

July - 27

## TNPSC BITS

- ❖ The Indian Computer Emergency Response Team (CERT-In) has issued a warning about a new internet ransomware virus called 'Akira' which targets both Windows and Linux-based systems.
- ❖ Rajasthan is set to become the first state to have a separate law for gig workers known as the 'Platform-Based Gig Workers (Registration and Welfare) Bill, 2023.'
- ❖ Power Finance Corporation (PFC) became the first member from India to join "Asia Transition Finance Study Group" (ATFSG).
- ❖ Banks wrote off bad loans worth over Rs 2.09 lakh crore during financial year (FY) 2022-23, taking the total loan write-off by the banking sector to Rs 10.57 lakh crore in the last five years.
- ❖ Sarita and Rakesh Kumar won India's first-ever gold medal in the World Archery Para Championships in Pilsen, Czech Republic.
- ❖ India and Australia have formed a joint working group to explore the possibility of a mutual recognition agreement (MRA) that would help Indian whiskey makers' access to the Australian market.
- ❖ US National Parents' Day, observed on the fourth Sunday of July (July 23), honours parents for their love and sacrifices.

## TAMIL NADU

### Manarkeni app



- ❖ Tamil Nadu School Education Department has launched an app called 'Manarkeni'.

- ❖ This app will have videos in English and Tamil based on concepts from the Tamil Nadu State Board syllabus across all classes.
- ❖ This have been created by the State Council for Educational Research and Training (SCERT).
- ❖ This initiative aims to encourage students to understand concepts better and promote critical thinking.

## NATIONAL

### Right to hold a passport



- ❖ The Delhi High Court has said that every citizen has a legal right to hold a passport.
- ❖ This right can be taken away only in accordance with law.
- ❖ Authorities cannot refuse to renew it merely on an apprehension that the earlier passports might have been misused.

## INTERNATIONAL

### BRICS Urbanization Forum

- ❖ This year, the forum has its first in-person follow-up in the vibrant South African city of Durban, South Africa.
- ❖ It aims to delve into key urban developmental issues and explore how cities globally are enhancing their resilience to meet emerging challenges.
- ❖ The last edition of the forum was hosted online under the presidency of China in 2022.

- ❖ The BRICS Urbanisation Forum that was inaugurated in New Delhi in February 2013.



### **Gender change and transgender marriages**



- ❖ Russia passed a law that outlawing gender-affirming procedures, a crippling blow to Russia's already embattled LGBTQ+ community.
- ❖ This law bans any "medical interventions aimed at changing the sex of a person," as well as changing one's gender in official documents and public records.



- ❖ The only exception will be medical intervention to treat congenital anomalies.
- ❖ It also annuls marriages in which one person has “changed gender” and bars transgender people from becoming foster or adoptive parents.
- ❖ In 2013, the Kremlin adopted legislation that banned any public endorsement of “nontraditional sexual relations” among minors.
- ❖ In 2020, Putin pushed through constitutional reform that outlawed same-sex marriage.
- ❖ Last year he signed a law banning “propaganda of nontraditional sexual relations” among adults as well.

