Ravindra's IAS

Science & Technology

(for prelims)

UPSC & STATE PSC'S

Ravindra's IAS

Content

SCIENCE & TECHNOLOGY (3 TO 86 PAGES)

- Science & Technology - Introduction
- Role of Science & Technology in Today's Life
- Role of Science & Technology In India
- India: Development of Science & Technology
- Information Technology
- Elements: Information Technology
- Cyber Crime & Cyber Security
- E-Infrastructure in India
- Artificial Intelligence
- Communication Technology
- Space Science & Technology
- Biotechnology
- Nanotechnology
- Nuclear Technology
- India Defence Technology

SCIENCE & TECHNOLOGY- INTRODUCTION OTHER:

- The evolution of science is like a boon to the world, as human beings come to know a lot about the world they are living in including the activities they indulge into. Fur- thermore, the development of technology along with the advancement in Science helps to bring in a revolution in various fields such as medicine, agriculture, education, information and technology, and many more.

- In the present world, if we think of any sort of development, then the presence of science and technology cannot be ignored.

What is Science?

- Science fundamentally is the systematic study of the structure and behavior of the natural and physical world through observations and experiments.

- Study of science evolved with the civilization of human beings. What is Technology?

- Technology (which is basically derived from the Greek word *'technologia'*) is an art, skill or ability, which is used to create and develop products and acquire knowledge.

- Scientists used their knowledge to develop technology and then used technology to develop Science; so, because of this reason science and technology are an integrated term in today's world.

- Science as a direct source of new technological ideas

- For example, innovation and development medical instruments; nuclear technology, radar system, etc.

Science as a source of engineering

- Most of the technical knowledge used in the designing and development of tools and techniques is actually an outcome of 'engineering science'.

- Science has also helped in the development of human skills. This is one of the fundamental contributions of Science.

Contribution of Technology to Science

- Consider the following points to understand the contribution of Technology to Science. Technology as a source of scientific challenges

- The development in the field of technology paves way for research and development in the field of Science. For example, space science is one of them. Technological development likewise indirectly stimulates basic research in the field of science.

Instrumentation and measurement techniques

- Development of advanced instruments facilitated scientists to measure the distance between sun and earth, the intensity of sun's rays, the revolution of celestial bodies, internal problems of human beings, life of a bridge, etc.