

COMMON PAPER – ENVIRONMENTAL STUDIES – 18UENS11

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I SEMESTER			
EVS	ENVIRONMENTAL STUDIES		18UENS11
Hrs/ Week: 2	Hrs/ Sem: 30	Hrs/ UNIT: 6	Credit : 2

Objectives:

- Creating the awareness about environmental problems among people.
- Imparting basic knowledge about the environment and its allied problems.
- Developing an attitude of concern for the environment.
- Motivating public to participate in environment protection and environment improvement.
- Acquiring skills to help the concerned individuals in identifying and solving environmental problems.
- Striving to attain harmony with Nature.

UNIT - I: Nature of Environmental Studies

Goals, Objectives and guiding principles of environmental studies. Towards sustainable development - Environmental segments– Atmosphere, Hydrosphere, Lithosphere, Biosphere – definition. Pollution episodes -- Hiroshima – Nagasaki, - Bhopal gas Tragedy, Fukushima. Stone leprosy in Taj Mahal

UNIT - II: Natural Resources

Renewable and Non Renewable resources - classification.

- Forest resources: Use and over - exploitation, Aforestation and deforestation.
- Water resources: Use and over - utilization and conservation of surface and ground water - Rain harvesting.
- Marine Resources: Fisheries and Coral reefs.
- Mineral resources: Use and exploitation - environmental impacts of extracting and using mineral resources.
- Food resources: Effects of modern agriculture fertilizers - pesticide problem.
- Energy resources: Growing energy needs - use of alternate energy source - Solar cells & wind mills.
- Land resources: Land degradation

UNIT - III: Ecosystem

- Concept of Eco-systems - Tropic level, food chains, food web and Ecological pyramids, Living conditions on other planets (Brief account).
Types, structure & Functions of the following:
 - a) Aquatic ecosystem
 - b) Grassland ecosystem

c) Forest ecosystem

d) Desert ecosystem

UNIT - IV: Biodiversity & Its Conservation

Introduction - Definition: ecosystem diversity, species diversity and Genetic diversity.
Hot spots of biodiversity - Western Ghats, Eastern Himalayas and Gulf of Mannar. Threats to biodiversity - Habitat Loss, Poaching of wildlife and Man - wildlife conflicts.

Conservation of biodiversity: *In-situ* and *Ex-situ*.

UNIT - V: Environmental Pollution

Sources, effects, prevention and control measures of the following.

a) Air pollution: Composition of clean air, Global warming, Ozone layer depletion.

b) Water Pollution: Fresh water and Marine water.

c) Noise Pollution

d) Soil pollution

Bio degradable and Non Bio degradable wastes; Environmental Acts

➤ Air (prevention & Control of Pollution) Act.

➤ Environmental Protection Act

➤ Water (Prevention & Control of pollution) Act

➤ Environmental movements - Green peace and Chipco movement.

➤ Role of Central & State pollution Control Boards.

REFERENCE BOOKS:

1. Basic of Environmental Science. Vijayalakhmi, Murugesan and Sukumaran - Manonmaniam Sundaranar University publications.

2. Environmental Studies. John de Brito, Victor, Narayanan and Patric Raja - published by St. Xavier's College, Palayamkottai, 2008.

3. Environmental Science and Biotechnology. A.G. Murugesan and C. Raja Kumar - MJP Publishers.

4. Fundamental of Environmental pollution - Krishnan Kannan - Chand & Company Ltd., New Delhi, 1997.

5. Environmental Studies. S. Muthiah, Ramalakshmi publications, Tirunelveli.

6. Environmental Studies. V.M. Selvaraj, Bavani Publications, Tirunelveli.