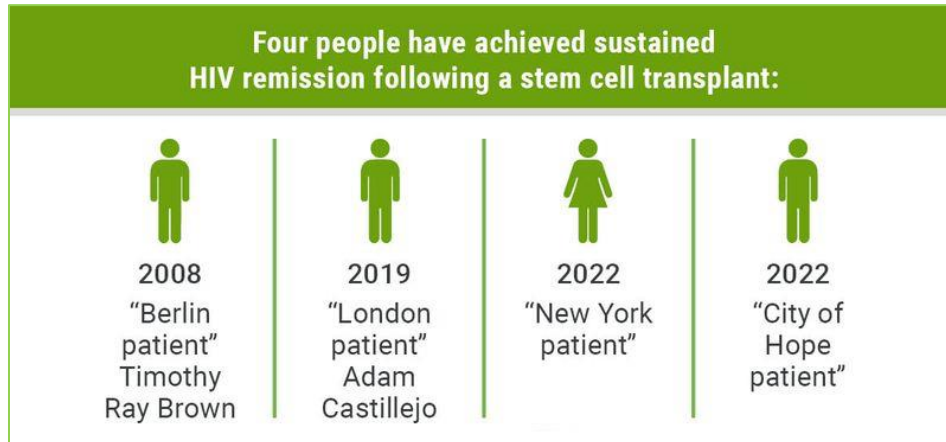
### **Global Parliamentary Pact**



- ❖ The second Global Parliamentary Summit against Hunger and Malnutrition was held in Chile.
- ❖ Parliamentarians from 64 countries signed the Global Parliamentary Pact at the summit.
- ❖ They all are committing to push for reforms in the agrifood system to make food sustainable and accessible to all.
- ❖ They have formed a new multilateral body to address the issues of poverty, hunger, and malnutrition in the agrifood system.
- ❖ In 2021, there were 46 million more people who endured hunger than in 2020.
- ❖ Some 2.3 billion people in the world did not have access to adequate food in 2021.

- ❖ The first such summit on hunger and malnutrition was conducted in Spain in 2018.

### **Sixth Person cured from HIV**



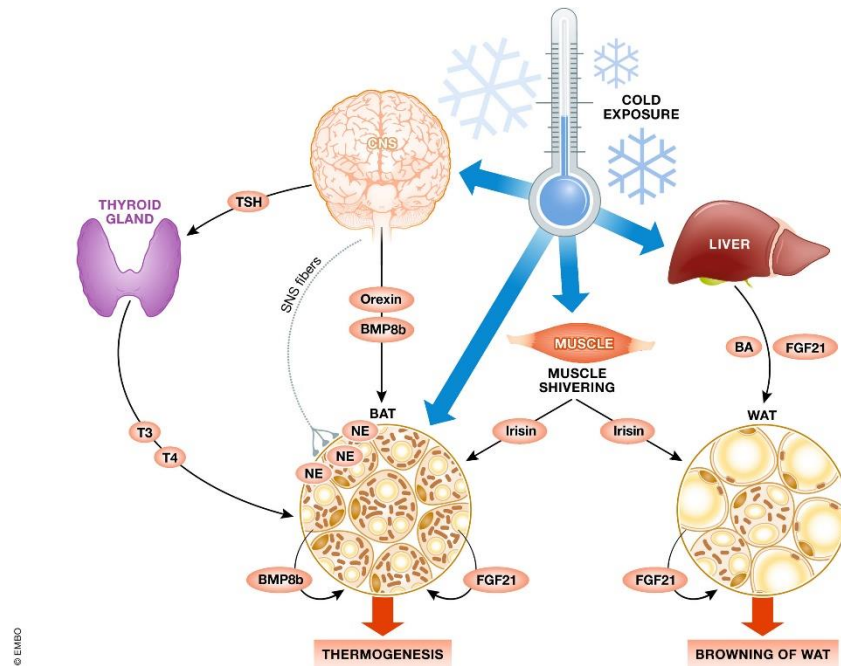
- ❖ A sixth person with HIV, being referred to as the Geneva patient, has likely been cured of HIV after receiving a stem cell transplant for leukaemia.
- ❖ The level of virus in his blood remained undetectable 20 months after his antiretroviral therapy was discontinued.
- ❖ This patient underwent a stem cell transplant in 2018 for an aggressive form of leukaemia.
- ❖ Twenty months later, his tests did not find any viral particles, latent reservoirs of the infection, or elevated immune response against the virus.
- ❖ All the six patients who have achieved HIV remission so far needed the stem cell transplantation for treatment of their cancers.
- ❖ In the first five cases, however, the treatment teams specifically looked for donors with CCR5 delta 32 mutation that is associated with lower risk of HIV.
- ❖ HIV lowers immunity in infected individuals by attacking the CD4 immune cells.
- ❖ Berlin patient, became the first person to overcome HIV after two stem cell transplants in 2007 and 2008.

