

April - 01

TNPSC BITS

- ❖ The use of an anti-cold fixed drug combination has been prohibited by the Indian drugs regulator Central Drugs Standard Control Organisation (CDSCO) to be used for children under the age of 4.
 - This common cold fixed drug combination (FDC) is a mixture of two drugs, chlorpheniramine maleate and phenylephrine.
- ❖ Saudi Arabia is set to participate in the Miss Universe pageant for the first time, marking a historic milestone for the country.
 - Romy Alqahtani will be the its first-ever contestant.

NATIONAL

Annual India TB report 2024

TB CASES IN INDIA OVER THE YEARS			
	India TB Report 2020	2023	2024
Estimated TB cases	26.9 lakh	27.4 lakh	27.8 lakh
Number of cases reported	24.04 lakh	24.2 lakh	25.5 lakh
Reporting from private sector	6.8 lakh	7.3 lakh	8.4 lakh
% cases from private sector	28.20%	30%	32.90%
Estimated mortality	4.36 lakh	3.2 lakh	3.2 lakh

- ❖ India's efforts are resulted in a decline of 16% in TB incidence (new cases emerging each year) and a 18% reduction in mortality due to TB, since 2015.
- ❖ There were only 2.3 lakh missing cases in 2023, as compared to 3.2 lakh the year before, the report states.
- ❖ This gap has been reducing over the years, especially with the government's Nishay portal tracking all TB patients.
- ❖ Nearly 33% or 8.4 lakh of the 25.5 lakh cases reported in 2023 came from the private sector.
- ❖ To compare, only 1.9 lakh cases were reported by the private sector in 2015.
- ❖ The estimated incidence of TB in 2023 increased slightly to 27.8 lakh from the previous year's estimate of 27.4 lakh.
- ❖ The mortality due to the infection remained the same at 3.2 lakh as per the data.

- ❖ India's TB mortality was dropped from 4.94 lakhs in 2021 to 3.31 lakhs in 2022.
- ❖ The number of cases reported in a year also went down from 29.4 lakh in 2021 as per the previous method to 27.4 lakh in 2022.

INTERNATIONAL

Legalizing Same-Sex Marriage – Thailand



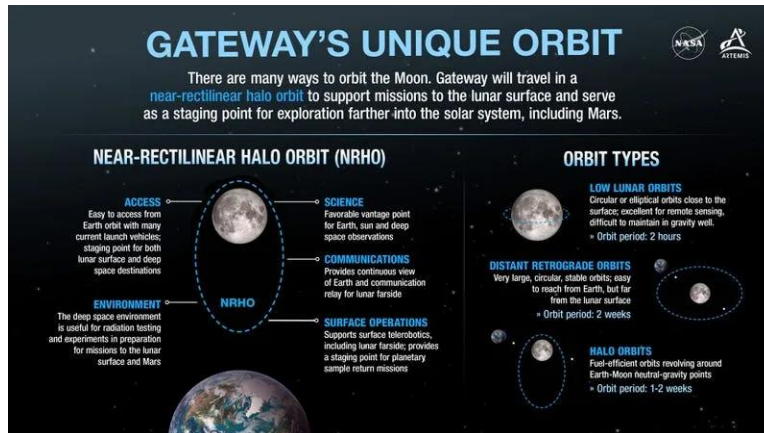
- ❖ Thailand's parliament overwhelmingly approved a marriage equality bill.
- ❖ It still requires approval from the Senate and endorsement from the king before it becomes law and would take effect 120 days later.
- ❖ Thailand is one of Asia's most liberal countries on lesbian, gay, bisexual and transgender issues.
- ❖ In 2019, Taiwan's parliament became the first in Asia to legalise same-sex marriage.

