

May - 16

TNPSC BITS

- ❖ The GMR Hyderabad International Airport was recognised as the most punctual airport in the world with 90.43 percent on-time performance.
- ❖ The Lal Bahadur Shastri International Airport, Varanasi has become the first in India to have a reading lounge.
- ❖ A book titled “Droupadi Murmu: From Tribal Hinterlands to Raisina Hills” was authored by Kasturi Ray.
- ❖ A book titled ‘The Indian Metropolis: Deconstructing India’s Urban Spaces’ was authored by Feroze Varun Gandhi.
- ❖ The University of Kashmir will host a two-day Youth20 event (Y20) on climate change.
 - The theme of the Y20 event is “Climate change and Disaster Risk Reduction: Making Sustainability a Way of Life”.
- ❖ Bangladesh hosted the 6th Indian Ocean Conference (IOC) recently.
- ❖ Chinese President Xi Jinping will host a two-day summit with the leaders of five Central Asian nations (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan).



NATIONAL

25 years of Pokhran II Test

On this day in 1998, India conducted Pokhran-II, celebrated as National Technology Day

WHEN INDIA BECAME **NUCLEAR**

Three detonations happened on May 11 & two on May 13



Former President Abdul Kalam and R. Chidambaram were the chief coordinators of Pokhran-II

Power of the three bombs		
15kt Atom bomb	45kt Hydrogen bomb	0.2kt The sub-kiloton device

India became the **6th country** to join the nuclear club

- ❖ On May 11, 1998, India conducted three nuclear bomb test explosions at the Indian Army’s Pokhran Test Range.

- ❖ Two days later, on May 13, two more bombs were tested.
- ❖ Codenamed Operation Shakti, these tests would display India's capability to build fission and thermonuclear weapons.
- ❖ On May 18, 1974, with support from Indira, India carried out its first nuclear test at the Pokhran test site.
- ❖ Pokhran-I was codenamed Operation Smiling Buddha.

INTERNATIONAL

Safety Approval for Gene-edited Crop



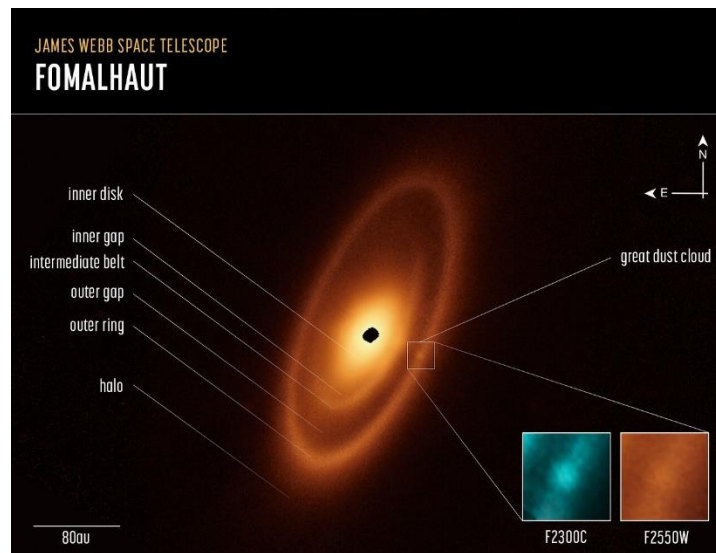
- ❖ China has approved the safety of a gene-edited soybean, its first approval of the technology in a crop.
- ❖ That Country increasingly looks to science to boost food production
- ❖ The soybean, developed by privately was owned Shandong Shunfeng Biotechnology Co Ltd.
- ❖ It has two modified genes, which significantly raising the level of healthy fat oleic acid in the plant.
- ❖ Unlike genetic modification, which introduces foreign genes into a plant, gene editing alters existing genes.
- ❖ United States-based company Calyxt also developed a high oleic soybean, producing a healthy oil.
- ❖ It was the first gene-edited food to be approved in the U.S. in 2019.

- ❖ Japan has also approved gene-edited foods, including healthier tomatoes and faster-growing fish.

SCIENCE AND TECHNOLOGY

Fomalhaut

- ❖ Fomalhaut is one of the top 20 brightest stars in the night sky and is located just 25 light-years away.
- ❖ NASA's James Webb Space Telescope captured the image of warm dust around a nearby the star.
- ❖ The dusty structures are much more complex than the asteroid and Kuiper dust belts of our solar system.
- ❖ Overall, there are three nested belts extending out to 14 billion miles (23 billion kilometers) from the star.
- ❖ This is equal to 150 times the distance of Earth from the Sun.
- ❖ Fomalhaut's dust ring was discovered in 1983 in observations made by NASA's Infrared Astronomical Satellite (IRAS).
- ❖ Fomalhaut is the 18th brightest star in the night sky and has 1.9 times the Sun's mass.



