## SEMESTER - II

| EeBranch: BCA | Semester-II |
|---|---|
| Subject Code: 2101 | Lecture: 02<br>Credit: 02 |
| Course Opted | Ability Enhancement Compulsory Course – 2 |
| Subject Title | ENVIRONMENTAL SCIENCE AND RTI |

**Course Objectives:**

- To help the students to acquire knowledge of pollution and environmental degradation.
- To help students acquire knowledge of the environment beyond the immediate environment including distant environment.
- To help students acquire a set of values for environmental protection.
- To provide students with an opportunity to be actively involved at all levels in environmental decision making.
- Describe the benefits of RTI.
- Identify the legal and historical foundations for RTI

**Course Outcomes:**
**Students will learn to**

- Appreciate concepts and methods from ecological and physical sciences and their application in environmental problem solving.
- Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems.
- Reflect critically about their roles and identities as citizens, consumers and environmental actors in a complex, interconnected world.
- Understand the practical applicability of the Right to Information Act, 2005

| Module | Sr. No. | Topic and Details | No. of Lectures Assigned | Marks Weightage |
|---|---|---|---|---|
| UNIT- I | 1. | **The Multidisciplinary nature of Environmental Studies**<br>Definition, scope and importance, Need for public awareness. | 2 | 4 |
| UNIT- II | 2 | **Natural Resources**<br>Renewable and non-renewable resources, Natural resources and associated problems.<br>a) Forest Resources: Use and over-exploitation, deforestation. Timber extraction, mining, dams and their effects on forests and tribal people.<br>b) Water resources: Use and over-utilization of surface and groundwater, floods, drought, conflicts over water, Dams: benefits and problems.<br>c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.<br>d) Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, waterlogging, and salinity.<br>e) Energy resources: Growing energy needs, renewable | 8 | 16 |

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| | | and non-renewable energy sources, useof alternate energy sources.<br>f) Land resources: Land as a resources ,land degradation ,man-induced landslides, soil erosion and desertification.<br>Role of an individual in conservation of natural resources.<br>Equitable use of resources for sustainable lifestyles. | | |
| **UNIT - III** | 3 | **Ecosystem**<br>Concept of an ecosystem, Structure and function of an ecosystem, Energy flow in the ecosystem, Food chains, food webs and ecological pyramids.<br>Introduction, types, characteristics features, structure and function of the following ecosystem: Forest ecosystem Grassland ecosystem, Desert ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries) | 6 | 12 |
| **UNIT-IV** | 4 | **Environmental Pollution**<br>Definition, Causes, effects and control measures of: Air pollution, Water pollution, Soil pollution, Noise pollution, Thermal pollution, .Nuclear Hazards.<br>Solid waste Management: Causes, effects and control measures of urban and industrial wastes– biodegradable and non -biodegradable wastes.<br>Role of an individual in prevention of pollution. | 6 | 12 |
| | 5 | **Right to Information Act:** Introduction, Right to information and obligations of public authorities, central information commission, state information commission and their duties, powers and functions of information commissions, appeals and penalties, Miscellaneous. | 3 | 6 |
| | | **TOTAL** | **25** | **50** |

**Text Book:**


1. P. Sharma 2013.Environmental Studies. University Science Press, New Delhi.


**Reference Books:**


1. Rajagopalan, R. 2018 Environmental Studies- From Crisis To Cure ,Oxford University Press, New Delhi.
2. Agarwal, K.C. 2001 Environmental Biology, Nidipubl. Ltd. Bikaner.
3. Bharucha Erach,Textbook onEnvironmentalStudies, UGC,NewDelhi
4. BoruaP.K., J.N. Sarma and others, A Textbook on Environmental Studies, Banlata, Dibrugarh
5. BrunnerR.C., 1989 Hazardous Waste Incineration, McGrawHillInc. 480p.
6. Clark R.S., Marine Pollution, Clanderson Press Oxford(TB).
7. Cunningham, W.P. Cooper, T.H. Gorhani,E &Hepworth, M.T. 2001, Environmental Encyclopedia, Jacio Publ. House, Mumbai, 1196p.
8. JoshiP.C. andNamitaJoshi, AText book ofEcologyand Environment, HimalayaPublishing
9. KaushikAnubhaandC.P.Kaushik ,Perspective in EnvironmentalStudies, New Age International
10. The Right to Information Act, 2005 ,SudhirNaib, Oxford University Press; 2011 edition