

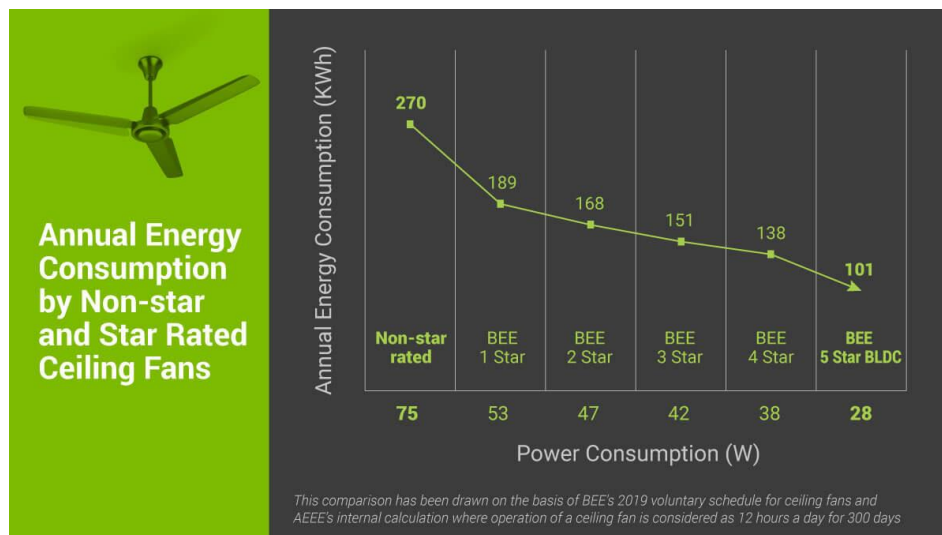
January - 23

TNPSC BITS

- ❖ ICMR-NARFBR (National Animal Resource Facility for Biomedical Research) facility was inaugurated at Genome Valley, Hyderabad.
- ❖ ESAF Small Finance Bank has bagged the prestigious Inclusive Finance India Awards 2022 for its contributions in advancing the goal of financial inclusion and supporting inclusive growth.
- ❖ The United Nations Educational, Scientific and Cultural Organization (UNESCO) has decided to dedicate the International Day of Education 2023 to Afghan girls and women.
- ❖ Himalayan Cataract Project Co-Founder Dr Sanduk Ruit has won the ISA Award for Service to Humanity, a top civilian award of Bahrain.

NATIONAL

BEE norms for Ceiling fans



- ❖ Ceiling fans category has come under the ambit of mandatory star labelling from January 1, as per the revised Bureau of Energy Efficiency (BEE) norms.
- ❖ Star labelling denotes energy savings of minimum 30% for one-star rated fans to over 50% for five-star rated fans.
- ❖ Under the new mandate, manufacturers would have to display the star ratings on their fans.

- ❖ The star rating is dependent on service value (air delivery in cubic metres per minute divided by energy consumption in wattage).

India's strongest brand - Jio

- ❖ Jio is strongest brand in India and ranked ninth among the world's strongest brands.
- ❖ This is according to a 'Global 500 – 2023' report published by Brand Finance.
- ❖ 'Jio' was placed ninth among the world's strongest brands ahead of brands like EY, Coca Cola and Accenture.



INTERNATIONAL

World Population Review

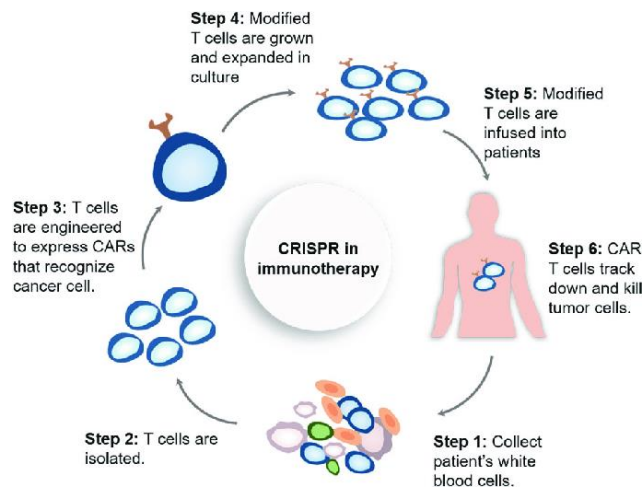
- ❖ The United States Census Bureau World Population Clock recently released its "World Population Review" report.
- ❖ According to the report, the world's population as of September 2022 was 7.9 billion.
- ❖ It is to reach 8 billion by November 2022.
- ❖ In 2015, the world population was 7.2 billion.
- ❖ India and China were the only countries with more than 1 billion people.
- ❖ China is the most populous nation in the world with 1.42 billion people.
- ❖ The population of India is 1.41 billion.
- ❖ India is to overtake China and become the most populous nation in the world by 2030.
- ❖ The population growth rate of the world is decreasing.

