖ The James Webb Space Telescope captured detailed images of the Helix Nebula in space.
- ❖ The telescope observes gas and dust around a dying star.
- ❖ The Helix Nebula formed when a star reached the final stage of its life and released material into space.
- ❖ A white dwarf, which is the remaining core of the dead star, lies at the centre of the nebula.
- ❖ The released gas, dust, and molecules may later help in the formation of new stars and planets.



### **AI Navigation Test on Mars**

- ❖ NASA's Perseverance rover completed the first Mars drive planned using artificial intelligence.
- ❖ Artificial intelligence models analysed orbital images and terrain data to create safe driving routes.

- ❖ Route planning was traditionally done by engineers at NASA's Jet Propulsion Laboratory.
- ❖ The project shows how artificial intelligence can support future space exploration missions.



## ENVIRONMENT NEWS

### Lonar Meteor Crater Lake Ecosystem

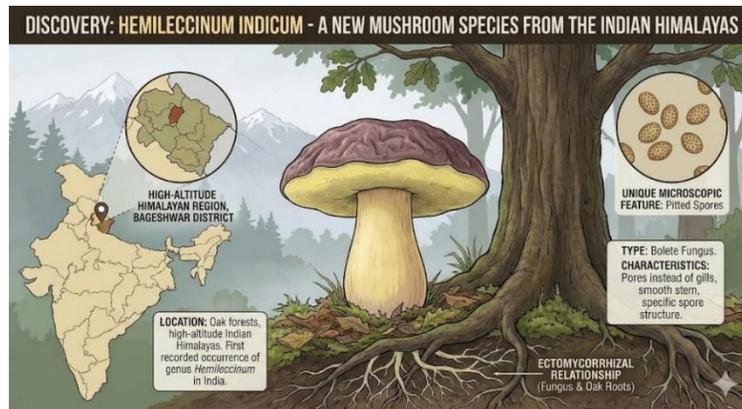


- ❖ Rising freshwater inflow is disturbing the ecological balance of Lonar Meteor Crater Lake in Maharashtra.
- ❖ Lonar Lake, in Buldhana district of Maharashtra, is India's only basaltic meteor impact crater lake.
- ❖ The lake was formed about 50,000 years ago when a meteorite struck the Deccan basalt region.
- ❖ It is a Ramsar Wetland known for its saline and alkaline water ecosystem.
- ❖ Rainfall and deep borewells nearby are increasing freshwater inflow, changing the lake's chemical composition.

- ❖ This is reducing salinity and affecting microorganisms and biodiversity in the lake.

### **New Mushroom Species**

- ❖ Researchers discovered a new mushroom species named *Hemileccinum indicum* in the Indian Himalayas.
- ❖ The species was discovered in oak forests of Bageshwar district, Uttarakhand, in high-altitude Himalayan regions.
- ❖ It is the first recorded occurrence of the genus *Hemileccinum* in India.
- ❖ The mushroom is a bolete fungus that forms ectomycorrhizal (symbiotic association between fungi and plant roots) relationships with oak trees.



### **Glacier Hazard Prediction Study**



- ❖ IIT Guwahati has developed a new method to predict glacial hazards in the Eastern Himalayas.

- ❖ The study identified 492 potential sites where glacial lakes may form in the future.
- ❖ These lakes can lead to Glacial Lake Outburst Floods (GLOFs), which cause sudden flooding.
- ❖ The research helps improve early warning systems and disaster preparedness in the Himalayan regions.

## STATE NEWS

### Mukhya Mantrir Eti Koli Duti Paat Scheme



- ❖ The Government of Assam launched the Mukhya Mantrir Eti Koli Duti Paat Scheme for tea garden workers in Tinsukia district, Assam.
- ❖ It provides one-time financial assistance of ₹5,000 to over six lakh tea garden workers.
- ❖ The scheme covers workers in 836 tea gardens across 27 districts.

- ❖ The initiative aims to support the tea tribe and the indigenous communities of Assam.
- ❖ Assam’s tea industry has completed about 200 years of commercial production.

