

July - 10

TNPSC BITS

- ❖ The Government of India hosted the 'Global India AI Summit' in New Delhi.
- ❖ 28-member Indian athletics team for the upcoming Paris Olympics, will lead by javelin thrower Neeraj Chopra.
- ❖ The first International Dairy Federation Regional Dairy Conference Asia Pacific-2024 was held in Kochi, Kerala.
- ❖ Bajaj Auto has launched the world's first CNG motorcycle-Freedom 125 with twin-tank setup - one for petrol and the other for CNG.
- ❖ BlinkX, the digital stockbroking arm of JM Financial, has set up BlinkX Gen AI Lab in Mumbai for the operational efficiencies and enhancing customers' experiences.
- ❖ The Dr Shyama Narang Foundation, Bangalore, in collaboration with Nimhans, hosted the third annual conference on Motor Neuron Disease.
 - Theme of the event is "Awareness, Care, and Management of MND/ALS".

NATIONAL

Most powerful non-nuclear bomb - SEBEX 2



- ❖ The Indian Navy successfully developed a new explosive which is two times more lethal than standard TNT (Trinitrotoluene).



- ❖ The new explosive named SEBEX 2 was developed by the Nagpur-based Solar Industries.
- ❖ It is now among the most powerful weapon non-nuclear explosives.
- ❖ SEBEX 2 is a new explosive formulation that provides a much more powerful blast effect than any currently available solid explosive.
- ❖ The Indian Navy has also certified SITBEX 1 – the EEL’s first thermobaric explosive.
- ❖ SITBEX 1, which generates extended blast duration with intense heat, is suited to target enemy bunkers, tunnels, and other fortified positions.

SBI - MSME Sahaj

MSME–Sahaj by SBI

SBI has launched “MSME–Sahaj”, a solution enabling customers to avail loan against their GST-registered sales invoices of up to ₹1 lakh. The app runs based on a Machine Learning (ML) model to validate the authenticity of the loan application.

- ❖ SBI announced MSME Sahaj, an online business loan solution for MSMEs.
- ❖ It provides credit against their Goods and Services Tax (GST) registered sales invoices of up to Rs 1 lakh.
- ❖ The new solution will have an entire turnaround time of less than 15 minutes without any manual intervention.

Gallantry Awards 2024

- ❖ President Droupadi Murmu conferred 36 Gallantry Awards to the personnel of the Armed Forces, Central Armed Police Forces, and State and Union Territory Police.
- ❖ The awards were conferred during the Defence Investiture Ceremony (Phase-1) at Rashtrapati Bhawan in New Delhi.
- ❖ The Gallantry Awards include ten Kirti Chakras and 26 Shaurya Chakras.

- ❖ Seven personnel were awarded Kirti Chakras posthumously and seven Shaurya Chakras posthumously.
- ❖ The awards were given to the personnel for displaying conspicuous gallantry, indomitable courage, and extreme devotion to duty.



INTERNATIONAL

Framework to fight online misinformation



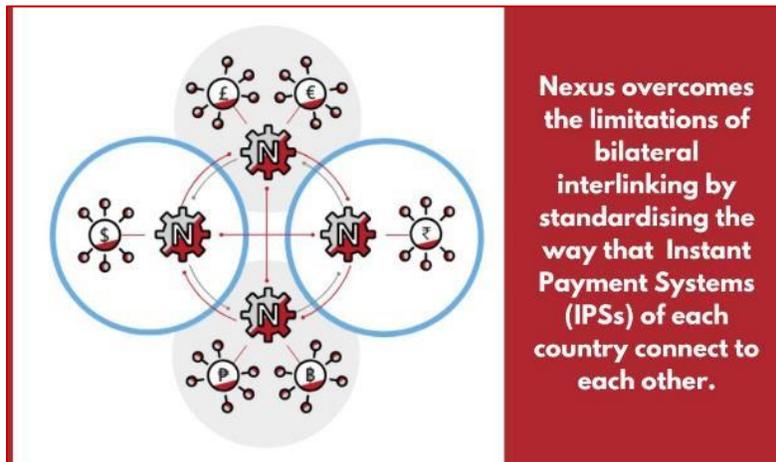
- ❖ The United Nations unveiled the Global Principles for Information Integrity.
- ❖ This comprehensive framework is aimed at addressing the escalating threats posed by misinformation, disinformation, and hate speech in the digital realm.

- ❖ The principles aim to create healthier and safer information environments that uphold human rights and promote peaceful societies and a sustainable future.

ECONOMY

Project Nexus by RBI

- ❖ The Reserve Bank of India (RBI) has joined Project Nexus.
- ❖ It is a multilateral international initiative to enable instant cross-border retail payments by interlinking domestic Fast Payments Systems (FPSs).
- ❖ India's Unified Payments Interface (UPI) and FPSs of Malaysia, the Philippines, Singapore and Thailand will be interlinked through Nexus.



