Aurora Supercomputer

The United States has decided to build the fastest supercomputer.

- The supercomputer is **named as Aurora.**

About Aurora

- It is scheduled to be delivered to the **Argonne National Laboratory near Chicago in 2021.**
- It will be the first machine **to reach a milestone called "exascale" performance, i.e. one billion billion calculations per second.**
- This **speed is around seven times the speed of the most powerful system built to date, or 1,000 times faster than the first "petascale" systems built in 2008.**
- The new machines will let researchers create significantly **more accurate simulations of** phenomena such as **drug responses, climate changes, the inner workings of combustion engines and solar panels.**
- An **International Business Machines (IBM) Corporation** system called **Summit(OLCF-4)**, built for the Oak Ridge National Laboratory in the USA is the **fastest supercomputer in the world with a clocked speed of 143.5 petaflops.**

Supercomputer in India

- India's first supercomputer called **PARAM 8000 was launched in 1991.**
- At present, Indian Institute of Tropical Meteorology has **Pratyush supercomputer, which is the fastest supercomputer in India,** it has a speed of 4.0 Petaflops.
- National Centre for Medium-Range Weather Forecasting has **Mihir**, which has a speed of 2.8 petaflops.

Unit of Computing Speed

- **Teraflops:** It is a unit of computing speed equal to **one million million (10^12) floating-point operations per second (FLOPS).**
- **Petaflops:** It is a unit of computing speed equal to **one thousand million million (10^15)** floating-point operations per second (FLOPS).
- **Exaflops:** It is a unit of computing speed equal to **one billion billion (10^18)** floating-point operations per second (FLOPS).