

Netaji Subhas Open University
Under National Higher Education Qualifications Framework (NHEQF) &
Curriculum and Credit Framework for Undergraduate Programmes
Course Type: Value Added Course (VAC)
Course Title: Environmental Studies/Education
পরিবেশ বিদ্যা/ শিক্ষা
Course Code: 5VA-ES-01

Credits: 2 / Marks: 70

Second Semester

Time: 2 Hours

Unit 1: Fundamentals of Environment

Definition, concepts, scope and importance of environmental studies; Components of environment; Environmental education

Unit 2: Natural Resources

Renewable and non-renewable resources:

i) Forest resources **ii)** Water resources **iii)** Mineral resources **iv)** Energy resources **v)** Land resources

Unit 3: Ecosystem

- a) Concept and components of ecosystem; Concept of Ecology; Food chain, Food web and Ecological pyramids; Energy flow and productivity in ecosystem; Nutrient cycles
- b) Biomes: Concept, definition, types

Unit 4: Biodiversity and its conservation

- a) Biodiversity: Levels of biological diversity; Biogeographical classification of India; Values of biodiversity; Hot-Spots of biodiversity; Mega-biodiversity nations; Threat to biodiversity; Threatened and endemic species of India
- b) Conservation of biodiversity (*In-situ* and *Ex-situ*)
- c) Ecosystem services

Unit 5: Environmental Pollution

- a) Definition, cause, effects and control measures of: Air pollution, Water pollution, Soil pollution, Noise pollution, Marine Pollution, Thermal Pollution
- b) Solid Waste Management: Generation, types, collection & disposal methods
- c) Disaster management: Floods, Earthquakes, Cyclones, and Landslides

Unit 6: Environmental Issues, Policies and Practices

- a) Global warming, Acid rain, Ozone layer depletion, Nuclear accidents,
- b) Climate change negotiation: Montreal and Kyoto Protocols
- c) Convention on Biological Diversity (CBD)
- d) Water conservation, Rainwater harvesting
- e) Environmental movements (Chipko, Silent Valley, Big Dam Movements)
- f) Environmental Laws: Constitutional Provisions for protecting environment- Articles 48(A), 51 A (g); Objectives & Principles of: The Environment Protection Act, 1986; The Air (Prevention and Control of Pollution) Act, 1981; The Water (Prevention and Control of Pollution) Act, 1974; The Wild Life (Protection) Act, 1972; The Forest (Conservation) Act, 1980; Biological Diversity Act, 2002

Unit 7: Human Population and the Environment

- a) Population growth, Population explosion, Family Welfare Programme
- b) Environment and human health: Common communicable and non- communicable diseases

Unit 8: Environmental Education

- a) Definition, Significance and Objectives of Environmental Education
- b) Genesis of Environmental Education in Indian Context; Philosophy of Environmental Education
- c) Role of Environmental Education in protecting the environment