

March - 28

TNPSC BITS

- ❖ NLC India Ltd (NLCIL) has bagged the GEEF Global Environment Award 2024 in the mining category during the Global Clean Energy Summit - 2024 held in New Delhi recently.
- ❖ The first “Global Inequality Research Award” is jointly awarded to Bina Argawal and James K. Boyce for their groundbreaking work in the field of social and environmental inequalities.
- ❖ NASA have successfully tested a 3D-printed engine recently.
 - The innovation system of propulsion is called the Rotating Detonation Rocket Engine (RDRE).
- ❖ Every year on March 22, the people of Bihar celebrate the Bihar Diwas to commemorate the formation of the state.
 - In 1912, Bihar and Orissa became separate states from Bengal.

TAMIL NADU

Arcot site museum



- ❖ The erstwhile official residence of the Nawab of Arcot, Muhammad Ali Khan Wallajah, during the 16th century, will soon become a permanent place for the Arcot site museum.
- ❖ Arcot was the capital of the Carnatic region when Zulfiqar Khan was the Nawab appointed by Aurangzeb in 1690.
- ❖ The dilapidated bungalow remained the official residence for Nawab Ali for many years before he decided to move to Madras to be closer to the British army.

- ❖ He vacated the bungalow after he built his Chepauk palace in 1768.
- ❖ Among its over 1,200 rare artefacts, the site museum has stone sculptures, terracotta figurines, coins, Islamic antiquities, porcelain ware, iron implements, wooden artefacts, and antiquities from excavation in the region.

Megalithic burials atop Jawadhu Hills



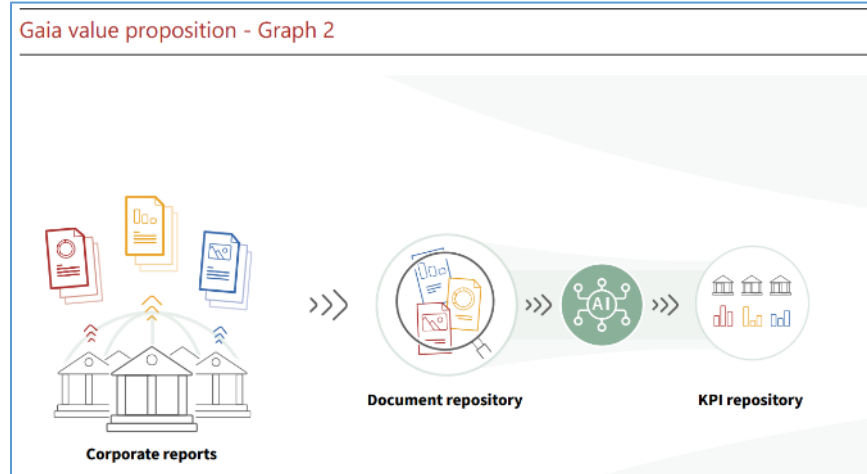
- ❖ TN Archaeology Department officials found over 100 megalithic burials inside Pattarakadu reserve forest (RF) atop Jawadhu Hills in Tiruvannamalai.
- ❖ Most of the megalithic burials were menhirs as they did not find any burial remains including things used by the deceased.
- ❖ Each burial site, on an average, was 7.5 metres in diameter and 1.5 metres in height.
- ❖ Most burials, which are made of huge granite stones, are located in the south-west and north-east direction.
- ❖ Similar types of megalithic burials without remains were also found in Mallachandram (Krishnagiri) and Coimbatore region.
- ❖ A megalith is a large stone that has been used to construct a prehistoric structure or monument, either alone or together with other stones.
- ❖ Such sites are two types, namely those that have actual burial remains like dolmenoid cists or they are simply memorial sites like menhirs.

