

## ENVIRONMENTAL STUDIES

Sem	Subject code	Category	Lecture		Theory		Credit
			Total Hrs	Hrs per week	Total Hrs	Hrs per week	
I		EVS	30	2	30	2	2

### Course Objective:

The Objective of this paper is to acquaint the students to know the importance of the environment and to stimulate each individual to prevent the Natural resources.

### UNIT - I The Multidisciplinary nature of environmental studies 2 Hours

Definition, Scope and importance – Need for public awareness.

### UNIT - II Natural resources: Renewable and Non-renewable resources 7 Hours

Natural resources and associated problems.

- a) Forest resources: Use and over – exploitation, deforestation, case studies, Timber extraction, mining, dams and their effects on forests and tribal people.
  - b) Water resources: Use and over – utilization of surface and ground water, floods, drought, conflicts over water, dams – benefits and problems.
  - c) Mineral resources: Use and exploitation, environmental effects of extraction and using mineral resources, case studies.
  - d) Food resources: World food problems, changes, caused by agriculture and overgrazing, effects of modern agriculture, fertilizer – pesticide problems, water logging, salinity, case studies.
  - e) Energy resources: Growing energy needs, renewable and nonrenewable energy sources, use of alternate energy sources. Case studies.
  - f) Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.
- Role of an individual in conservation of natural resources.
  - Equitable use of resources for sustainable lifestyles.

### **UNIT - III Ecosystems 7 Hours**

- Concept of an ecosystem
- Structure and function of an ecosystem
- Producers, consumers and decomposers
- Energy flow in the ecosystem
- Ecological succession
- Food chain, food webs and ecological pyramids
- Introduction, types, characteristics features, structure and function of the following ecosystem:-
  - a) Forest ecosystem
  - b) Grassland ecosystem
  - c) Desert ecosystem
  - d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

### **UNIT - IV Biodiversity and its conservation 7 Hours**

- Introduction – Definition: Genetics, species and ecosystem diversity.
- Biogeographical classification of India.
- Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values.
- Biodiversity at global, National and local levels.
- India as a mega – diversity
- Hot-spots of biodiversity
- Threats to biodiversity: habitat loss, poaching of wildlife, manwildlife conflicts.
- Endangered and endemic species of India.
- Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

### **UNIT - V Environmental pollution 7 Hours**

#### Definition

- a) Causes, effects and control measures of

- b) Air pollution
- c) Water pollution
- d) Soil pollution
- e) Marine pollution
- f) Noise pollution
- g) Thermal pollution
- h) Nuclear hazards
- Solid waste management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution.
- Pollution case studies.
- Disaster management: floods, earthquake, cyclone and landslides.

NB: Field visit is mandatory for Internal.