SCIENCE AND TECHNOLOGY

First commercial spacewalk

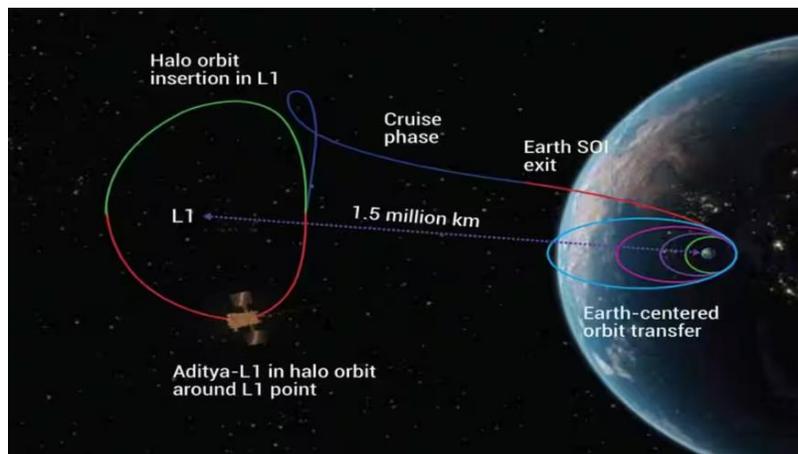


- ❖ Elon Musk's SpaceX will launch the "Polaris Dawn" mission.

- ❖ It will take four persons 870 miles from Earth.
- ❖ In addition to testing in-orbit communications, the crew will carry out high-altitude exercises, the first-ever commercial spacewalk, and health-related research.
- ❖ This distance is greater than any crewed space trip since the 1966 Gemini 11 mission and the 1972 Apollo 17 mission.

ISRO's Aditya-L1 mission 2024

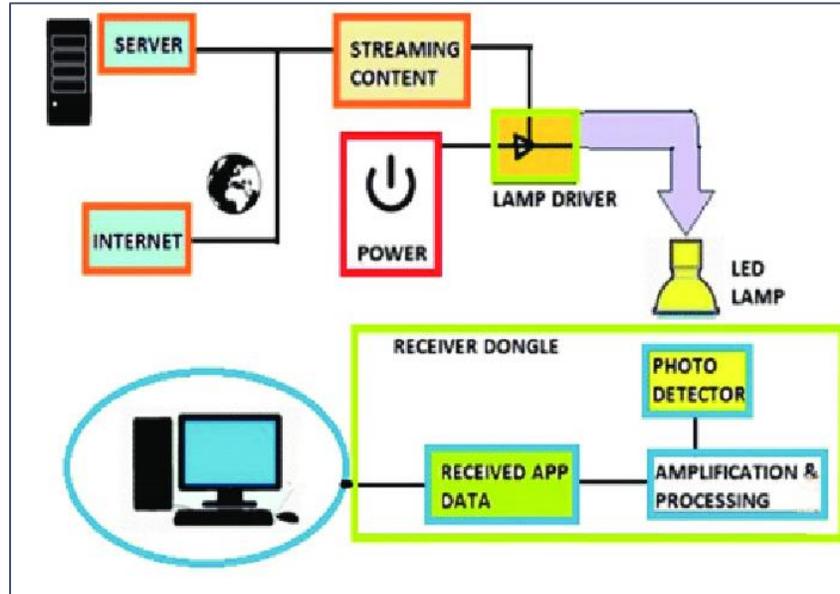
- ❖ Aditya-L1 mission has completed its halo orbit around the Sun-Earth L1 point on July 2.
- ❖ The Aditya-L1 spacecraft completed circling the L1 point in the halo orbit in 178 days.
- ❖ The Aditya-L1 mission, which is an Indian solar observatory at Lagrangian point L1, was launched on September 2, 2023.
- ❖ It was inserted in its targeted halo orbit on January 6, 2024.



Velmenni's Li-Fi technology

- ❖ Telecom startup Velmenni has received a grant from the ministry of defence (MoD) for its innovative Li-Fi (Light Fidelity) technology.
- ❖ According to Velmenni, its Li-Fi can enhance data transmission for the Indian Navy and other defence applications.
- ❖ It offers enhanced security and performance, making it ideally suited for the Indian Navy's real-time communication needs.
- ❖ Li-Fi uses special LED (light-emitting diodes) bulbs as routers and works on optical wireless communications (OWC) technology.

- ❖ Li-Fi devices deliver data through visible, infra-red, or ultraviolet light.
- ❖ Meanwhile, Wi-Fi routers use radio frequencies to transmit data.
- ❖ Li-Fi also boasts of delivering speeds of up to 224GB per second.



Microwave Obscurant Chaff Rocket



- ❖ DRDO handed over the Medium Range-Microwave Obscurant Chaff Rocket (MR-MOCR) to the Indian Navy.

