

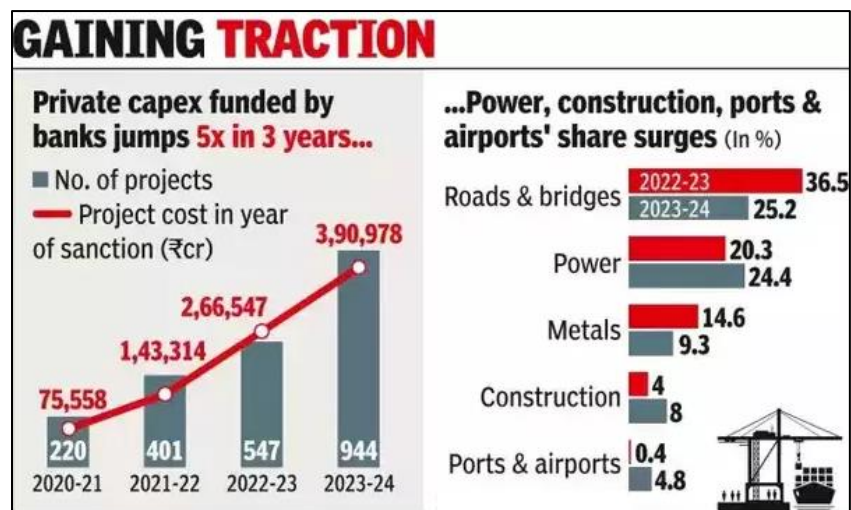
August - 30

TNPSC BITS

- ❖ DRDO has successfully carried out its maiden flight test of Long-Range Glide Bomb (LRGB), GAURAV from Su-30 MK-I platform.
- ❖ India's second home-built 700 MW nuclear power reactor at Kakrapar Atomic Power Station in Gujarat started operating at its full capacity.
- ❖ U.S. Food and Drug Administration approved a nasal spray, Neffy to treat severe allergic reactions, the first needle-free alternative to shots like EpiPen.

TAMIL NADU

Private projects sanctioned by banks in Tamilnadu



- ❖ The number of private sector projects in Tamil Nadu financed by banks and financial institutions increased to 83 in 2023-24 from 44 in 2022-23.
- ❖ The State's share in overall project cost of ₹3,90,978 crore dipped to 3% in 2023-24.
- ❖ The State's share was 4.8% in the total cost of ₹2,66,546 crore in 2022-23.
- ❖ The number of private projects sanctioned by banks and financial institutions in Tamil Nadu was 40 in 2021-22.
- ❖ The state-wise distribution of projects sanctioned by banks and financial institutions revealed that the top five states viz., Gujarat (14.7%), Maharashtra (11.7%), Karnataka (11.1%), Andhra Pradesh (10.1%) and Uttar Pradesh (7.6%).

- ❖ They had together accounted for about 55 per cent of the total cost of projects sanctioned during 2023-24.
- ❖ Tamil Nadu ranks only at 12th place in 2023-24 in terms of share in total project cost, when compared to no 1 position in 2018-19.

Rare granite idol



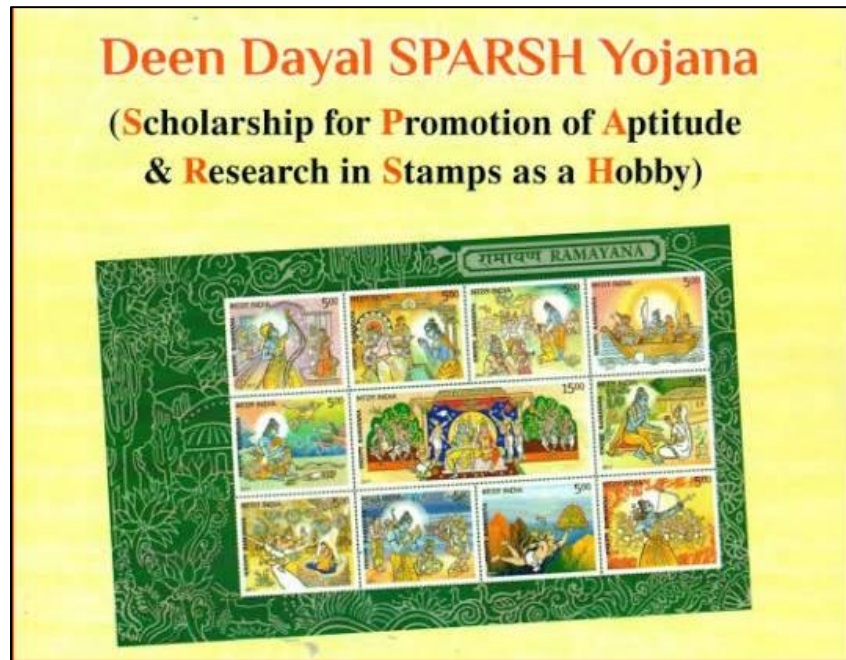
- ❖ Around 300 years old granite Amman idol was unearthed at Mathur village near Cheyyar in Tiruvannamalai.
- ❖ They also discovered a small bronze sword with a handle.
- ❖ The idol was belonged to the later Vijayanagara era.
- ❖ Because it was during that period that the region witnessed more temple-related construction activities.
- ❖ Under the Indian Treasure Trove Act 1878, anything found below one foot belongs to the government.