SCIENCE AND TECHNOLOGY

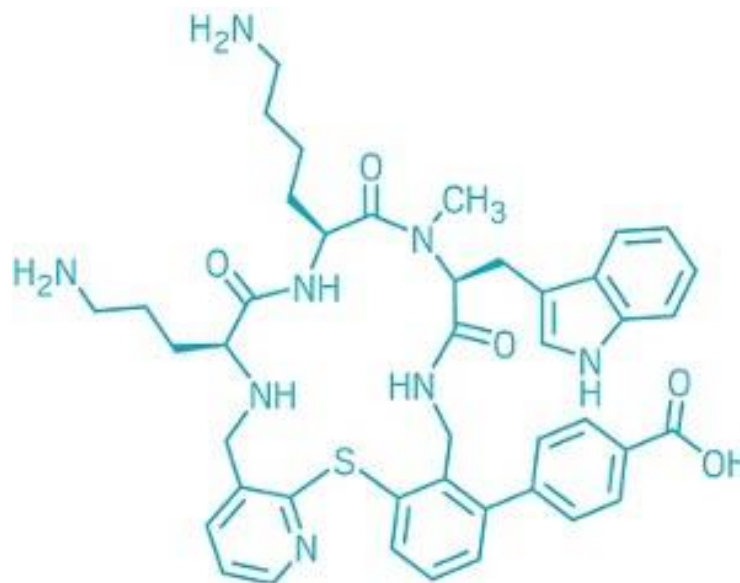
Lunar Gateway Station - NASA

- ❖ NASA, along with a suite of international and private partners, has plans to build a small space station Called Lunar Gateway.
- ❖ The current plan is to place Gateway in a near-rectilinear halo orbit, or NRHO.
- ❖ This fuel-efficient orbit takes advantage of neutral gravity points generated by the Earth and the Moon.

- ❖ NRHO is highly elliptical, so the space station will come to within approximately 1,865 miles (3,000 kilometers) of the Moon during its closest approach but then travel out to a distance of 43,500 miles (70,000 km).
- ❖ The European Space Agency (ESA) says Gateway will support four astronauts for 90-day stays.



Antibiotic Zosurabalpin

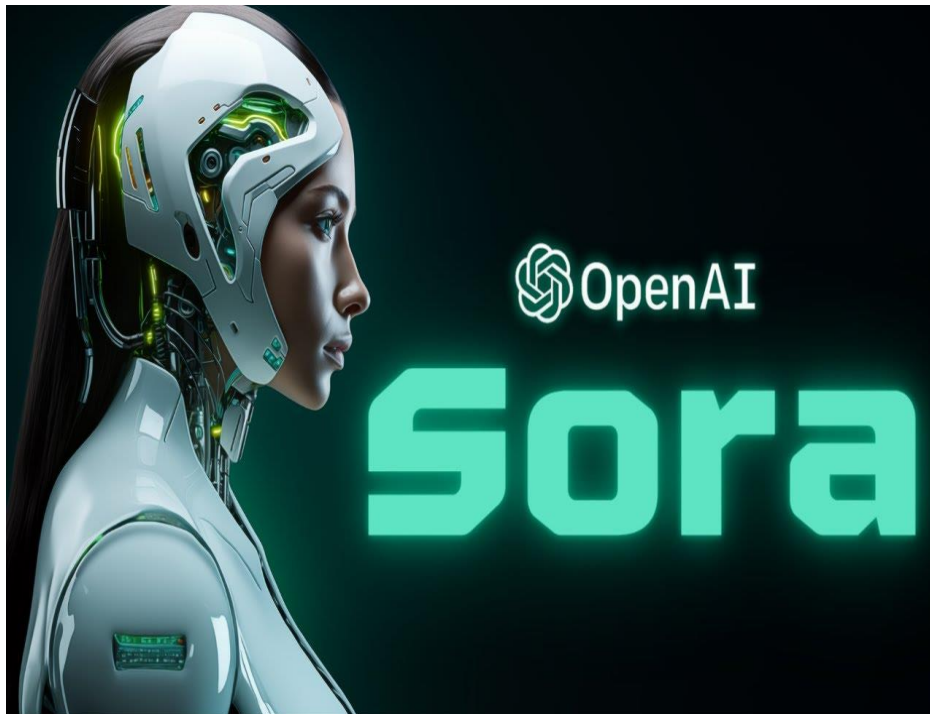


Zosurabalpin

- ❖ Researchers have identified a new class of antibiotics with the potential to tackle a drug-resistant bacterium, *Acinetobacter baumannii*.
- ❖ Zosurabalpin was found to be effective against CRAB (carbapenem-resistant *Acinetobacter baumannii*)-induced pneumonia and sepsis in mouse models.

- ❖ *A. baumannii* inhibits a key process, transport of the molecule lipopolysaccharide (LPS), by inhibiting a complex of proteins.
- ❖ This complex was essential for transporting LPS to the bacterial surface to create the outer-membrane structure of Gram-negative bacteria.
- ❖ Zosurabalpin blocks LPS transport, and the abnormal build-up of LPS in the cell kills the bacterium.

OPENAI: Sora



- ❖ OpenAI has announced a new generative AI system named Sora, which produces short videos from text prompts.
- ❖ Sora combines features of text and image generating tools in what is called a “diffusion transformer model”.
- ❖ Sora is not the first text-to-video model.
- ❖ Earlier models include Emu by Meta, Gen-2 by Runway, Stable Video Diffusion by Stability AI, and recently Lumiere by Google.

'Old smoker' giant red star

- ❖ Astronomers have discovered a new type of red giant star nicknamed "an old smoker" near the centre of the galaxy.
- ❖ The star's brightness is temporarily obscured by puffs of smoke.