Exobiology Extant Life Surveyor

- ❖ NASA has developed a robot whose to explore Enceladus, one of the many moons of Saturn.

- ❖ The goal is to find out if there is water on this moon, and therefore potentially some form of life.
- ❖ The robot moves and slithers around like a snake.
- ❖ Enceladus is the sixth-largest moon of Saturn.



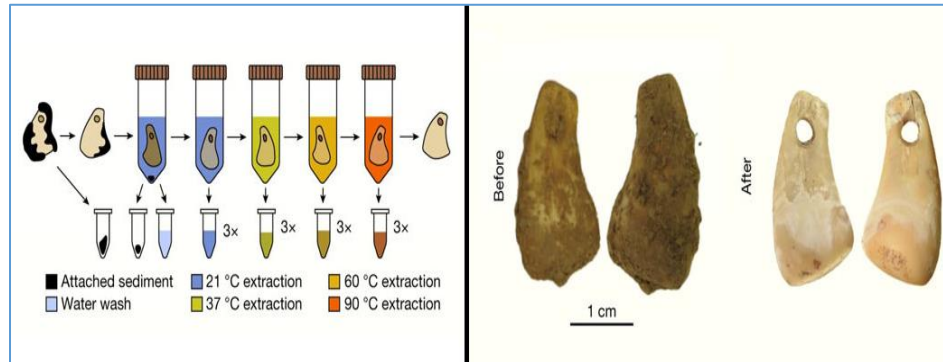
India's First C295 Tactical Transport Aircraft



- ❖ The first Airbus C295, a new-generation tactical airlifter, successfully completed its maiden flight for India.
- ❖ This first flight represents a significant accomplishment for the first Make in India aerospace programme.
- ❖ The Indian Air Force is set to become the largest operator of the C295 in the world.
- ❖ The first 16 aircraft will be assembled in Seville, Spain, and delivered to the customer in 'fly-away' condition.

- ❖ The following 40 aircraft will be manufactured and assembled by Tata Advanced Systems (TASL) in India as part of an industrial partnership between the two companies.

Non-Invasive Method to Extract DNA from fossil



- ❖ Scientists have developed a non-destructive DNA extraction method Palaeolithic Remains.
- ❖ In this, the objects were submerged in a sodium phosphate buffer while gradually increasing the temperature.
- ❖ DNA trapped in ancient bone and tooth artifacts is released into the solution and enables further sequencing and analysis.
- ❖ By washing the artifacts at temperatures of up to 90 degrees Celsius, we are able to extract DNA from the wash waters, while keeping the artifacts intact.
- ❖ The researchers applied this new method to a deer tooth pendant from Denisova Cave and managed to recover DNA of a wapiti (species of elk) and an ancient human.
- ❖ The DNA analyses allowed them to estimate the age of the pendant at around 19,000-25,000 years.
- ❖ Generally, DNA extraction from ancient skeletal material can be destructive or can alter the specimens.

STATES

Digital health cards for children

- ❖ The Urban Development Department and Lucknow Smart City launched “School Health Program”.
- ❖ Thus Uttar Pradesh in India becomes first state to provide such facility.

- ❖ Under the pilot project, the School Health Program has been started by Lucknow Smart City in three schools in Lucknow.
- ❖ A digital health report card for the overall physical and mental well-being of 1765 municipal school students is being prepared under the project.
- ❖ A unique ID card will be made for each child, through which the child's parents, school and administrative officials can download this health card.
- ❖ Follow-up of the Digital Health Report is also done every six months.
- ❖ If a child is admitted to the hospital due to illness, then he can be treated through a health cover cashless card of Rs 25,000.



PERSONALITIES, AWARDS, AND EVENTS

Harvard University's Radcliffe fellowship



- ❖ Biologist Sathya Bhama das Biju has been chosen for Harvard University's prestigious Radcliffe fellowship.
- ❖ He is popularly known as 'the Frogman of India'.

- ❖ His work is spanning three decades and he discovered over a hundred species.
- ❖ The Delhi University professor is one of the 50 scholars who were awarded the Harvard Radcliffe Institute Fellowship for 2023-24.
- ❖ He had recently won the Kerala Sree award instituted by the Kerala government for his outstanding contributions in the field of science.

MISCELLANEOUS

Pliosaur Discovered in England

- ❖ Pliosaur remains were discovered at Oxfordshire's Abingdon County Hall Museum, England.
- ❖ Scans on a backbone found the reptile was between 9.8m (32ft) and 14.4 (47ft) long.
- ❖ Pliosaurus were a type of short-necked plesiosaur.
- ❖ These Marine reptiles was built for speed compared to their long-necked cousins.
- ❖ They lived between 220 million years ago (Triassic period) and 70 million years ago (Cretaceous period).
- ❖ They were mostly found in the prehistoric seas that covered modern-day Europe.

