

Indian Science and Technology

VAC-11

Syllabus

Unit-I.

Science and Technology- The Beginning

1. Development in different branches of Science in Ancient India: Astronomy, Mathematics, Engineering and Medicine.
2. Developments in metallurgy: Use of Copper, Bronze and Iron in Ancient India.
3. Development of Geography: Geography in Ancient Indian Literature.

Unit-II

Developments in Science and Technology in Medieval India

1. Scientific and Technological Developments in Medieval India; Influence of the Islamic world and Europe; The role of *maktabs*, *madrasas* and *karkhanas* set up.
2. Developments in the fields of Mathematics, Chemistry, Astronomy and Medicine.
3. Innovations in the field of agriculture - new crops introduced new techniques of irrigation etc.

Unit-III.

Developments in Science and Technology in Colonial India

1. Early European Scientists in Colonial India- Surveyors, Botanists, Doctors, under the Company's Service.
2. Indian Response to new Scientific Knowledge, Science and Technology in Modern India:
3. Development of research organizations like CSIR and DRDO; Establishment of Atomic Energy Commission; Launching of the space satellites.

Unit-IV.

Prominent scientist of India since beginning and their achievement

1. Mathematics and Astronomy: Baudhayan, Aryabhata, Brahmgupta, Bhaskaracharya, Varahamihira, Nagarjuna.
2. Medical Science of Ancient India (Ayurveda & Yoga): Susruta, Charak, Yoga & Patanjali.
3. Scientists of Modern India: Srinivas Ramanujan, C.V. Raman, Jagdish Chandra Bose, Homi Jehangir Bhabha and Dr. Vikram Sarabhai.