M.Sc. Environmental Science
Semester-IV
ENERGY AND ENVIRONMENT

UNIT-I

Ecology, Structure and functioning of natural ecosystems: Ecology, ecosystems and their structure, functioning and dynamics; Energy flow in ecosystems; biogeochemical cycles and climate; Population and communities.

UNIT-II

Environmental Pollution: Definition, Cause, effects and control measures of - Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution and Nuclear hazards, Solid waste Management, Disaster management Role of an individual in prevention of pollution, Pollution case studies.

UNIT-III

Energy technologies and environment: Introduction to energy sources: How energy is produced and consumed, and ways in which it impacts society and the environment. Types of energy resources as Renewable and Non-renewable energy, fossil fuels and hydropower, nuclear, solar, and wind energy, and issues related to energy conservation in everyday life. Effects of waste products associated with energy generation and usage and energy conservation measures.

UNIT-IV

Social Issues and the Environment: Climate change, global warming, acid rain, ozone layer depletion, Wasteland reclamation, Consumerism and waste products, Environment Protection Act, Air (Prevention and Control of Pollution) Act, Water (Prevention and control of Pollution) Act, Wildlife

Protection Act, Forest Conservation Act, Issues involved in enforcement of environmental legislation.