## PERSONALITIES, AWARDS, AND EVENTS

### Franz Edelman Award 2026

- ❖ India’s “Anna Chakra” digital logistics system has been selected as a finalist for the 2026 Franz Edelman Award.
- ❖ Anna Chakra is a decision-support system that improves food-grain movement under the Public Distribution System (PDS).
- ❖ It was developed by the Department of Food and Public Distribution (DFPD) with the World Food Programme (WFP) and IIT-Delhi.
- ❖ The system was launched nationally in December 2025.
- ❖ It supports over 81 crore Public Distribution System (PDS) beneficiaries in India.
- ❖ The Franz Edelman Award is a global award in operations research and analytics.



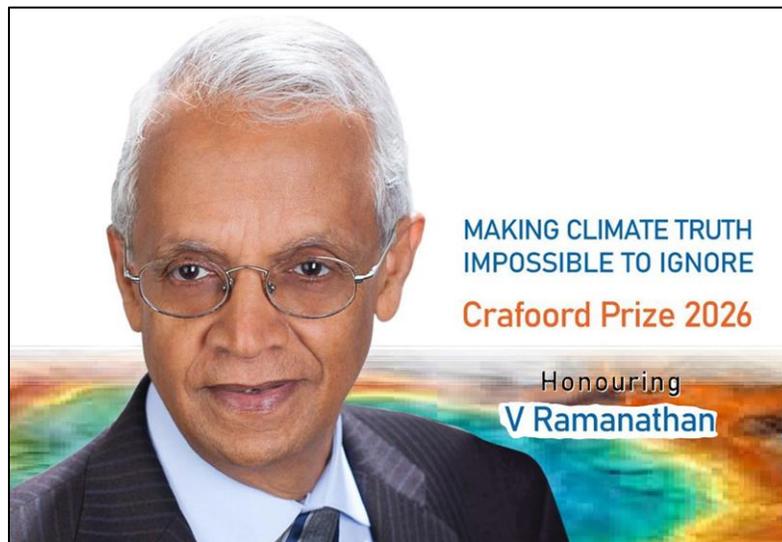
### Wiley Research Heroes Prize 2025

- ❖ Dr. Chandrakant Lahariya, an Indian public health expert, won the Wiley Research Heroes Prize 2025 in the “Impact Beyond Academia” category.
- ❖ He became the first Indian to receive this global research recognition.
- ❖ The Wiley Research Heroes Prize honours researchers whose work influences public policy and society.

- ❖ Dr. Lahariya's research focuses on vaccination programmes, maternal and child health, and primary healthcare systems.
- ❖ He is a former World Health Organization (WHO – World Health Organization) official.
- ❖ The other Wiley Research Heroes Prize 2025 awardees are Dr. Namrata Pathak, Dr. Khulood Alsayegh, Dr. Nandita Garud, and Dr. Emmanuel Peprah.



### **Crafoord Prize 2026**



- ❖ Indian-origin climate scientist Veerabhadran Ramanathan won the Crafoord Prize 2026 for his work on climate science.

- ❖ The Crafoord Prize is given by the Royal Swedish Academy of Sciences.
- ❖ It is awarded in fields not covered by the Nobel Prize, such as geosciences and astronomy.
- ❖ Veerabhadran Ramanathan is known for research on greenhouse gases (GHGs) and global warming.
- ❖ He discovered the role of chlorofluorocarbons (CFCs) and other pollutants in climate change.
- ❖ The award is often called the “Nobel Prize of Geosciences.”

## MISCELLANEOUS NEWS

### Devnimori Buddha Relics

- ❖ India sent the Devnimori Buddha relics to Sri Lanka for a public exposition in Colombo from February 4–10, 2026.
- ❖ The relics are preserved at The Maharaja Sayajirao University of Baroda (MSU), Vadodara.
- ❖ They will be displayed at the Gangaramaya Temple in Colombo.
- ❖ The relics were discovered in 1957 at the Devnimori archaeological site in the Aravalli district, Gujarat.
- ❖ The relic casket has inscriptions in Brahmi script and Sanskrit.