ECONOMY

Gaia AI Project

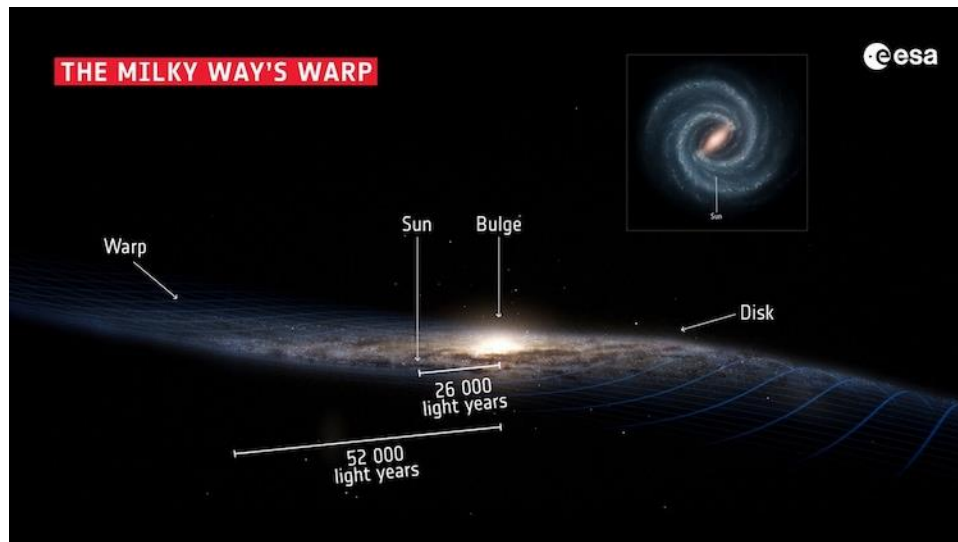
- ❖ The Bank for International Settlements have broken new ground by using artificial intelligence to collect data for assessing climate-related financial risks.

- ❖ Their experimental Gaia AI project was used to analyse company disclosures on carbon emissions, green bond issuance and voluntary net-zero commitments.
- ❖ Gaia was able to overcome differences in definitions and disclosure frameworks across jurisdictions to offer much-needed transparency.
- ❖ Also, this makes it easier to compare indicators on climate-related financial risks.



SCIENCE AND TECHNOLOGY

Ancient streams of stars

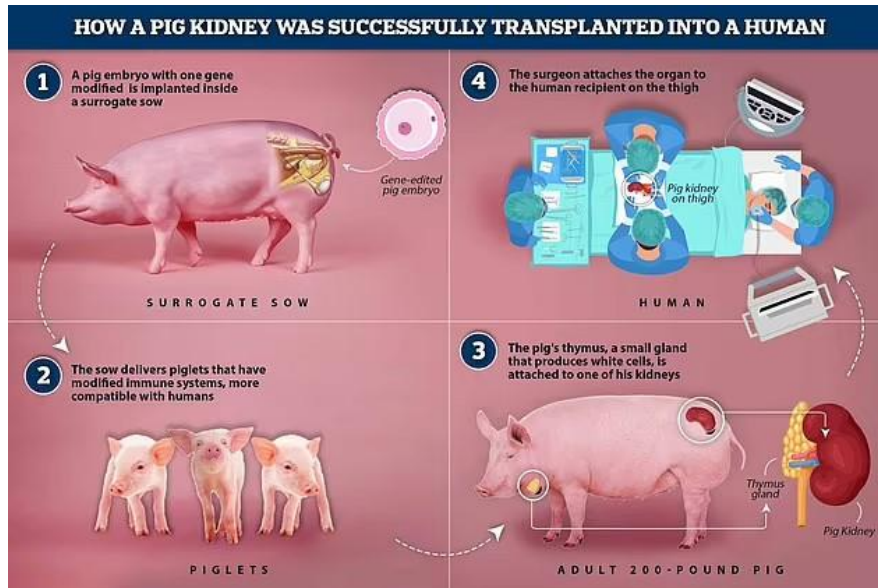


- ❖ The European Space Agency's Gaia space telescope has unveiled two ancient streams of stars, named Shiva and Shakti.
- ❖ They have significantly advanced our understanding of the Milky Way's origins.
- ❖ These celestial formations, woven together over 12 billion years ago.

- ❖ They are among the earliest structures to have contributed to the formation of our galaxy.
- ❖ They predate even the oldest parts of the Milky Way's spiral arms and disc.
- ❖ Each stream carries the mass of about 10 million Suns, with stars aged between 12 to 13 billion years, moving in remarkably similar orbits and compositions.

First pig-to-human kidney transplant

- ❖ A 62-year-old man with end-stage renal disease has become the first human to receive a new kidney from a genetically modified pig.
- ❖ The kidney was provided by eGenesis of Cambridge, Massachusetts, from a pig.
- ❖ The pig has been genetically edited to remove genes harmful to a human recipient and add certain human genes to improve compatibility.



