

# **Ability Enhancement Compulsory Courses (AECC)**

## **SEMESTER – I**

### **Environmental Studies**

#### **Unit- 1: Introduction to Environmental Studies, Ecosystem, Pollution**

1. Scope and nature of Environmental studies, Man and Environment, Structure and function of ecosystem; energy flow in the aquatic ecosystem
2. Environmental pollution: types, causes, effects and controls of air and water pollution, climate change, global warming, green house effect, ozone layer depletion.

#### **Unit- 2: Natural Resources**

1. Land resources and land use changes, land degradation, soil erosion and desertification, Alternate energy resources, Deforestation.
2. Water: Use and over exploitation of surface and ground water, floods, droughts, conflicts over water (national and inter-state)

#### **Unit- 3: Biodiversity and Conservation**

1. Levels of biological diversity: genetic, species, and ecosystem diversity, Conservation of biodiversity, Biogeographic zones of India.
2. Threat to biodiversity: Habitat loss, poaching of wild life, man-wild life conflicts, Endangered and endemic species of India.

#### **Unit- 4: Human Communities and the Environment**

1. Human population growth: Impacts on environment, human health and welfare.  
Disaster management: floods, earthquakes, cyclones and landslides.
2. Environmental ethics, Environmental education, awareness and audits.  
Environmental movements: Chipko, Silent valley, Bishnois of Rajasthan.

#### **Books:**

1. Panigrahi, A.K. and Alaka Sahu, 2014 - A text book of Environmental studies. Giribala Publications, Berhampur.
2. Carson, R. 2002 - Silent spring. Houghton Mittlin Harcourt
3. Gleeson, B. and Low, N. (eds) 1999 - Global ethics and environment. London
4. Odum, EP, Odum, HT and Andrews, J. 1971- Fundamentals of Ecology, Philadelphia, Saunders.
5. Singh, JS, Singh, SP and Gupta SR. 2014 - Ecology, Environmental Science and conservation. S. Chand Publications, New Delhi.
6. Smith, R.L. (2008); Ecology and Field biology, USA