NATIONAL

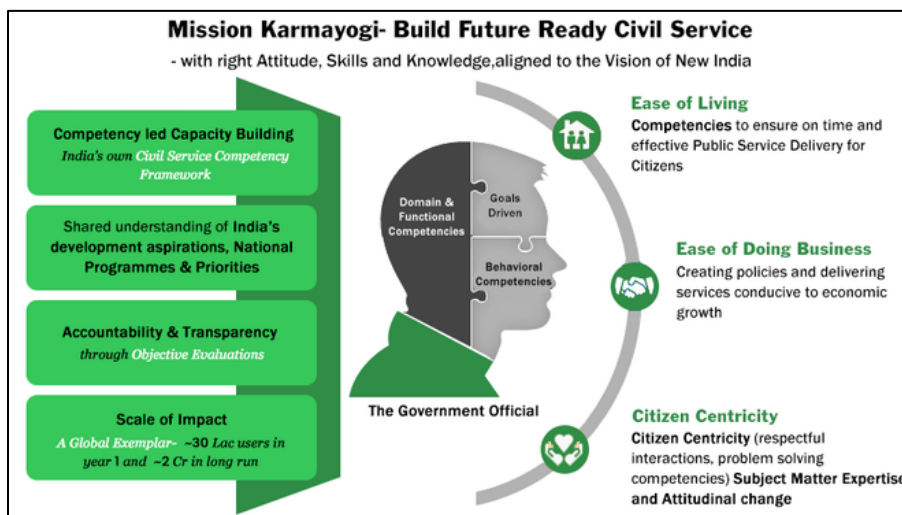
Deen Dayal SPARSH Yojana

- ❖ Department of Posts has launched a philately scholarship scheme Deen Dayal SPARSH Yojana.

- ❖ It will help to promotion of aptitude and research in stamps as a hobby for generating interest regarding philately amongst students.
- ❖ It grants scholarship to those meritorious students of classes 6 to 9, whose academic records are good as well as who have adopted Philately as a hobby.
- ❖ The amount of scholarship will be ₹ 6000/- per annum at the rate of ₹ 500/- per month, which will be payable on quarterly basis.



New portals under Mission Karmayogi



- ❖ The Amrit Gyan Kosh and Faculty Development portals were recently launched under Mission Karmayogi.

- ❖ The Amrit Gyan Kosh portal provides a shared knowledge bank with India-centric case studies.
- ❖ The Faculty Development portal focuses on training practitioners and faculty to improve knowledge delivery to civil servants.