- ❖ This also makes sense since there are many more heavy elements in that region of the galaxy, which could create more dust in the star's atmosphere.
- ❖ They discovered 32 such newborn stars.
- ❖ The researchers described this as the “largest number anyone has ever found before in one batch.”



ENVIRONMENT

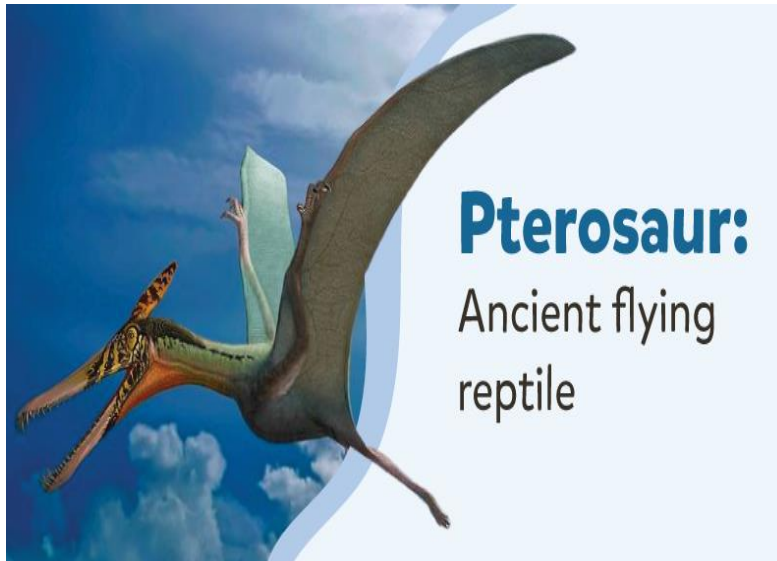
Rare All-White Gentoo Penguin



- ❖ An extremely rare all-white penguin spotted in Chilean Antarctica.

- ❖ The penguin spotted at the Gabriel Gonzalez Videla Base is a female of the Gentoo species, which typically has black feathers with a few whites.
- ❖ Although the condition is commonly genetic, trauma can also cause it.
- ❖ It differs from albinism as the penguin's eyes and beak are the usual colour.
- ❖ About eight years ago, a rare white penguin was spotted in the colony.

Pterosaur - New Species



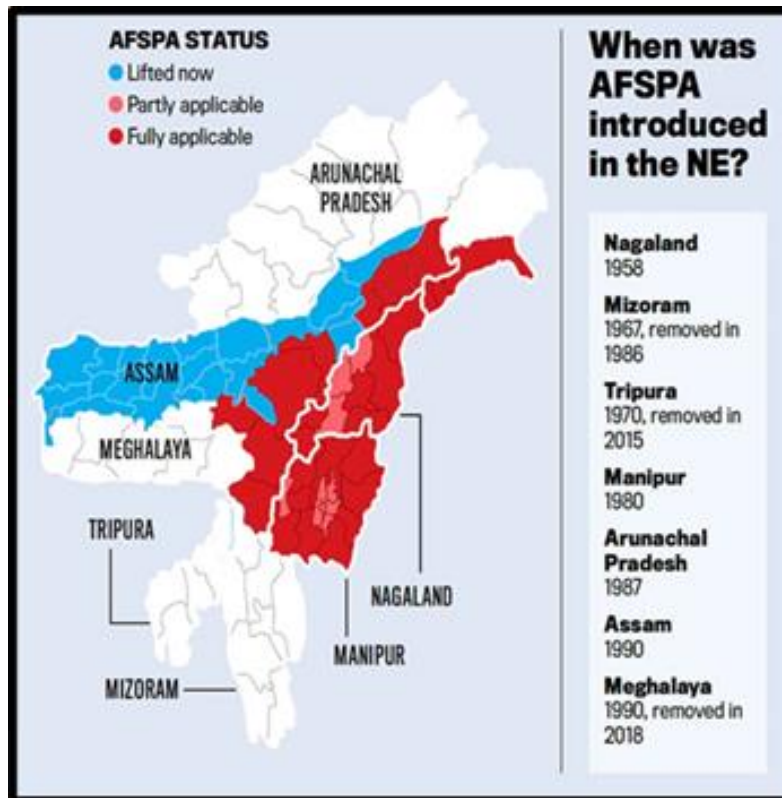
- ❖ A team of paleontologists has identified a new species of pterosaur from a fossil discovered on the Isle of Skye in Scotland.
- ❖ It is a type of flying reptile that lived during the time of the dinosaurs.
- ❖ The fossil, which is about 165 million years old, belongs to a group of pterosaurs known as darwinopterans.
- ❖ These are regarded as a transitional form between the earlier and later pterosaurs.
- ❖ Ceoptera is the first darwinopteran pterosaur to be found in Scotland, and only the second pterosaur overall.