- ❖ It obscures radar signals and creates a microwave shield around platforms and assets, thus reducing radar detection.
- ❖ The rocket, when fired, forms a microwave obscurant cloud in space spreading over a sufficient area, with adequate persistence time.
- ❖ It was creating an effective shield against hostile threats having radio frequency seekers.

ENVIRONMENT

Vaquita - Marine Mammal

- ❖ The world's most endangered marine mammal, the vaquita, is teetering on the edge of extinction.
- ❖ Only 6-8 individuals spotted compared to 8-13 just a year ago.
- ❖ These shy porpoises are found exclusively in Mexico's upper Gulf of California.
- ❖ Their preferred habitat lies in the Gulf's shallow near-shore waters.

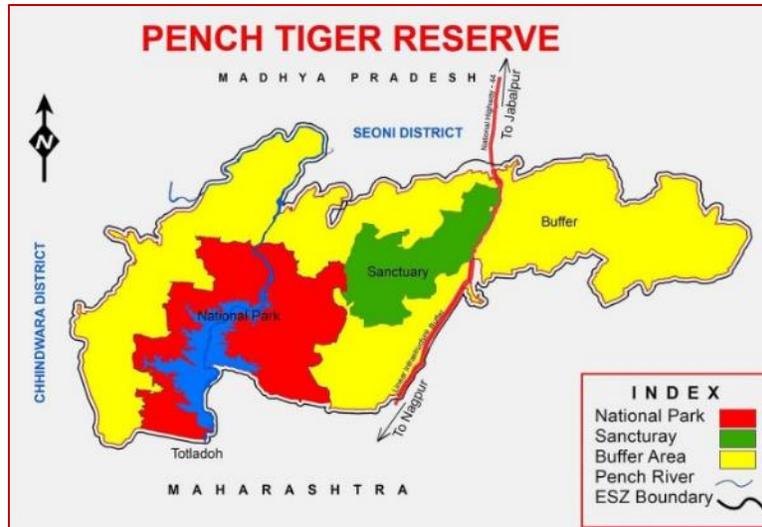


STATES

AI System for forest fire detection

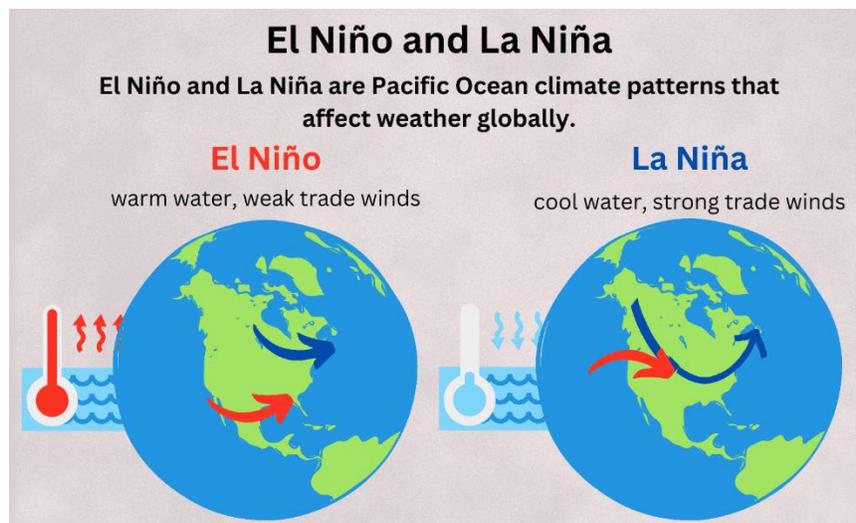
- ❖ The Pench Tiger Reserve in Maharashtra has launched an advanced Artificial Intelligence (AI) system for early detection of forest fires.

- ❖ This state-of-the-art system features a high-resolution camera, with a visual range of 15 kilometres.
- ❖ This means it can effectively cover more than 350 sq. km of the tiger reserve.



MISCELLANEOUS

Bayesian Convolutional Neural Network



- ❖ Bayesian Convolutional Neural Network (BCNN) is the new product uses the latest technologies such as Artificial Intelligence (AI), deep learning, and machine learning (ML) to improve forecasts related to the ENSO phases.
- ❖ BCNN is a combination of the dynamic model with AI.
- ❖ This helps it forecast the emergence of El Niño and La Niña conditions with a 15-month lead time.

- ❖ Other models which can give a prediction up to six to nine months in advance.

Brain-Eating Amoeba Infection

- ❖ Four cases of the rare but fatal primary amoebic meningoencephalitis (PAM) reported in Kerala.
- ❖ Primary amoebic meningoencephalitis or PAM is caused by *Naegleria fowleri*.
- ❖ This amoeba thrives in warm freshwater lakes, ponds and rivers.
- ❖ It can also survive in poorly maintained swimming pools in rare cases.
- ❖ The amoeba enters the body through the nose and reaches the brain.
- ❖ As it can infect the brain and destroy the tissues there, this one-celled organism is also called 'brain-eating amoeba'.
- ❖ These infections, though rare, are fatal and 97% of the patients don't survive.

