

**FOUNDATION ENVIRONMENTAL STUDIES FOR BA/ B.COM./ B.SC.
(COMPULSORY IN SEMESTER III)**

Semester III

FES 300: Environmental Studies

Paper Code : FES 300

Contact Hours : 2.00

Max. Marks :50.00

Min Marks :18.00

Paper will have only 100 multiple choice questions to be evaluated on O.M.R. sheet. These O.M.R. sheets will be evaluated by authorized computer firm of the college examination department.

Objective: In spite of the deteriorating status of the environment, study of environment has so far not received adequate attention in our academic programmes. This programme aims at giving students a clear understanding of environmental concerns and to follow sustainable development practices. This will definitely help students develop an interdisciplinary global understanding of ecological and environmental problems

Unit I

(No. of Hrs :6)

- Definition, Scope and Importance of Environment
- Scope of Environmental studies and its Applications
- Importance with respect to the society
- Relationship of Environmental Studies with other subjects(Multidisciplinary nature of Environment)

Unit II

(No. of Hrs :6)

- Ecosystem: structure and function
- Concept of Ecosystem
- Biotic and abiotic components of Ecosystem
- Food chain and Food web
- Ecological Pyramids and productivity
- Energy Flow
- Biogeochemical cycle

Unit III

(No. of Hrs :7)

- Environmental pollution
- Water pollution: Definition, Sources and Effects
- Air Pollution- Definition, Sources and Effects
- Noise Pollution-Definition, Sources and Effects

Unit IV

(No. of Hrs :7)

- Energy and Environment
- Solar Energy and its uses
- Wind Energy
- Tidal Energy
- Hydro Power
- Bio energy

Unit V

(No. of Hrs: 6)

- Biodiversity and its Conservation
- Introduction: Definition, genetics, species and ecosystem diversity.
- Values of Biodiversity: Consumptive use, productive use, social esthetic and option values.
- Threats to Biodiversity –Habitat loss, poaching of wild life.

Unit VI

(No. of Hrs: 6)

- Natural Resources
- Renewable and non renewable
- Natural resources and associated problems.
- Forest Resources- Use and over-exploitation, deforestation and its effects
- Water Resources-Land degradation; Soil erosion and desertification.
- Mineral resources: Use and exploitation, environmental effects of extracting mineral resources

Unit VII

(No. of Hrs: 7)

- Global Environmental Issues
- Acid Rain
- Ozone Depletion
- Global Warming
- Marine Issues

Unit VIII

(No. of Hrs: 7)

- Environmental Movements Chipko Movement,
- Appikko Movement ,
- Narmada bachao aandolan,
- Human Population and Environment,
- Population growth and explosion,
- Impact of urbanization, industrialization and crop production,
- From unsustainable to Sustainable development,
- Water Conservation,
- Rainwater harvesting,
- Watershed management
- Water Borne Diseases
- Social Environment
- HIV

ESSENTIAL READINGS:

- Bharucha Erach, The Biodiversity of India, Mapin Publishing Pvt. Ltd., Ahmedabad –380 013, India,
- Singh, R.B., Thakur, D.K. and Chauhan, J.P.S., RBD publications, Jaipur
- Townsend C., Harper J, and Michael Begon, Essentials of Ecology, Blackwell Science
- Odum, E.P. 1971. Fundamentals of Ecology. W.B. Saunders Co. USA.

REFERENCES:

- Brunner R.C., 1989, Hazardous Waste Incineration, McGraw Hill Inc. 480p
- Clark R.S., Marine Pollution, Clarendon Press Oxford
- Cunningham, W.P. Cooper, T.H. Gorhani, E & Hepworth, M.T. 2001, Environmental Encyclopedia, Jaico Publ. House, Mumbai
- De A.K. Environmental, Chemistry, Wiley Eastern Ltd.
- Gleick, H.P. 1993. Water in Crisis, Pacific Institute for Studies in Dev., Environment & Security. Stockholm Env. Institute Oxford Univ. Press.
- Heywood, V.H & Weston, R.T. 1995. Global Biodiversity Assessment. Cambridge Univ. Press
- Jadhav, H & Bhosale, V.M. 1995. Environmental Protection and Laws. Himalaya Pub. House, Delhi
- Mckinney, M.L. & School, R.M. 1996. Environmental Science Systems & Solutions, Web enhanced edition.
- Mhaskar A.K., Matter Hazardous, Techno-Science Publication
- Miller T.G. Jr Environmental Science , Wadsworth Publishing Co
- Rao M N. & Datta, A.K. 1987. Waste Water treatment. Oxford & IBH Publ. Co. Pvt. Ltd.
- Sharma B.K., 2001. Environmental Chemistry. Geol Publ. House, Meerut
- Wanger K.D., 1998 Environmental Management. W.B. Saunders Co. Philadelphia, USA