

**Environmental studies**  
**(Common Paper for Under Graduate Students-B.A, B.Sc, B.Com,**  
**B.B.A, B.B.M)**

**Marks:100**

**Credits :04**

**56hrs**

**Unit 1: Introduction to Environmental Studies:** Definition, Scope and Importance, Need for Public Awareness, Institutions in Environment, People in Environment. Natural Resources-Renewable and Non-Renewable Resources, Natural Resources and associated Problems, Renewable Resources, Role of an Individual in the Conservation of Natural Resources, Equitable use of Resources for Sustainable Lifestyles. 10hrs

**Unit 2 : Biodiversity and its conservation :**Introduction — Definition : genetic, 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 nation Hot-spots of biodiversity. •Threats to biodiversity : habitat loss, poaching of wildlife, man-wildlife conflicts. •Endangered and endemic species of India Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity. 10hrs

**Unit 3: Pollution:** Definition, Air pollution, The History of Air Pollution, Structure of the Atmosphere, Types and Sources of Air Pollution, Control Measures of Air Pollution, Water Pollution, Causes of Water Pollution, The State of India Rivers, Control Measures for Water Pollution, Soil Pollution, Causes of Soil Degradation, Marine Pollution, Pollution Due to Organic Waste, Effects of Marine Pollution, Noise Pollution, Effects of Noise Pollution, Noise Control Techniques, Thermal Pollution, Effects, Control Measures, Nuclear Hazards, Solid Waste Management: Causes, Effects and Control Measures of Urban and Industrial Waste, Characteristics of Municipal Solid Waste, Vermi composting, Hazardous Waste. Role of an Individual in the prevention of Pollution, Pollution Case Studies, Disaster Management: Foods, Earthquakes, Cyclones, Landslides, From Management to Mitigation of Disaster. 12hrs

**Unit 4: Social Issues and the Environment:** From Unsustainable to Sustainable Development, Urban Problems Related Energy, Water Conservation, Rain Water

Harvesting, Watershed Management, Water Conservation, Rain Water Harvesting, Watershed Management, Resettlement and Rehabilitation of People: Its problems and concerns, Environmental Ethics: Issues and Possible Solutions, Resource Consumption Patterns and need for equitable Utilisation, The need for Gender Equity, Preserving Resources for Future Generations, The Rights of Animals, The Ethical Basis of Environment Education and Awareness, The Conservation of Ethics and Traditional Value Systems of India, Climate Change, Global Warming, Acid Rain, Ozone Layer Depletion, Nuclear, Accidents and Holocaust, Wasteland Reclamation, Consumerism and Waste Products, Reduce, Reuse, Recycle, Role of an Individual, The Environment (Protection) Act, The Air (Prevention Control of Pollution) Act, The Water (Prevention Control of Pollution) Act, The Wildlife Protection Act, Forest Conservation Act, Issues Involved in Enforcement of Environmental legislation, Environment Impact Assessment (EIA), Citizens Actions and Action Groups, Public Awareness, Using an Environmental Calendar of Activities. 14hrs

**Unit 5: Human Population and the Environment:** Population Growth, Variation Among Nations, Global Population Growth, Population Explosion: Family Welfare Programme, Methods of Sterilisation, Urbanisation, Environment and Human Health, Environmental Health, Climate and Health, Infectious Diseases, Water- Related Diseases, Risks Due to Chemicals in Food, Cancer and the Environment, Human Rights, Value Education, Environmental Values, Valuing Nature, Valuing Cultures, Social Justice, Human Heritage, Equitable Use of Resources, Common Property Resources, Ecological Degradation, HIV/AIDS, Woman and Child Welfare, Role of Information Technology in Environment and Human Health. 10hr

## REFERENCES

1. Agarwal, K.C. (2001) Environmental Biology, Nidi Publ. Ltd. Bikaner.
2. Bharucha Erach (2003), The Biodiversity of India, Mapin Publishing Pvt. Ltd., Ahmedabad — 380 013, India, Email: mapin@icenet.net ( R )
3. Gadgil, Madhav (2001) Ecological Journeys, The Science and Politics of conservation in India. Permanent Black.
4. Cunningham, W.P. Cooper, T.H. Gorhani, E & Hepworth, M.T. (2001). Environmental Encyclopedia, Jaico Publ. House. Mumbai, 1196p
5. De A.K., Environmental Chemistry, Wiley Eastern Ltd.
6. Down to Earth, Centre for Science and Environment ( R )
7. Hawkins R.E, Encyclopedia of Indian Natural History, Bombay Natural History Society , Bombay (R)

8. Heywood, V.I. & Watson, R.I. (1995). Global Biodiversity Assessment. Cambridge Univ. Press 1140p.
9. Jadhav, V. & Bhosale, V.M. (1995). Environmental Protection and Laws. Himalaya Pub. House, Delhi 284 p.
10. McKinney M.L. & Schoch. R.M. (1996). Environmental Science systems & Solutions. Web enhanced edition. 639p.
11. Shukla, P.R., Subodh K Sharma, Ravindranath, N H, Garg, Amit & Bhattacharya, Sumana (2003) Climate Change and India: Vulnerability Assessment and Adaptation, Universities Press Pvt Ltd.
12. Miller T.G (Jr) (1997)..., Environmental Science, Wadsworth Publishing Co. (TB)
13. Odum, E.P. (1971). Fundamentals of Ecology. W.B. Saunders

### **Examination Question Paper Pattern:**

The structure of the question paper being: Part-A, Short answer pattern with choice -30 marks.

Part-B, Essay type with inbuilt choice 40 marks