- ❖ It will reach zero by 2080-2100. After 2100, the growth rate will be negative.
- ❖ By 2100 the world population is to reach 10.4 billion people.
- ❖ Vatican City is the least populated country in the world with a population count of 500 people.
- ❖ The world's population continues to increase by roughly 140 people per minute.
- ❖ The growth rate fell below 1% in 2020.
- ❖ This occurrence is the first since 1950.
- ❖ Global life expectancy has increased as 72.8 years in 2019.
- ❖ This is nine years longer than the expectancy in 1990.
- ❖ The global expectancy is expected to increase and reach 77.2 years by 2050.

Country	Population	Country	Population
United States	338,653,036	Russia	144,704,502
Indonesia	275,908,026	Mexico	127,724,673
Pakistan	236,882,454	Japan	123,801,638
Nigeria	219,741,895	Ethiopia	124,095,535
Brazil	215,538,160	Philippines	115,969,226
Bangladesh	171,594,827	Egypt	111,384,124

SCIENCE AND TECHNOLOGY

Base editing technology used in CAR-T therapy

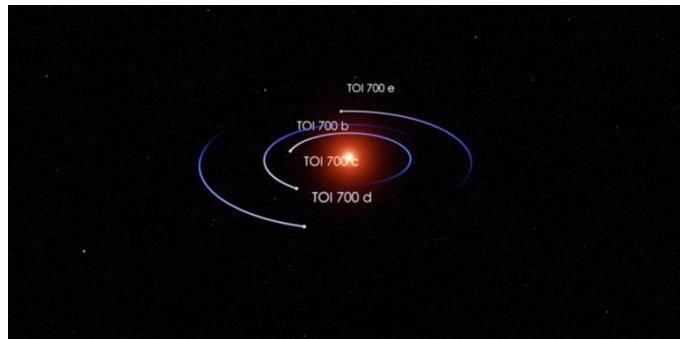


- ❖ University of Texas Southwestern Medical Center have successfully used base editing technology to repair damaged heart tissue.

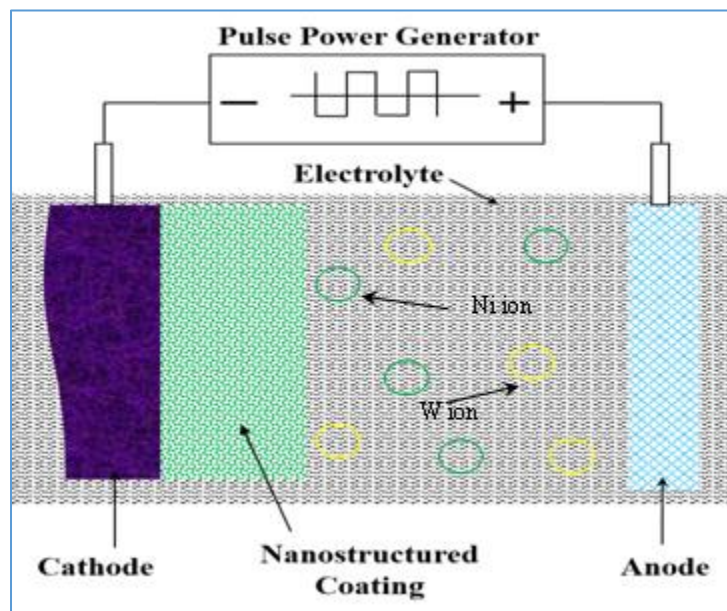
- ❖ They used a CRISPR-Cas9 nucleotide base editing system to modify an enzyme called the calcium calmodulin-dependent protein kinase II δ .
- ❖ This protein involved in signalling pathways across various body functions.

Earth-sized rocky Planet

- ❖ NASA's Transiting Exoplanet Survey Satellite (TESS) mission has discovered a second Earth-sized, rocky planet within the habitable zone of its star.
- ❖ The range of distances where liquid water could occur on a planet's surface.
- ❖ The planet is named TOI 700 e.
- ❖ The world is 95% Earth's size and likely rocky.
- ❖ Astronomers previously discovered three planets in this system, called TOI 700 b, c, and d.



