

SEMESTER-III (Pool-B)

COURSE NAME : ANCIENT TO MODERN PHYSICS

(CHOI-B49)

Number of Credit: - 02

Maximum marks: 50

Course title: Ancient to Modern Physics

Unit I – Indian contribution to Science (From Ancient to Modern): Astronomy, Vedic cognitive science, Aryabhata, Varahamihira, Brahmagupta, Bhaskara,

Unit II – Contribution to Weather Science in Ancient India, Principles of forecasting rainfall in Ancient India, Scientific assessment of the rules of rainfall, Forecasting practised in Ancient India.

Unit-III – Development of research organisation like Council of Industrial and Scientific Research (CSIR), Defence Research and Development Organisation (DRDO), Indian Space Research Organisation (ISRO).

Unit IV – Scientist's contribution to Modern India: Jagdish Chandra Basu, C.V. Raman, S.N. Bose, Maghnand Saha, P.C. Ray, S.S. Bhatnagar, H.J. Bhabha, Vikram Sarabhai, A.P.J. Abdul Kalam.

Unit V – Scientific missions of Independent India: Nuclear test 1974 and 1998, Chandrayaan mission, Mangal mission, different other space mission, etc.

Text/Reference Books:

1. On Astronomy in Ancient India, S.C. Kak, Indian Journal of History of Science 22 (1987) 205-221; On the chronology of Ancient India, S.C. Kak, Indian Journal of History of Science 22 (1987) 222-234.
2. Contribution to Weather Science in Ancient India, A.S. Ramanathan, Indian Journal of History of Science 21 (1986) 7-14; Indian Journal of History of Science 21 (1986) 15-21;
3. Contribution to Weather Science in Ancient India, VI-Principles of forecasting rainfall in Ancient India (short and medium range), Indian Journal of History of Science 22 (1987) 191-197; Indian Journal of History of Science 22 (1987) 198-204;
4. <https://www.csir.res.in>.
5. <https://drdo.gov.in>.
6. <https://www.isro.gov.in>