TNPSC BITS

- ❖ The ISRO chairman K.Sivan was presented the National Systems Gold Medal by the Systems Society of India (SSI) during the 42nd National Systems Conference held in Thiruvananthapuram.
  - o The medal acknowledges his outstanding contributions to system science and engineering.
- ❖ The ISRO has launched Samwad with Students as part of its outreach programme. This will engage youngsters across the country in activities concerning space science under this programme.
- ❖ A panel headed by IIT-Hyderabad chairman B V R Mohan Reddy has suggested the All India Council for Technical Education (AICTE) not to allow setting up of new Engineering colleges from 2020.
- ❖ The Minister for Housing and Urban Affairs (Independent Charge) Hardeep Singh Puri announced that the Pradhan Mantri Awas Yojana, PMAY loan subsidy for middle-income group has been extended till 31st March 2020.
- ❖ The Rising football star Kylian Mbappe won the 2018 French Player of the Year title, beating out Raphael Varane and Antoine Griezmann.
- ❖ Uzbekistan has announced 2019 as the 'Year of Active Investment and Social Development' in the backdrop of the proposed investments from India to boost economy of the Central Asian country.
- ❖ The Tamilnadu governor Banwarilal Purohit has appointed Krishnan as vice chancellor of the Madurai Kamaraj University for a period of three years with effect from the date (January 1, 2019) of his assumption of office.
- ❖ India and Pakistan have exchanged lists of their nuclear facilities in accordance with a 1988 agreement.
  - o This is the twenty-eighth consecutive exchange of such list between the two countries, the first one having taken place on 1 January 1992.

NATIONAL

Bhima Koregaon

❖ On January 01, 2019 people visited the Vijay Stambh (war memorial) in Koregaon Bhima village in Pune district of Maharashtra.

❖ The battle was fought in Bhima Koregaon, a district in Pune with a strong historical Dalit connection, between the Peshwa forces and the British on January 1, 1818.

❖ It is the 201st year of this battle of Bhima Koregaon.

❖ The British army, which comprised mainly of Dalit soldiers, fought the upper caste-dominated Peshwa army.

❖ The British troops defeated the Peshwa army.

Indian Bridge Management System

❖ The Minister of Road Transport & Highways and Shipping Nitin Gadkari formally launched the Indian Bridge Management System (IBMS).

❖ The IBMS is being developed to create an inventory of all bridges in the country and rate their structural condition.

❖ The IBMS is the largest platform in the world owned by a single owner, with database that could exceed 1,50,000 bridge structures.

❖ During the inventory creation each bridge is assigned a unique identification number or National Identity Number based on the state, RTO (Road Transport Office) zone and whether it is situated on a National Highway, State Highway or is a district road.

❖ Precise location of the bridge in terms of latitude-longitude is also collected through GPS and based on this, the bridge is assigned a **Bridge Location Number**.

Ujjwala Sanitary Napkin initiative

❖ The Union Petroleum Minister Dharmendra Pradhan launched the Ujjwala Sanitary Napkin initiative in Bhubaneswar.

❖ The Central scheme will be a counter to the Odisha government's Khushi scheme, in which sanitary napkins are provided free of cost to female students of government and government-aided schools in the state.

❖ The New scheme will expand women's access to hygiene products and provide them with employment opportunities in every district of the state.

INTERNATIONAL

"Panda Bonds" in Chinese Currency - Pakistan

❖ The Pakistan's cabinet has approved the issuance of first-ever renminbi-denominated bonds (**Panda Bonds**) to raise loans from the China's capital markets.

❖ With this, Pakistan has moved a step forward to give the Chinese currency a status at par with the US dollar.

❖ The bonds will help the government to diversify the investor base of capital market issuance and provide a source of raising Renminbi, the Chinese Currency.

❖ This is being done so that Pakistan can finance its yawning trade deficit with Beijing.

BOND ISSUE IN FOREIGN CURRENCY

- Formosa bond
  A non-New Taiwan Dollar-denominated bond issued by a non-Taiwan entity in the Taiwan market
- Panda bond
  A Chinese renminbi-denominated bond issued by a non-China entity in the People's Republic of China market

SCIENCE AND TECHNOLOGY

Body Scanners From 2019

❖ Airports across India are set to install body scanners from next year.

❖ The full-body scanners to be used in all airports are called "millimetre wave" machines.

❖ It bounces electromagnetic waves off the traveller to provide an animated image where a suspicious item might be located.

