Context:

- The Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI) here is gearing up to play a key role in a nationwide project to decode the genetic information of all known species of plants and animals in the country.

**Indian Initiative on Earth BioGenome Sequencing (IIEBS)**

- The Institute has been selected as one of the Biological Knowledge and Resource Centres of the Indian Initiative on Earth BioGenome Sequencing (IIEBS). It will join hands with other premier research institutes to utilise cutting edge technologies for genome sequencing.
- The whole genome sequencing of 1,000 species of plants and animals will be taken up in the initial phase of IIEBS to be completed over a period of five years at an estimated cost of ₹440 crore. The National Institute of Plant Genome Research, New Delhi is the coordinating centre for the nationwide project involving a total of 24 institutes.
- The digital repository of genome sequences is expected to provide the critical infrastructure for better understanding of ecosystems and conservation of biodiversity as well as the development of new treatments for infectious and inherited diseases, agricultural products, biomaterials and biological fuels.

**What is the Genome India Project?**

- The Genome India Project, a collaboration of 20 institutions including the Indian Institute of Science and some IITs, will enable new efficiencies in medicine, agriculture and the life sciences.
- Its aim is to ultimately build a grid of the Indian “reference genome”, to fully understand the type and nature of diseases and traits that comprise the diverse Indian population.
- The mega project hopes to form a grid after collecting 10,000 samples in the first phase from across India, to arrive at a representative Indian genome.

**About Jawaharlal Nehru Tropical Botanic Garden and Research Institute:**

- KSCSTE-Jawaharlal Nehru Tropical Botanic Garden and Research Institute (KSCSTE - JNTBGRI) was found in 1979 with the objective of establishing a Conservatory Botanic Garden of tropical plant resources in general and of the country and the Kerala state in particular.
- It is established in Trivandrum.
- It also undertakes research programmes for the sustainable utilization of the resources. The idea of establishing the institute was conceived soon after the first United Nations Conference on human Environment, held in Stockholm in 1972 by the Founder Director, the late Professor A. Abraham and its became his commitment to conserve the waning tropical plant species of India. Consequently, the institute was established as an autonomous R & D organization by the Government of Kerala in 1979.
- KSCSTE - JNTBGRI is the only organization in India, which maintains a 300 acre conservatory garden for the wild tropical plant genetic resources of the country, besides a well integrated multidisciplinary R & D system dealing with conservation, management and sustainable utilization of tropical plant resources.
- During the past 30 years, it has flourished into one of the premier R & D organization in
Asia, devoted to conservation and sustainable utilization of tropical plant diversity. The institute is recognized as a ‘National Centre of Excellence in ex situ conservation and sustainable utilization of tropical plants.