

HUMAN GENETICS AND GENOME ANALYSIS

Prelims: Science & Technology- Biotechnology

Mains: GS-III- Awareness in the fields of IT, Space, Computers, Robotics, Nano-Technology, Bio-Technology and Issues Relating to Intellectual Property Rights.

- ✚ **Context:** The **Department of Biotechnology (DBT)** has initiated a programme called Human Genetics and Genome Analysis for reducing India's disease burden

About the Programme:

- ✚ Private DNA testing laboratories offering recreational genetics tests are already burgeoning in India.
- ✚ Now, the **department of biotechnology (DBT)** has initiated a programme called **human genetics and genome analysis** in which the country's genetic resource is being utilized to develop baseline data initially on various ethnic groups for disease susceptibility.
- ✚ The focus is on improving human health by promoting the development and dissemination of genomic methodologies and tools for prediction and prevention of human disease, and for therapeutic intervention.
- ✚ The aim is to improve disease management through lifestyle modulation, improvement in public health, reduction of disease burden, and lowering of treatment cost with more genetic laboratories and trained personnel in the area.

About Recreational Genetics:

- ✚ Recreational genetics is a term used to describe personal genetics tests which can be used to determine a person's genetic make-up.
- ✚ The information from such a test can be used to unearth details about ancestry and inherited traits, among other things.
- ✚ Recreational genetics may also be called recreational DNA testing.
- ✚ Genetic testing can reveal how one's genes behave and respond, personal genetic information can provide data that can help people make more informed health-related decisions about their lifestyle, goals, dietary habits, fitness, nutrition and weight management
- ✚ While recreational genetic tests are common in the US and several European countries, in India the genetic testing market is still at a nascent stage.