## **SCIENCE AND TECHNOLOGY**

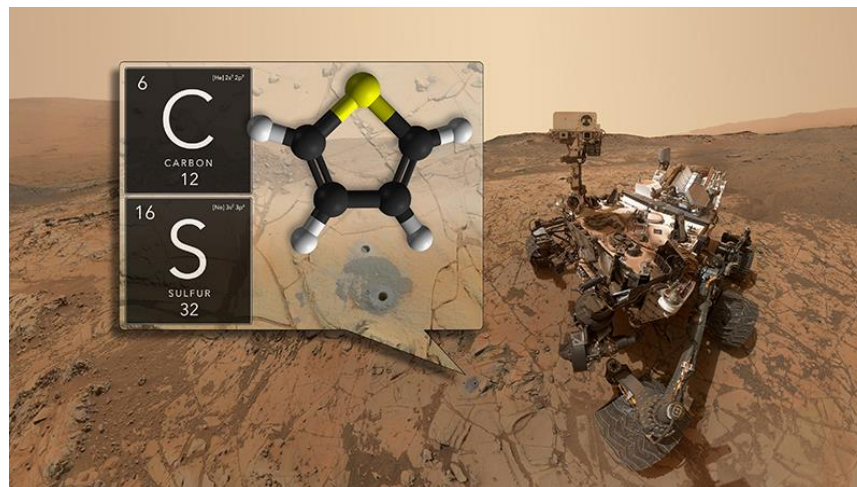
### **Inter-organ communication**

- ❖ IIT-M have developed a computational approach called "multicens" to understand inter-organ communication network in humans.

- ❖ Multicens will help uncover key molecular mediators of inter-organ communication.
- ❖ They used the genomic information available for various tissues to develop this method.
- ❖ Exchange of information between organs and tissues allows organisms to adapt to changes in their environment, assess their energy reserves and maintain overall well-being.



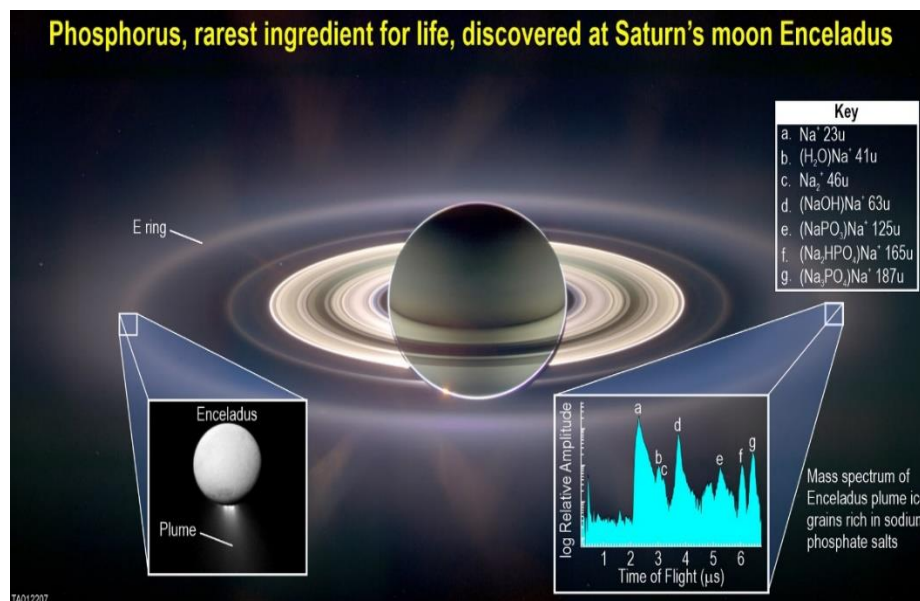
## Organic matter on Mars



- ❖ NASA's Perseverance rover has discovered evidence of organic compounds in a Martian crater.

