National Super Computing Mission (NSM)

October 22, 2020

3rd phase of National Super Computing Mission to start in January 2021

About the NSM

- It envisages **empowering our national academic and R&D institutions** spread over the country by installing a vast supercomputing grid comprising more than 70 high-performance computing facilities.
- These supercomputers will also be **networked on the National Supercomputing grid over the National Knowledge Network (NKN).**
- The NKN is another programme of the government which connects academic institutions and R&D labs over a high speed network.
- Academic and R&D institutions as well as key user departments/ministries would participate by using these facilities and develop applications of national relevance.
- The Mission also **includes the development of highly professional High Performance Computing (HPC)** aware human resource for meeting challenges of development of these applications.
- The Mission implementation would bring supercomputing within the reach of the large Scientific & Technology community in the country and enable the country with a capacity of solving multi-disciplinary grand challenge problems.
- The Mission would be **implemented and steered jointly by the Department of Science and Technology (DST) and the**

Department of Electronics and Information Technology (DeitY) at an estimated cost of Rs.4500 crore.

Objective:

- To make India one of the world leaders in Supercomputing and to enhance India's capability in solving grand challenge problems of national and global relevance
- To empower our scientists and researchers with state-of-the-art supercomputing facilities and enable them to carry out cutting-edge research in their respective domains
- To minimize redundancies and duplication of efforts, and optimize investments in supercomputing
- To attain global competitiveness and ensure self-reliance in the strategic area of supercomputing technology

Applications:

- Improving weather services
- Natural disaster prediction
- Disaster simulation and management
- Support computational biology
- Drug discovery
- Space ambitions
- Molecular Dynamics
- Discovery and extraction of new sources of oil and gas
- Atomic Energy Simulation
- National Security/Defence Applications
- Big data analytics