

## **Common Value-Added Courses (VAC-151)**

### **ENVIRONMENTAL STUDIES**

Total Marks- 100

End Semester Examination = 70

Internal Examination=30

Total Credits=3

#### **UNIT 1: Introduction to Environmental Studies: (12 lectures)**

Definition, scope and importance of environmental studies. Concept of ecosystem; Producers consumers and decomposers; Energy flow in an ecosystem; Food chain and food webs; Ecological pyramids; Ecological succession. Nutrient cycles (Carbon cycle and nitrogen cycle). Major ecosystems: Terrestrial (Forest) and Aquatic (Pond).

#### **UNIT 2: Natural Resources and management: (12 lectures)**

Concepts and types of natural resources (Renewable and non-renewable). Importance, threats and management of land resources, forest resources, water resources and energy resources.

#### **UNIT 3: Biodiversity and conservation: (12 lectures)**

Definition, levels of biodiversity (genetic, species and ecosystem diversity); Endemism; global biodiversity hot spots. Biodiversity of India with special reference to North East India. Threats to Biodiversity: Habitats loss, poaching of wildlife, man-wildlife conflicts in Indian context. In-situ and ex-situ conservation of biodiversity.

#### **UNIT 4: Environmental pollution and climate change: (12 lectures)**

Environmental pollution: Types (Air, water, soil and noise pollution), causes, effects and controls. Solid waste Management. Climate change, global warming, ozone layer depletion, acid rain and its impact on environment. Environment Laws: Environment Protection Act; Air (Prevention and control of pollution) Act; Water (Prevention and control of pollution); Wildlife Protection Act.

#### **UNIT 5: Environmental ethics and disaster management: (12 lectures)**

Principle and concept of environmental ethics: Animal Welfare and Animal Rights, Deep ecology. Ecofeminism, Putting environmental ethics into practice. Environmental movement and awareness: Chipko, Silent valley. Bishnoi of Rajasthan. Causes, impacts and management of floods, earthquake. cyclones and landslides.