- ❖ This providing insights into the potential habitability of Mars.
- ❖ It reveals a more complex organic geochemical cycle on Mars than previously thought.
- ❖ It is also indicating the presence of multiple reservoirs of the potential organic molecules on the planet.
- ❖ The findings suggest that Mars has experienced aqueous processes and that water may have played a significant role in the existence of organic matter.
- ❖ The research team used an instrument called the Scanning Habitable Environments with Raman and Luminescence for Organics and Chemicals (SHERLOC) to detect the organic compounds.

### Phosphorus Discovered on Enceladus



- ❖ Researchers have discovered the presence of phosphorus in icy grains emanating from Saturn's moon.
- ❖ The new discovery made Enceladus - sixth largest among Saturn's 146 known natural satellites.
- ❖ Previous studies had spotted signs of the other five elements needed for life—carbon, hydrogen, nitrogen, oxygen and sulphur.
- ❖ The discovery of phosphorus on Enceladus suggests that this moon possesses the necessary building blocks for life.
- ❖ Phosphorus is an integral part of life on Earth.
- ❖ It's the second most abundant mineral in the human body, behind calcium.
- ❖ It is key to forming bones, teeth, cell membranes and DNA.

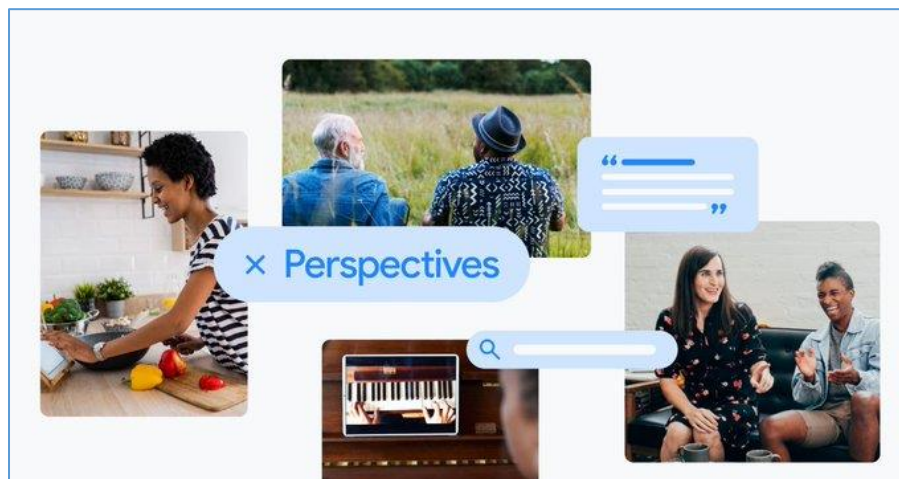
- ❖ NASA's Cassini space probe, which has been studying Saturn and its moons for 13 years, has made a significant discovery.

### **Carbon-dioxide Auroras**

- ❖ NASA's satellite spots infrared carbon dioxide aurora from outer space.
- ❖ An aurora is a natural light display those shimmers in the sky.
- ❖ When charged particles crash into the planet's atmosphere, they interact with many different atoms and molecules.
- ❖ Carbon dioxide is one of them.
- ❖ When carbon dioxide molecules about 90 kilometres above Earth become excited during an aurora, they emit infrared radiation.



### **Google's 'Perspectives' Search**



- ❖ Google has recently launched a new search feature called Perspectives.



- ❖ It is aiming to provide users with a broader range of viewpoints on various topics.
- ❖ It encompasses a wide range of content types, including long- and short-form videos, images, and written posts.
- ❖ These materials are sourced from discussion boards, Q&A sites, and popular social media platforms.