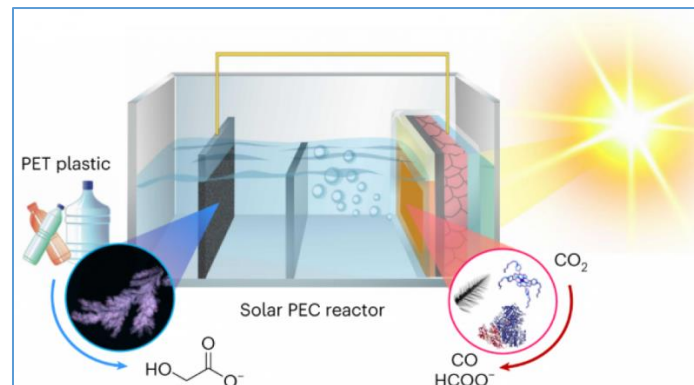
Corrosion-resistant nickel alloy coating



- ❖ A new method of deposition of Nickel alloy coatings was setup on high-performance materials in engineering applications.
- ❖ It can replace environmentally toxic chrome coatings.
- ❖ The coatings obtained are also highly corrosion-resistant and useful for the plastic ware industry.
- ❖ The process consists of environment-friendly electrolyte consisting of nickel and tungsten ions that is the source of strengthening elemental tungsten (W) and nickel (Ni).

New Reactor powered by Sun

- ❖ University of Cambridge, UK have developed a system that can transform plastic waste and greenhouse gases into sustainable fuels and other valuable products.
- ❖ This is using energy from the sun.
- ❖ This integrated reactor has two separate compartments.
- ❖ One is for plastic and another one is for greenhouse gases.
- ❖ The reactor uses a light absorber based on perovskite.
- ❖ Perovskite is a promising alternative to silicon for next-generation solar cells.
- ❖ This reactor converts polyethylene terephthalate (PET) plastic bottles and CO₂ into different carbon-based fuels such as CO, syngas or formate, in addition to glycolic acid.

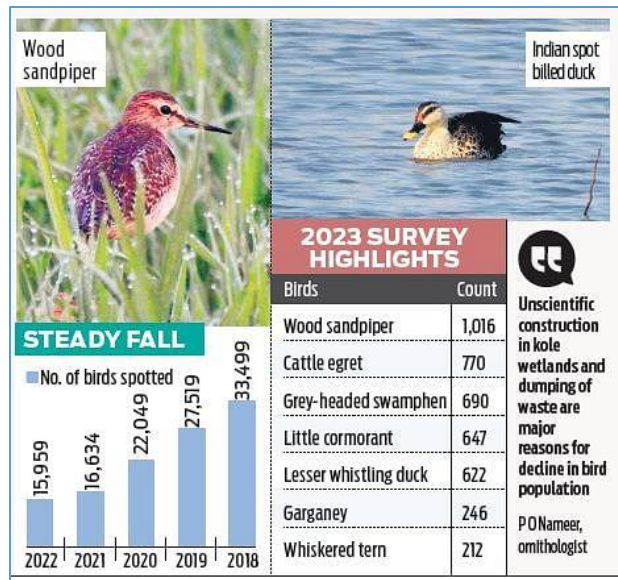


ENVIRONMENT

Kole Wetlands birds count

- ❖ Drop Kole wetlands are spread over an area of 13,632 hectares straddling Thrissur and Malappuram districts.
- ❖ It has been visited by hundreds of migratory birds every year.

- ❖ A survey was conducted in the Thrissur-Ponnani kole fields, a Ramsar site known for the number and diversity of birds.
- ❖ The first day of 2023 Census recorded the lowest count of waterbirds in three decades.
- ❖ A total of 9,904 birds belonging to 90 different species were counted this year.
- ❖ The counts were 16,634 & 15,956 in 2021 and 2022 respectively.
- ❖ There has been a marked decline in the number since 2018, when the count was 33,499.



PERSONALITIES, AWARDS, AND EVENTS

Assamese poet Nilamani Phukan



- ❖ Renowned Assamese poet Nilamani Phukan passed away.

- ❖ Phookan won the 56th Jnanpith Award, India's highest literary award for the year 2020.
- ❖ He was also awarded the 1981 Sahitya Akademi Award in Assamese for his poetry collection, Kavita (Kabita).
- ❖ He was awarded the Padma Shri by the government of India in 1990 and received the Sahitya Akademi Fellowship.

World's oldest living person

- ❖ A Spanish woman, who was born in the United States, has become the world's oldest living person at the age of 115.
- ❖ She gained this position after the death of 118-year-old Lucile Randon of France, according to Guinness World Records (GWR).
- ❖ As of January 20, 2023, Maria Branyas Morera is 115 years 322 days old.