❖ The Bureau of Civil Aviation Security (BCAS) will come out with technical specifications following which airports can install these machines.
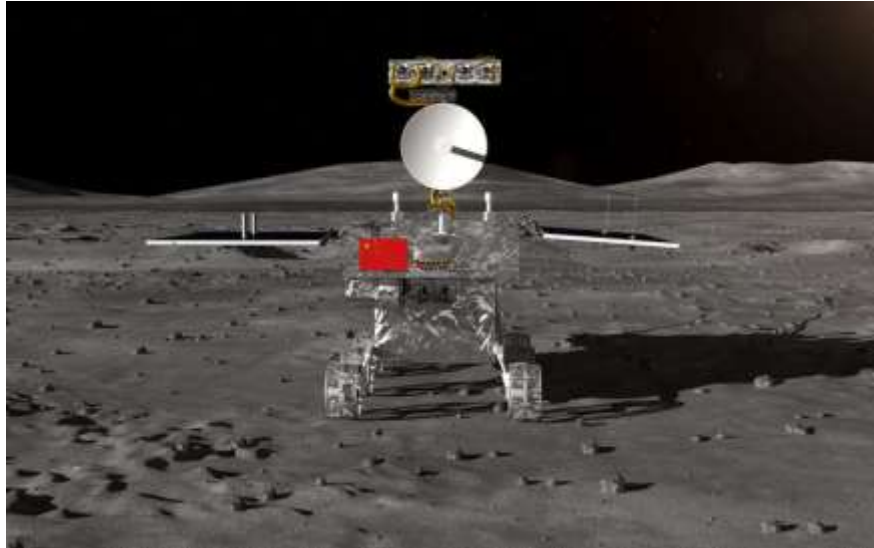

TaiGenomics

❖ Microsoft and Taiwan's AI Labs have collaborated and unveiled TaiGenomics, using Microsoft Azure Cloud computing and storage capabilities.

❖ It is an Artificial Intelligence (AI) based genetic analysis platform.

❖ The platform uses AI to process, analyse and draw inferences from vast amounts of medical and genetic data provided by patients and hospitals.

❖ TaiGenomics could decrease human error by helping the doctors to predict diseases efficiently.

Chang'e-4 Spacecraft

❖ The probe, the Chang'e-4, entered a planned orbit "to prepare for the first ever soft landing on the far side of the moon".

❖ The space probe is moving into position to land on the dark side of the moon for the first time.

❖ China launched the Chang'e-4 probe on December 08, carried by a Long March-3B rocket.

❖ Soft-landing on the far side is challenging because any direct communication between the rover and Earth will be blocked by the other hemisphere.

❖ To solve this, China launched a relay satellite, Queqiao, or Magpie Bridge, between Earth and the moon.

Algorithm to detect rare cells

- ❖ Researchers from IIT Delhi have developed an algorithm that can find rare cells from a very large pool of cells in a matter of seconds.
- ❖ The algorithm, Finder of Rare Entities (FiRE), assigns a rareness score to each cell that is computed based on the gene expression profile of about 20,000 genes.
- ❖ Cells having scores above a certain threshold are reported as rare cells.
- ❖ The new algorithm has superior sensitivity and specificity compared with existing methods.

Bagbazar-O-Rosogolla Utsob

- ❖ Bagbazar-O-Rosogolla Utsob, a 3-day festival has been inaugurated at Bagbazar, Kolkata to mark the 150th year of invention of Rosogolla.
- ❖ During the occasion, a postal stamp and a statue of Nabin Chandra Das, the inventor of Rosogolla, was unveiled.

NASA's New Horizons spacecraft

- ❖ NASA's New Horizons spacecraft became the first explorer to fly past the mysterious object - Ultima Thule, located some 4 billion miles from Earth.

❖ This is a historic flyby of the farthest, and quite possibly the oldest, cosmic body ever explored by humankind.

Ultima Thule

❖ Ultima Thule is located in the Kuiper belt in the outermost regions of the Solar System, beyond the orbit of Neptune.

❖ It measures approximately 30 km in diameter, and is irregularly shaped.

❖ Ultima Thule has a reddish color, probably caused by exposure of hydrocarbons to sunlight over billions of years.

❖ Ultima Thule belongs to a class of Kuiper belt objects called the "cold classicals", which have nearly circular orbits with low inclinations to the solar plane.

New Horizons set for most distant planetary encounter
Jan 1 flyby of Ultima Thule, an icy body in the Kuiper Belt, a relic of the solar system's formation

New Horizons
Launch: Jan 2006
Flyby of Pluto 2015

Planetary orbits*

Sun
Saturn
Uranus
Neptune
Pluto

New Horizons

Kuiper Belt: contains billions of objects which were the building blocks of the planets

Ultima Thule

Source: NASA   *Illustration not to scale, paths not exact

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