

BCA101 ENVIRONMENT AND ECOLOGY

Teaching Scheme

Lectures: 1 hr./Week

Tutorials: 1 hr./Week

Credits: 2

Examination Scheme

Class Test -6 Marks

Teachers Assessment – 3 Marks

Attendance – 6 Marks

End Semester Exam – 35 Marks

Prerequisite: - General knowledge of Ecology and Environment Biotechnology

Course Objectives:

1. To give an overview of Environment and factors associated with it.
2. To give basic knowledge of Effects of human activities on environment-Agriculture, Housing, Industry, Mining and Transportation activities
3. To have an overview of Natural Resources- Water Resources- Availability and Quality aspects.
4. To explain about the Environmental Pollution, their types and their effects.
5. To explain the Current Environmental Issues of Importance
6. To explain the Human Health & Hygiene: Population and birth control, sexually transmitted diseases.

Detailed Syllabus

UNIT-1

Definition, Scope & Importance, Need For Public Awareness- Environment definition, Eco system, Balanced ecosystem, Human activities – Food, Shelter, Economic and social Security. Effects of human activities on environment-Agriculture, Housing, Industry, Mining and Transportation activities. Basics of Environmental Impact Assessment.

UNIT-2

Natural Resources- Water Resources- Availability and Quality aspects. Water borne diseases, Water induced diseases, Fluoride problem in drinking water. Mineral Resources, Forest Wealth, Material cycles- Carbon, Nitrogen and Sulphur Cycles. Energy – Different types of energy, Electro-magnetic radiation. Conventional and Non-Conventional sources – Hydro Electric, Fossil Fuel based, Nuclear, Solar, Biomass and Bio-gas. Hydrogen as an alternative future source of Energy.

UNIT-3

Environmental Pollution and their effects. Water pollution, Land pollution. Noise pollution, Public Health aspects, Air Pollution, Solid waste management. Current Environmental Issues of Importance: Population Growth, Climate Change and Global warming- Effects, Urbanization, Automobile pollution. Acid Rain, Ozone Layer depletion, Animal Husbandry. Environmental Protection- Role of Government, Legal aspects, Initiatives by Non-governmental Organizations (NGO), Environmental Education, Women Education.

Text and Reference Books

1. Benny Joseph – “Environmental Studies” –Tata McgrawHill-2005
2. Dr. D.L. Manjunath, “Environmental Studies” –Pearson Education-2006.
3. R. Rajagopalan – “Environmental studies” –Oxford Publication – 2005.
4. M. Anji Reddy – “Text book of Environmental Science & Technology” –BS Publication.

Course Outcomes:

After completing the course, students will be able to:

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| 1. Identify the factors governing the environment and their impact | | |
| 2. Current Environmental Issues and solution to curb it. | | |
| 3. Initiatives taken by Government and Non-governmental Organizations (NGO) | | |
| 4. Judicious use of Conventional and Non-Conventional sources | | |
| 5. Legal aspects pertaining to protection of environment. | | |