Prelim Bits 25-03-2019

Tejas LCA

- Tejas is a supersonic single-engine, multirole light fighter designed by Hindustan Aeronautics Limited (HAL) for the Indian Air Force and Indian Navy.
- It came from the Light Combat Aircraft (LCA) programme, which began in the 1980s to replace India's ageing MiG-21 fighters.
- Recently India has showcased the Tejas Light Combat Aircraft (LCA) in Langkawi International Maritime Aero Expo (LIMA-2019) held in Malaysia.

Chinook Helicopters

- Chinook is a heavy lift helicopter manufactured in US, recently inducted into the Indian Air Force.
- The heavy-lift transport helicopter will enhance India’s heli-lift capability across all types of terrain to full effect.

EMISAT

- The Indian Space Research Organization (ISRO) is about to launch an electronic intelligence satellite EMIAT for Defense Research and Development Organization (DRDO).
- Polar Satellite Launch Vehicle will be used to put the 436 kg EMISAT into a 749-km orbit.
- The satellite will identify the exact topography of enemy areas and find out how many communication devices are active in the area and also helps India to keep an eagle eye on hostile nations.
- This is not the first time ISRO is launching satellite for DRDO earlier ISRO has launched Microsat-R which was developed by DRDO.

Spring Equinox

- Spring equinox is the first official day of spring in the Northern Hemisphere, the length of day and night are close to equal during this equinox.
- The Vernal Equinox is a solar term with great balance, at the equinox, earth’s two hemispheres are receiving the sun’s rays equally.
- The equinox is the moment in Earth’s orbit when the sun appears to cross

the celestial equator.
- It means longer and warmer days as the northern hemisphere begins to tilt towards the sun.
- The Spring/Vernal Equinox is celebrated as the Persian New year, known as Nowruz.

PM-KUSUM Scheme

- KisanUrja Suraksha evam Utthaan Mahabhiyan (KUSUM) scheme promotes decentralization of solar power production of up to 28,250 MW to help farmers.
- The scheme would provide extra income to farmers, by giving them an option to sell additional power to the grid through solar power projects set up on their barren lands.
- It would help in de-dieselizing the sector as also the DISCOMS.
- The scheme would also promote energy efficiency and water conservation and provide water security to farmers.

Muons

- Muon elementary subatomic particle similar to the electron but 207 times heavier, they can either have Positive or Negative charge.
- A muon is relatively unstable, with a lifetime of only 2.2 microseconds, since muons are charged they lose energy by displacing electrons from atoms (ionization) before decaying.
- In nature, high energy cosmic rays (usually protons) hit nuclei in the upper atmosphere and produce “showers” of particles, including muons and muon neutrinos.
- The Gamma Ray Astronomy PeVEnergieS phase-3 or GRAPES-3 muon telescope is located at Ooty, Tamil Nadu.
- It is designed to study cosmic rays with an array of air shower detectors and a large area muon detector.

Source: PIB, The Hindu, Indian Express

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