

OBJECTIVES:

1. To enable the students to acquire a basic understanding of the Energy Resources of the Environment and associated problems.
2. To create awareness about the importance of Biodiversity
3. To have a clear understanding of Environmental concerns and need to follow sustainable development practices.

COURSE:

UNIT – I: Environment & Natural Resources

1. The Multidisciplinary nature of Environmental studies Definition, Scope and Importance.
2. Natural Resources.
 - a. Forest Resources: Use and over-exploitation, deforestation, causes and effects of deforestation; Conservation of forests.
 - b. Water Resources: Use and over-utilization; conservation of water, Rain water harvesting.
 - c. Mineral Resources: Use and over-exploitation, impact of mining on environment.
 - d. Land Resources: Land as a source; Land degradation; Soil erosion; soil conservation.
 - e. Food Resources: World food problems.
 - f. Energy Resources: Renewable and non-renewable energy sources, use of alternate energy sources; citizen's role in conservation; Sustainable life styles.

UNIT – II: Ecosystem:

- a) Concept of an Ecosystem
- b) Structure and function of an ecosystem
- c) Producers, Consumers & Decomposers
- d) Energy flow in the ecosystem
- e) Food chains, food webs & Ecological Pyramids
- f) Types of Ecosystem (Brief Account)

UNIT – III: Biodiversity & its Conservation:

- a) Introduction – Definition: Genetic, Species and Ecosystem Diversity.
- b) Value of Biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values.
- c) Biodiversity at global & National levels.
- d) Threats to biodiversity: Habitat loss, poaching of wildlife.
- e) Endangered and endemic species of India
- f) Conservation of biodiversity:
In-situ and Ex-situ conservation of biodiversity .

UNIT – IV : Environmental Pollution :

Definition, Causes, effects and control measures of :

- a. Air Pollution
 - b. Water Pollution
 - c. Soil Pollution
 - d. Marine Pollution
 - e. Noise Pollution
 - f. Thermal Pollution
 - g. Nuclear hazards.
- Roll of an individual in prevention of pollution.

UNIT - V : Social Issues and the Environment :

- a. Sustainable development
- b. Environmental Ethics : Issue and possible solutions
- c. Environment protection Act.
- d. Population Explosion – Family Welfare Programme
- e. Environment and human health
- f. Human Rights.

REFERENCE BOOKS:

1. Principles of Environmental Science – Inquiry and applications. By William P.Cumingham – Mary Ann Cumingham.
Tata McGraw – Hill Publishing Co.Ltd, New Delhi.
2. Ecology & Environment - by P.D.Sharma Rastogi Publications, Meerut.
3. Environmental Science Education by A. Paneer Selvam and Mohana Ramakrishnan sterling publishers private Ltd., New Delhi.
4. Environmental studies – Anil kumar De & Amal Kumar De New Age International (P)Ltd. Publishers, New Delhi.
5. Glimpses of Environment – by Dr.K.V.S.G.Muralikrishna Environmental Protection society, Kakinada.
6. Environmental Concept – by Dr. Ajit Kumar Bera New Central Book Agency(P) Ltd. Calcutta .
7. Environmental Economics – by Karpagam, M.Sterling Publishers Pvt. Ltd., New Delhi.
8. Environmental Management – Vol I & II by R.K.Rai, A.C.Mahapatra & N.P.Goel, Rawat Publications, Jaipur.

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