### **Virgin Galactic**

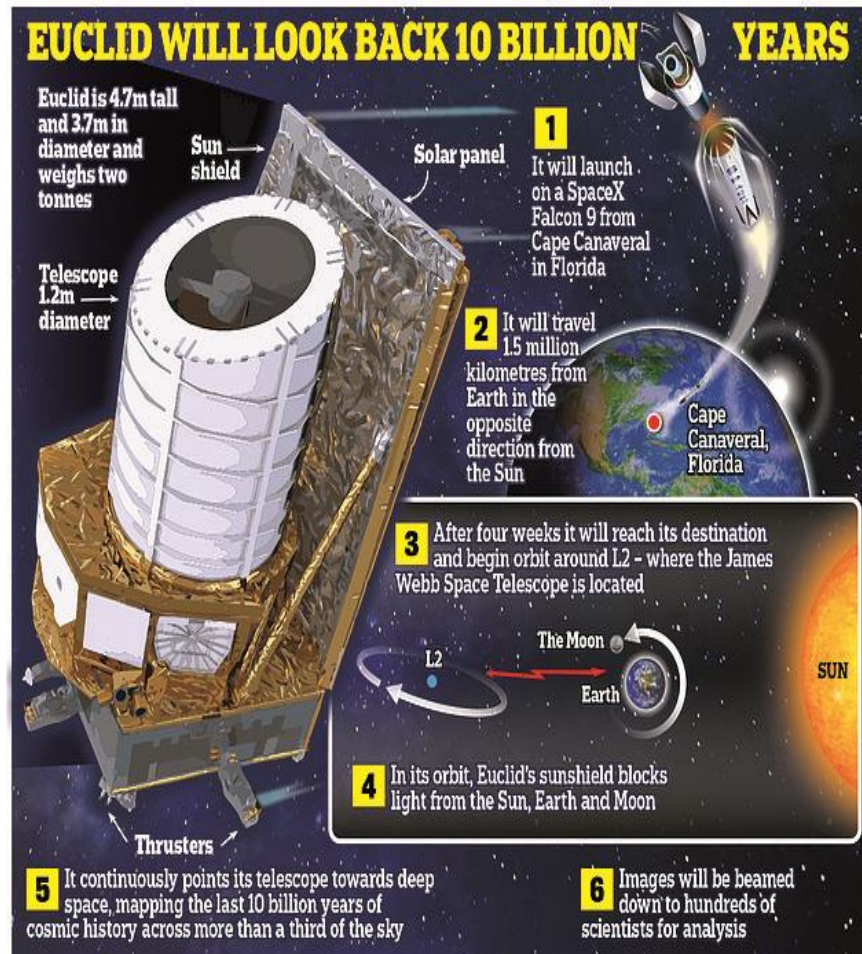
- ❖ Virgin Galactic successfully completes its maiden commercial space flight after a 75-minute suborbital journey to the edge of space.
- ❖ The mission featured two Italian Air Force personnel.
- ❖ Virgin Galactic is the space venture established by British entrepreneur Richard Branson.



### **Euclid Space Telescope**

- ❖ The European Space Agency plans to survey billions of galaxies using the Euclid Space Telescope.
- ❖ The new Euclid space telescope was launched on a SpaceX Falcon 9 rocket.
- ❖ Euclid is a visible to near-infrared space telescope developed by the European Space Agency (ESA) and the Euclid Consortium.

- ❖ This mission aims to better understand dark energy and dark matter by accurately measuring the acceleration of the universe.