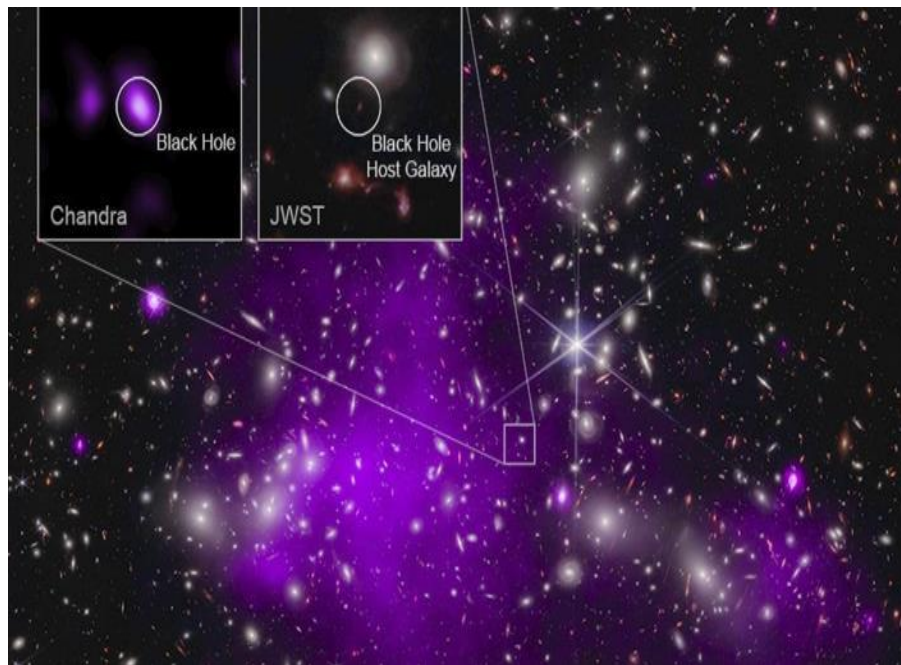
Budgett's frog

- ❖ Researchers from the IISc have identified that peptides (short protein) produced from Budgett's frog can combat enzymes of disease-causing pathogens.
- ❖ The peptides (short proteins) produced from the skin of amphibians have long been studied because of their ability to counter unfavourable conditions in the environment, including harmful pathogens.
- ❖ This frog-secreted peptide inhibited two key enzymes called subtilisin carlsberg and proteinase K., produced by pathogens.
- ❖ Budgett's frog found in South America is kept as a pet in many countries because of their intelligent behaviour.

- ❖ The frogs have developed a defensive mechanism through their skin.
- ❖ They generally combat the microorganisms and other harmful things through their skins.



Oldest Black Hole in Cosmic History



- ❖ Scientists have discovered the oldest black hole yet; a cosmic beast formed a mere 470 million years after the Big Bang.
- ❖ Observations given the universe is 13.7 billion years old, that puts the age of this black hole at 13.2 billion years.

- ❖ This black hole is a whopper — 10 times bigger than the black hole in our own Milky Way.
- ❖ It's believed to weigh anywhere from 10% to 100% the mass of all the stars in its galaxy.

IMPORTANT DAYS

International Day of Nowruz 2024 - March 21



- ❖ Nowruz, also spelt Norooz or Nowrooz, is the Iranian New Year, marking the beginning of the spring equinox in the Northern Hemisphere.
- ❖ An ancient festival with roots in Zoroastrianism, Nowruz marks the beginning of the Iranian Solar Hijri calendar.
- ❖ It falls on or around the spring equinox, typically between March 19th and March 21st.
- ❖ This year, it was celebrated on March 20, with the exact moment of the vernal equinox occurring at 6:36 AM in Tehran, Iran.

- ❖ However, the United Nations recognises March 21st as the International Day of Nowruz, emphasising its global observance and cultural significance.

International Day for the Elimination of Racial Discrimination 2024 - March 21

- ❖ On this day in 1960, the police in Sharpeville, South Africa, opened fire and killed 69 people at a peaceful demonstration against apartheid "pass laws".
- ❖ In 1979, the United Nations General Assembly adopted a program of activities to combat racism and racial discrimination.
- ❖ This year's theme is: "A decade of recognition, justice and development: the implementation of the International Decade for People of African Descent."



World Water Day 2024 - March 22

- ❖ This day aims to advocate for the sustainable management of freshwater resources.
- ❖ In 1992, the United Nations Conference on Environment and Development in Rio de Janeiro saw the first formal proposal of this day.



- ❖ A core focus of World Water Day is to support the achievement of Sustainable Development Goal (SDG) 6: water and sanitation for all by 2030.
- ❖ The theme for this year is 'Water for prosperity and peace'.

