

Nikshay mitra

- The President has launched the 'Pradhan Mantri TB Mukta Bharat Abhiyan' and announced the Nikshay 2.0 portal to eliminate TB by 2025.

About Ni-kshay Mitras initiative

- The initiative ensures three-pronged support including Nutritional, Additional diagnostic, and Vocational support.
- The program was brought in to fill the critical "community" elements into India's fight towards the Pradhan Mantri TB Mukta Bharat Abhiyan aimed at eliminating TB by 2025.
- The NIKSHA 2.0 portal provides additional patient support to TB patients to take advantage of Corporate Social Responsibility (CSR) opportunities to improve treatment outcomes, enhance community participation and fulfill India's commitment to TB eradication.
- Ni-kshay Mitra (Donor) for this program includes cooperative societies, corporates, elected representatives, individuals, institutions, non-governmental organizations, political parties, and partners who can support by adopting the health facilities (for the individual donor), blocks/urban wards/districts/States for accelerating the response against TB to complement the government efforts.
- The support provided to the patient under this initiative is in addition to the free diagnostics, free drugs, and Ni-Akshay Poshan Yojana provided by the National TB Elimination Programme (NTEP) to all TB patients notified from both the public and the private sector.

G20 Logo – Hornbill

- The logo for India's upcoming G20 presidency was officially unveiled recently at the Hornbill festival in Nagaland.
- This popular festival show, cases the art, culture and cuisine of Nagaland.
- It also brings attention to a family of some of the largest, most magnificent birds in our country.
- The Great Hornbill is found in the Himalayan foothills, the Northeast, and the Western Ghats.
- It is the state bird of Arunachal Pradesh and Kerala.
- With a wingspan of five feet, it presents an awesome (and noisy) spectacle while landing on a perch.
- The wreathed hornbill, the brown hornbill, and the rufous necked hornbill are slightly smaller and only found in Northeast India.
- A great place to spot the oriental pied hornbill is the Rajaji National Park, Uttarakhand.
- The Malabar grey hornbill's loud 'laugh' echoes in the Western Ghats.
- The smallest of the group, the Indian grey hornbill is found all over (except the Thar Desert) and is often spotted in urban settings such as Theosophical Society gardens in Chennai.
- Tall trees preferred Hornbills prefer tall trees for their nests (breast height being 1.5 meters or more).
- There is a mutualism between these birds and the trees where they nest.
- As large fruit-eating birds, hornbills play a vital role in dispersing the seeds of about 80 rainforest trees.
- Some trees, such as the cupcalyx white cedar suffer a 90% decline in seed dispersal

beyond the parent tree when hornbill populations decline, negatively impacting the biodiversity of forests

- Tall trees are the first targets of illegal logging, and so there has been a slow decline in hornbill numbers, as reflected in bird counts.

THE HINDU

CrCoNi

- CrCoNi is a subset of a class of metals called high entropy alloys (HEAs).
- All the alloys in use today contain a high proportion of one element with lower amounts of additional elements added, but HEAs are made of an equal mix of each constituent element.
- These balanced atomic recipes bestow some of these materials with an extraordinarily high combination of strength and ductility when stressed, which together make up what is termed “toughness”.
- The toughness of this material near liquid helium temperatures (20 kelvin, -424 Fahrenheit) is as high as 500 mega Pascal’s square root meters.
- The metal is exceptionally strong and ductile which, in materials science, means highly malleable and impressively strong its strength and ductility improve as it gets colder.

THE HINDU

Americium -241 batteries

- Scientists are developing batteries containing americium-241, a radioactive

isotope that can be extracted from power plants spent fuel.

- Americium -241, a by-product of plutonium decay, has never been used as a fuel.
- The project is funded by the European Space Agency (ESA), which hopes to wean itself off plutonium- powered equipment sourced from international partners.
- Nuclear waste could power space missions to the far reaches of the Solar System places that are too dark for the solar panel.

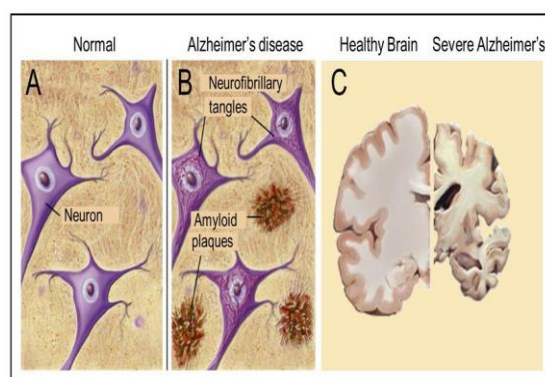
THE HINDU

A DNA

- Two- million- year- old DNA sequences the oldest ever obtained recovered from a 100 -metre -thick deposit of frozen mud and sand in the Northeastern tip of Greenland, shattering the record for ancient- DNA preservation.
- Suggest that the region was once home to mastodons and reindeer that roamed a forested ecosystem unlike any now found on Earth.
- Reindeers were also unheard of in Greenland.

THE HINDU

Lecanemab



- The drug, lecanemab, jointly developed by pharma companies Biogen and Eisai, was tested on patients with early Alzheimer's.
- Results of the study published in the New England Journal of Medicine (NEJM) showed modest effects in arresting the decline of cognitive and functional aspects in patients with early disease.

What is lecanemab?

- Lecanemab belongs to a class of drugs called monoclonal antibodies.
- These antibody-mediated drugs target beta-amyloid, the protein deposition that is seen in patients with Alzheimer's disease, and disrupts cell function.
- "For years amyloid plaques have been thought to be an important target for the treatment of Alzheimer's. This class of drugs does precisely that.

THE HINDU