

FIRST YEAR SCIENCE - 2018-19

ENVIRONMENTAL SCIENCES

PAPER-I

BASIC CONCEPTS OF ECOLOGY & EVOLUTION

Duration : 3 Hrs

M.M.: 50

UNIT-I

Fundamental principles of environment; Man's attitude towards environment, Rise of agriculture, Domestication of animals, Ancient civilization and environment.

Ecology : Definition , aim, scope and branches; Historical background of ecology : Ecology in Indian classics and ancient Greek and Roman Literature, growth of ecology from 12th to 20th Century; Growth of plant as well as Animal Ecology in India.

UNIT-II

Natural processes – Primeval atmosphere and origin of life; Structure and composition of present day atmosphere; atmosphere and earth radiation balance; Hydrosphere: atmospheric humidity and precipitation, hydrological cycle. Lithosphere – soil formation, soil texture, soil profile, soil classification.

UNIT- III

Energy - Brief idea of Biogas, biomass, solar energy, coal, hydro – power and nuclear power. Environmental impacts of energy use. Energy conservation.

UNIT- IV

Evolution and Ecology : Evolution – evidences and theories of organic evolution. Darwinism & Lamarkism. Adaptation, co-evolution, speciation and selection. Evolution of Man.

UNIT - V

Plant nomenclature : Plant kingdom – classification, general characters and examples of different groups.

Animal kingdom – Classification and general characters upto class level with examples.