India-Nepal power trade

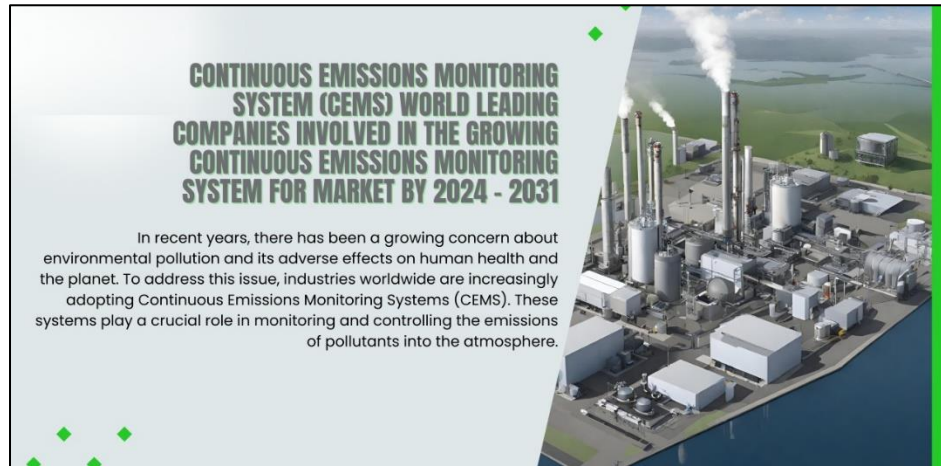


- ❖ India has allowed Nepal to export an additional 251 MW of electricity to the country.
- ❖ India's Designated Authority for Cross-Border Trade has approved an additional 251 MW of power exports from 12 hydropower projects in Nepal.
- ❖ With this, Nepal would be exporting 941 MW of hydropower from 28 projects.
- ❖ Earlier, Nepal was exporting 690 MW of electricity from 16 projects.
- ❖ Nepal had already become a net exporter of electricity and net revenue generator in the last fiscal year.
- ❖ India and Nepal had reached an agreement for the long-term power trade that envisages the sale of up to 10,000 MW of power from Nepal to India in the next 10 years.
- ❖ Nepal shares a border of over 1,850 km with five Indian States — Sikkim, West Bengal, Bihar, Uttar Pradesh and Uttarakhand.

Continuous Emission Monitoring

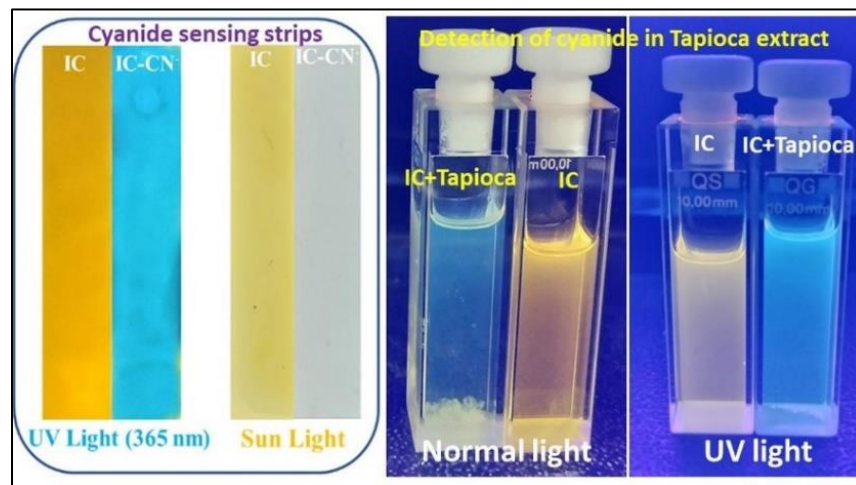
- ❖ Continuous Emission Monitoring System (CEMS) is a critical tool for accurate pollution monitoring and reporting, essential for industries across India.

- ❖ In 2014, Central Pollution Control Board (CPCB) mandated the installation of CEMS in 17 categories of highly polluting industries and common pollution control facilities.
- ❖ Recently CSIR-NPL has developed a certification scheme, NPLI CS and associated testing facilities for CEMS.
- ❖ The CEMS was certified by TUV/MECERT and the United States Environmental Protection Agency.
- ❖ The CSIR-NPL certification procedure aligns with the European standard EN-15267 (Parts 1, 2 and 3).



SCIENCE AND TECHNOLOGY

New Cyanide Sensor



- ❖ Researchers from Kerala has achieved a new chemical sensing by developing a highly sensitive and selective cyanide sensor.

- ❖ The team has created a material capable of detecting the toxic cyanide at low concentration.
- ❖ It will enhance the safety of drinking water and food products.
- ❖ Cyanide, a potent toxin, is present in various plants, fruits, and microorganisms.
- ❖ WHO is limiting the cyanide concentrations to below 0.19 mg/L due to its lethal effects on humans and aquatic life.
- ❖ Cyanide exposure can occur through consumption of certain foods like cassava (tapioca) and even common items like apple and apricot seeds, sprouting potatoes, and almonds.

