**17MC2101- ENVIRONMENTAL STUDIES**

**UNIT-I**

**INTRODUCTION**: Definition, Scope and Importance of Environmental studies, Environmental Components.

**UNIT-II**

**ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT:**

1. Land resources: Importance, Land degradation, Soil erosion and desertification, Effects of modern agriculture (fertilizer and pesticideproblems).
2. Forest Resources: Use and over-exploitation-Mining and Dams-their effects on forest and tribalpeople.
3. Water Resources: Use and over-utilization of surface and ground water, Floods and droughts, Rainwater harvesting, clouds seeding and watershedmanagement.
4. Energy resources: Energy needs - Renewable and non-renewable energy, need to use of alternate energy sources, Impact of energy use onenvironment.

**UNIT-III**

 **ECOSYSTEM**: Introduction, types, characteristics and functions of Ecosystems

**BIO-DIVERSITY AND ITS CONSERVATION**: Value of bio-diversity- consumptive and productive use, social, ethical, aesthetic and option values - Threats to biodiversity- conservation of biodiversity.

**UNIT-IV**

**ENVIRONMENTAL POLLUTION:** Causes, Effects and control measures of Air pollution, Water Pollution, Soil pollution, Marine Pollution, Noise pollution, Nature of Thermal pollution and nuclear hazards, Global warming, Acid rain, Ozone depletion.

**SOLID WASTE MANAGEMENT**: Composting, Vermiculture - Urban and industrial wastes, recycling and reuse,

**UNIT-V**

**ENVIRONMENTAL PROBLEMS IN INDIA:** Drinking water, Sanitation and public health -Effects of urbanization, Transportation, Industrialization on the quality of environment-Social Issues.

**ECONOMY AND ENVIRONMENT**: The economy and environment interaction, Sustainability, Environment Impact Assessment

**UNIT-VI**

**ENVIRONMENTAL ACTS:** Water (Prevention and control of pollution) Act-Air (Prevention and control of pollution) Act – Environment protection Act, Wildlife protection Act, Forest conservation Act.

**CASE STUDIES:** Silent valley project, Madhura Refinery and Taj Mahal, Tehri Dam, Kolleru Lake Aquaculture, Fluorosis in Andhra Pradesh.

 **FIELD WORK:** Visit to Local Area having river/Forest/grass land/hill/mountain to Document and Environmental assets.

**TEXT BOOKS:**

1. “Environmental science” by Anubha Kaushik and C.P.Kaushik.

2. “Environmental science and Engineering” by P.Anandan and R.K.Kumaravelan.

**REFERENCES:**

1. “Introduction to Environmental science” by Y.Anjaneyulu.

2. “Environmental studies” by Dr B.S.Chauhan.

3. “Environmental science” by M.Chandra sekhar