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

Semester III

FES 300: Environmental Studies-I

Paper Code **:** FES 300
Contact Hours **:** 2.00
Max. Marks **:**100.00 **Min Marks** :36.00

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

Semester IV

FES 400: Environmental Studies- II

Paper Code **:** FES 400
Max. Marks **:**100.00 **Min Marks** :36.00

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: The course aims to provide students with knowledge about natural and disrupted systems in the natural world, and to stimulate them to develop their ability to apply their knowledge and adopt a standpoint on environmental issues.

Unit I **(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 II **(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; Soli erosion and desertification.
- Mineral resources: Use and exploitation, environmental effects of extracting mineral resources

Unit III **(No. of Hrs: 7)**

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

Unit IV **(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:

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- Clark R.S., Marine Pollution, Clanderson 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 & Waston, R.T. 1995. Global Biodiversity Assessment. CambridgeUniv. 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