Prelim Bits 19-04-2019

Western Disturbances

- Western Disturbance is an extratropical storm originating in the Mediterranean region that brings sudden winter rain to the north-western parts of the Indian sub-continent.
- It is a non-monsoonal precipitation pattern driven by the westerlies.
- Extratropical storms are a global phenomenon with moisture usually carried in the upper atmosphere, unlike their tropical counterparts where the moisture is carried in the lower atmosphere.
- Western disturbances bring moderate to heavy rain in low-lying areas and heavy snow to mountainous areas of the Indian Subcontinent.
- Precipitation has great importance in agriculture, particularly for the Rabi crops. Wheat among them is one of the most important crops, which helps to meet India's food security.

UNESCO Geo Park

- UNESCO Global Geoparks are single, unified geographical areas where sites and landscapes of international geological significance are managed with a holistic concept of protection, education and sustainable development.
- At present, there are 147 UNESCO Global Geoparks in 41 countries
- UNESCO Global Geoparks is given this designation for a period of four years after which the functioning and quality of each UNESCO Global Geoparks are thoroughly re-examined during a revalidation process.
- In 2018 Lonar Lake in Maharashtra and St. Mary's Island and Malpe beach in coastal Karnataka are listed for UNESCO Global Geopark Network status.

Helium Hydride Ion

- Scientists have detected that Helium hydride ion (HeH+) was the first molecule to be formed in the universe.
- During big bang, ionized hydrogen and neutral helium atoms reacted to form HeH+.
- The molecule will emit its strongest spectral line at a characteristic

wavelength of 0.149 mm.
- NASA’s high-flying observatory SOFIA detected this molecule towards a planetary nebula.

SOFIA

- Stratospheric Observatory for Infrared Astronomy (SOFIA) is an aircraft with reflecting telescope, flying into the stratosphere at 38,000-45,000 feet.
- SOFIA is put above Earth’s infrared-blocking atmosphere, allowing astronomers to study the solar system and beyond in ways that are not possible with ground-based telescopes.
- The observatory’s mobility allows researchers to observe from almost anywhere in the world and enables studies of transient events that often take place over oceans where there are no telescopes.

Genome Sequencing

- Council of Scientific and Industrial Research (CSIR) with co-operation of Centre for Cellular and Molecular Biology (CCMB) has initiated a genome sequencing project for educating a generation of students on the “usefulness” of genomics.
- Globally, many countries have undertaken genome sequencing of a sample of their citizens to determine unique genetic traits, susceptibility (and resilience) to disease.
- This is the first time that such a large sample of Indians will be recruited for a detailed study.
- The project aims to sequence at least 10,000 Indian genomes, where Genomes will be sequenced based on a blood sample.

International Fleet Review

- International Fleet Review (IFR) is a parade of naval ships, aircraft and submarines, and is organized by nations to promote goodwill, strengthen cooperation and showcase their organizational capabilities.
- IFR also serves as an ideal platform for the world’s navies to showcase their prowess and indigenous ship designing and shipbuilding capabilities in a global/ international arena.
- Indian Navy warships INS Kolkata and INS Shakti will be participating in IFR 2109, China.

Source: The Hindu, PIB, Down to Earth

