

ABILITY ENHANCEMENT COMPULSORY COURSE
SEMESTER.-I (FOR ARTS & COM. ALL) SEMESTER - II (FOR SC. ALL)
AECC-I : Environmental Studies

Time - 2 hrs. F.M. - 50 [40 (Sem.) + 10 (Int.)] Credit - 2 Lectures - 30

UNIT I: Understanding our Environment:

Definition, scope and importance of Environmental Studies, Need for public awareness; Concept of an ecosystem; Structure and function of an ecosystem; Producers, consumers and decomposers; Energy flow in the ecosystem; Food chains, food webs and ecological pyramids; Characteristic features, structure and function of the Forest, Grassland, Desert and Aquatic ecosystems.

Concept of Biodiversity, Threats to biodiversity, Conservation of biodiversity: in-situ and ex-situ conservation of biodiversity; Hot-spots of biodiversity; Endangered and endemic species of India.

UNIT II: Natural Resources and their Management:

Concept of resources, Renewable and Non-renewable resources; Marine resources.

Forest resources: Use and over-exploitation, deforestation and their effects on forest and people.

Water resources: Use and over-utilization of surface and ground water, floods, drought, dams-benefits and problems.

Mineral resources: Uses; environmental effects of over exploration of mineral resources.

Energy resources: Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources.

UNIT III: Environmental Pollution:

Definition of Pollution; Causes, effects and Control measures of air, water and soil pollution.

Current pollution issues around the world (Eutrophication of water bodies, Green House Effect and Global Warming, Ozone layer depletion and its effects, Solid waste management),

UNIT IV: Social Issues and the Environment

Concept of Sustainable development; Water conservation, rain water harvesting, watershed management; Mining waste and its reclamation.

Environmental legislations of India: Environment (Protection) Act, 1986; Air (Prevention and Control of Pollution) Act, 1981; Water (Prevention and control of Pollution) Act, 1974; Wildlife (Protection) Act, 1972; Forest Conservation Act, 1980.

Population growth and Pressure on Environment, Role of NGOs and Public awareness to combat communicable diseases; Environmental Education.

Books Recommended

1. Dash MC and Mishra PC, Man and Environment, McMillan, London.
2. Mishra PC and Das MC, Environment and Society, McMillan, London.
3. Odeem EP, Fundamentals of Ecology, Natraj Publication.
4. Mishra DD, Fundamental Concept in Environmental Studies, S.Chand, New Delhi.
5. Asthana DK and Asthana Meera, A Testbook of Environmental Studies, S. Chand, New Delhi.
6. Bharucha Erach, Textbook for Environmental Studies, Universities Press India Pvt. Ltd., Hyderabad.