Miniature CRISPR Tool



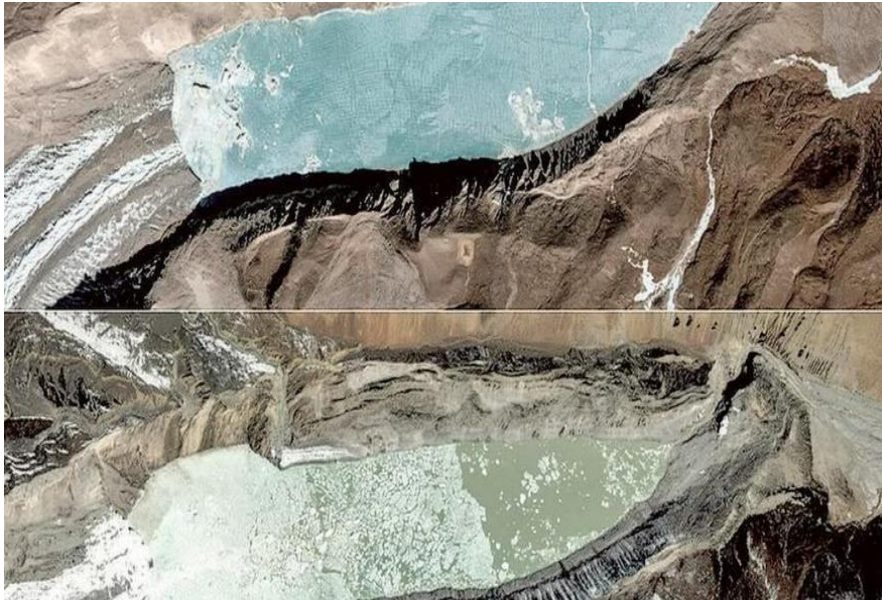
- ❖ Using the gene-editing tool CRISPR, scientists can precisely edit genomes to introduce desirable genetic traits or remove undesirable ones.
- ❖ However, there has been a critical obstacle: a commonly used form of the CRISPR system is too big for plant genomes.
- ❖ This system uses one of two proteins, Cas9 or Cas12, to target specific parts of the DNA.
- ❖ But they are too bulky for plant cells to accommodate.
- ❖ Researchers recently presented an alternative that could solve this major problem in plant genome editing.

- ❖ They developed a plant genome editor consisting of a protein called ISDra2TnpB, derived from bacteria called *Deinococcus radiodurans*.
- ❖ ISDra2TnpB is less than half the size of Cas9 and Cas12.

ENVIRONMENT

Study on Glacial Lakes 2024

- ❖ The National Glacial Lake Outburst Floods Risk Mitigation Programme (NGRMP) was approved by the Centre.
- ❖ There are nearly 7,500 glacial lakes in the Himalayan Mountain ranges located in India and some of them are being monitored via remote sensing.
- ❖ The National Disaster Management Authority (NDMA) has finalised a list of 189 “high-risk” glacial lakes for mitigation measures to reduce the risk.
- ❖ The Central Water Commission (CWC) in an October 2023 report stated that 902 glacial lakes and water bodies are being monitored via satellite.



Slow Loris – Assam

- ❖ A slow loris was rescued in Shantipur, near the Chirang-Bhutan border.
- ❖ This marks the first known instance of this elusive primate being spotted in the region.
- ❖ There are nine species of slow loris.
- ❖ They found exclusively in the South and Southeast Asia.

- ❖ Slow lorises are the world's only venomous primates.
- ❖ Bengal slow loris (*Nycticebus Bengalensis*) is listed as Endangered in the IUCN Red List.



IMPORTANT DAYS

International Day against Nuclear Tests 2024 - August 29



- ❖ The main aim of observing this day is to increase awareness about the impacts of nuclear tests and nuclear explosions.
- ❖ It also aims to increase awareness about a nuclear-weapon-free world.

- ❖ The U.S.A. is the only country to have used nuclear weapons.
- ❖ This day commemorates the closure of the Semipalatinsk Nuclear Tests site in 1991.

International Whale Shark Day 2024 - August 30

- ❖ This day aims to raise awareness about the plight of whale sharks, the largest fish in the world.
- ❖ The whale shark (*Rhincodon typus*) is the largest fish on Earth and a keystone species in marine ecosystems.
- ❖ It can grow to a length of approximately 18 metres and weigh as much as 21 tonnes.
- ❖ It is listed as Endangered in International Union for Conservation of Nature (IUCN) Red List.

