

EVS – ENVIRONMENTAL STUDIES

Credits : 2

Hours : 30

Objective : To impart knowledge about the environment and its importance.

UNIT I

The Multi disciplinary nature of environmental studies -Definition, scope and importance – Need for public awareness.

UNIT II

Natural Resources: Renewable and Non-Renewable resources:

- a) Forest resources: Uses 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, conflict over water, dams-benefits and problems.
- c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources. Case studies.
- d) Food resources: World Food problems, Changes caused by 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 life styles.

UNIT III

Ecosystems: Concept of an ecosystem – structure and function of an ecosystem – producers, consumers and decomposers – energy flow in the ecosystem- Ecological succession – food chains, food webs and ecological pyramids – Introduction, types, characteristics features, structure and function of the following of the eco system – forest ecosystem – grassland ecosystem – Desert eco system – aquatic eco systems(pond, streams, lakes, river, oceans, estuaries)

UNIT IV

Biodiversity and its conservation: Introduction – Definition : genetic, species and ecosystem diversity – Biogeographically classification of India – value of the biodiversity – consumptive Use, productive use, social, ethical, aesthetic and option values – Biodiversity at global, National and local levels – India as a mega – diversity nation – Hotspots of biodiversity – Threats to biodiversity: habitat loss, poaching of wild life conflicts – Endangered and endemic species of India – Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

UNIT V

Environmental Pollution: Definition - Causes, effects and control measures of Air pollution – Water pollution – Soil pollution – Marine pollution – Noise pollution – Thermal pollution – Nuclear hazards: Soil waste management: Causes, effects and control measures of urban and industrial wastes – Role of an individual wastes – Role of an individual in prevention of pollution – Pollution case studies – Disaster management: floods, earth quake cyclone and landslides.

UNIT VI

Social issues and the Environment: From unsustainable to sustainable development – Urban problems related to energy – Water conservation, rain water harvesting – Watershed management – Resettlement and rehabilitation of people, its problems and concerns case studies – Environmental ethics : issues and possible solutions – Climate change, global warming, acid rain, ozone layer Happy sankranti/pongal <http://crackspider.net/>

Case studies – Wasteland reclamation – Consumerism and waste products. Environment protection act – Air (prevention and control of pollution) Act – Wildlife protection act – Forest conservation act – Issues involved in enforcement of environmental legislation – public awareness.

UNIT VII

Human population and the Environment: Population growth, variation among nations- Population environmental assets – river/forest/grassland/joi;/mountain- visit to a local polluted site- Urban / Rural/Industry/Agricultural – Study of common plants, insects, birds- Study of simple eco systems – ponds, river, hill slopes etc.

BOOKS RECOMMENDED:

1. Hanley, N., Shogern and B.White(1997) Environmental Economics in Theory and practice, Macmillian
2. Kolstad, C.D(1999), Turner(1999), Environmental Economics, Oxford University Press, New Delhi.
3. Sankar, U. (Ed)(2001), Environmental Economics, Oxford University Press, New Delhi.