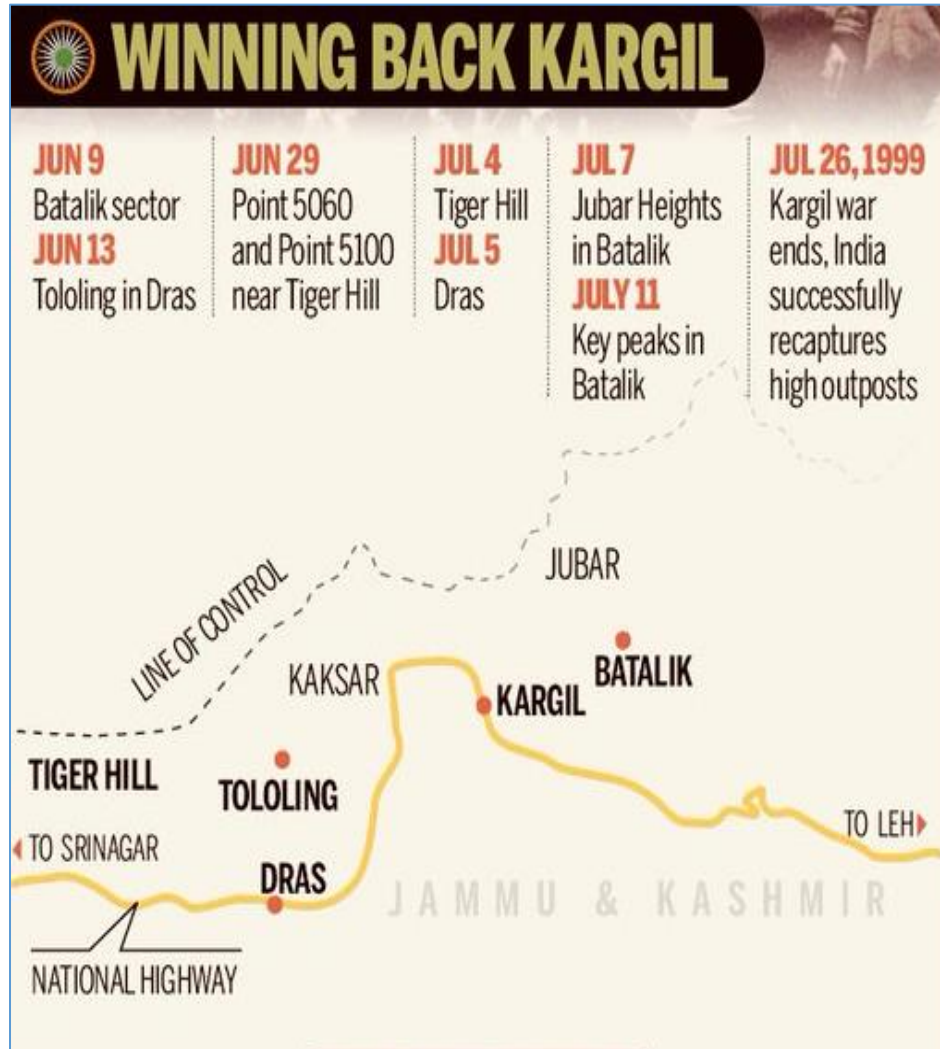


## IMPORTANT DAYS

### **Kargil Vijay Diwas 2023 - July 26**

- ❖ The day commemorates the victory of the Indian armed forces in the Kargil War fought against Pakistan.
- ❖ The day is observed to pay tribute and to honour the bravery and sacrifice of the soldiers in the war of 1999.
- ❖ Indian Army launched 'Operation Vijay' after the first infiltration was reported by local shepherds on May 3, 1999.
- ❖ The target of Operation Vijay was to recapture the Indian territory along the LoC, which was occupied by the Pakistani infiltrators.

- ❖ Indian Air Force launched the airstrike on May 26 under operation Safed Sagar to support the Indian Army.
- ❖ On July 26, 1999, Indian Army declared Operation Vijay a success after recapturing all the military posts in Kargil.



### **International Day for the Conservation of the Mangrove Ecosystem 2023 - July 26**

- ❖ This annual celebration is focused on raising awareness about the importance of mangroves in safeguarding our ecosystem.
- ❖ This annual observance was adopted by the General Conference of the UN Educational, Scientific and Cultural Organization (UNESCO) in 2015.
- ❖ They support a rich biodiversity and provide a valuable nursery habitat for fish and crustaceans.

- ❖ Mangroves also act as a form of natural coastal defense against storm surges, tsunamis, rising sea levels and erosion.
- ❖ Their soils are highly effective carbon sinks, sequestering vast amounts of carbon.