STATES

Extension of AFSPA

- ❖ The Union Ministry of Home Affairs (MHA) extended the Armed Forces (Special Powers) Act (AFSPA) in parts of Nagaland and Arunachal Pradesh for another six months.

- ❖ The AFSPA gives unbridled power to the armed forces and the Central Armed Police Forces deployed in “disturbed areas”.
- ❖ Under the Act, they can kill anyone acting in contravention of law, arrest and search any premises without a warrant.
- ❖ And it ensures protection from prosecution and legal suits without the Central government’s sanction.

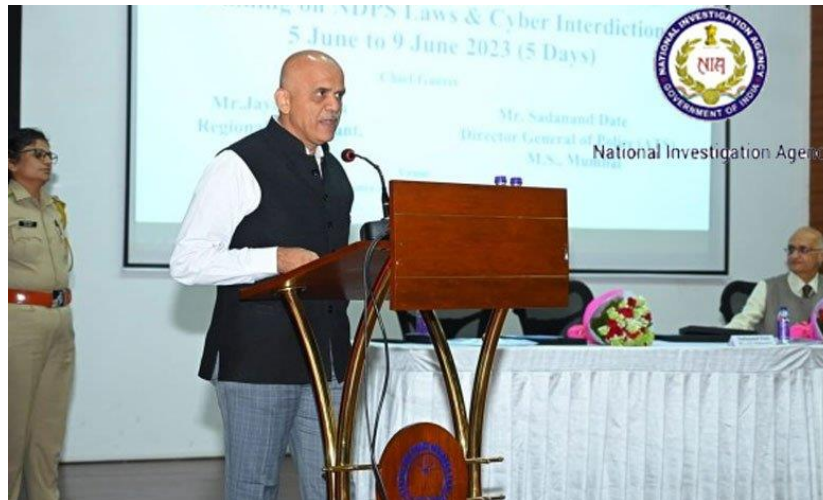


PERSONALITIES, AWARDS, AND EVENTS

New Appointments in various forces

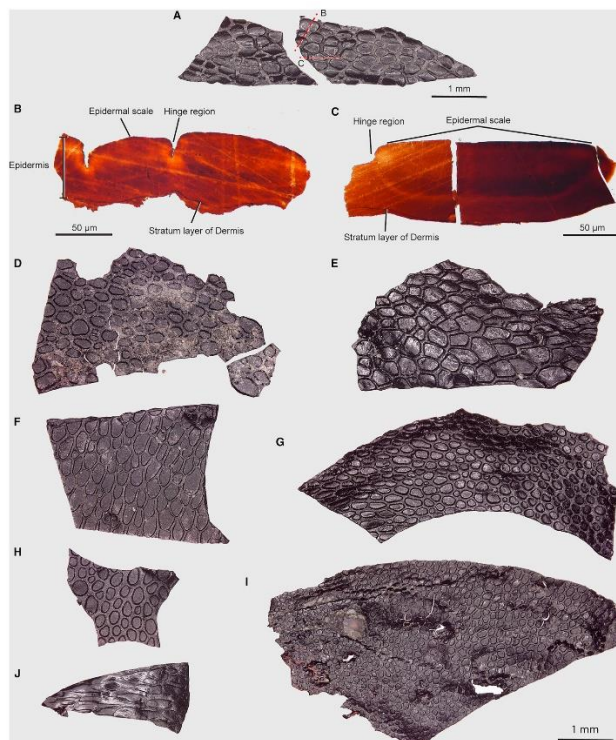
- ❖ The appointment committee of the Cabinet has approved the names of new chiefs for the National Investigation Agency (NIA), National Disaster Response Force (NDRF) and the Bureau of Police Research and Development (BPRD).
- ❖ Maharashtra cadre officer Sadanand Vasant Date has been appointed as the new NIA chief.
- ❖ He was awarded President’s medal for Gallantry for saving lives and countering terrorists during the 26/11 Mumbai terror attacks.
- ❖ 1991 batch Indian Police Service officer Piyush Anand is appointed as the new NDRF DG.

- ❖ 1990 batch of the Indian Police Service officer Rajeev Kumar Sharma is appointed as the director general of BPRD.



MISCELLANEOUS

Oldest Known Skin Fossil



- ❖ Researchers have discovered a fossilized crocodile-like skin, which is at least 286 million years old.



- ❖ There are very, very few cases of Paleozoic land animals that have skin preserved.
- ❖ The fragment of fossilized reptile skin was found in a limestone cave in Oklahoma.

