Important Facts for Prelims (12th September 2018)

APSARA U Reactor

"Apsara-Upgraded" is a swimming pool type research reactor which began its operation at Bhabha Atomic Research Centre(BARC), Trombay on September 10, 2018. Indigenously made, it uses plate type dispersion fuel elements made of Low Enriched Uranium (LEU).

- **Significance of Reactor**
  The reactor will increase indigenous production of radioisotopes for medical application. It will be used for research in nuclear physics, material science and radiation shielding.
- **Apsara Reactor:**
  "Apsara" was also the name of the first research reactor in Asia which became operational in Trombay campus of Bhabha Atomic Research Centre in August 1956. After five decades of operation, the research reactor was shut down in 2009. Now, it is recommissioned as APSARA U after upgradation.
- **Swimming Pool-Type Reactor**
  It is a common form of the water-cooled, plate-fuel reactor, in which the reactor core is positioned near the bottom of a large, deep pool of water.

India's First Missile Tracking Ship

- India's first Missile Tracking Ship (a kind ocean surveillance ship) has been built by **Hindustan Shipyard Limited (HSL)**. The ship is being built for the National Technical Research Organisation, the technical intelligence agency working directly under the supervision of the Prime Minister's Office and the National Security Adviser.
- **India will now be among the few countries to operate a ship such as this.** It will be inducted in the Indian Navy once sea trials are completed.
- Other Countries that have a missile tracking ship are **Russia, US, China, and France.**

- It will be named after its induction into the Indian Navy. For now, it is simply called as VC 11184.
- A tracking ship also called a missile range instrumentation ship or range ship is a ship equipped with antennas and electronics to support the launching and tracking of missiles and rockets.

Yudh Abhyas 2018

- Yudh Abhyas 2018 is a joint military training exercise between the **Indian Army and US Army.**
- **Yudh Abhyas is hosted alternately by both countries annually.**
- This year's exercise will be conducted in the foothills of Himalayas at Chaubatia in Uttarakhand from 16 September to 29 September 2018. This will be the 14th edition of the joint military exercise.
- In this year's exercise, both nations will work together in counterinsurgency and counterterrorism environment in mountainous terrain.

International Center for Transformative Artificial Intelligence (ICTAI)

- **NITI Aayog, Intel, and Tata Institute of Fundamental Research (TIFR)** will together set up a Model International Center for Transformative Artificial Intelligence (ICTAI) towards developing and deploying AI-led application-based research projects.
- This initiative is part of NITI Aayog's 'National Strategy for Artificial Intelligence' discussion paper that focuses on establishing ICTAI in the country through private sector collaboration. The model ICTAI is chartered to develop AI foundational frameworks, tools, and assets, including curated datasets and unique AI algorithms.
- Based in **Bengaluru**, the Model ICTAI aims to conduct advanced research to incubate AI-led solutions in three important areas – **healthcare, agriculture, and smart mobility** – by bringing together the expertise of Intel (private) and TIFR (public).
- The intent is to develop standards and support policy development related to information technology such as data storage, information security, privacy, and ethics for data capture and use.