

Chaudhary Bansi Lal University, Bhiwani
B.A. / B.Sc. / B. Com.
Ability Enhancement Compulsory Course
Environmental Studies

Paper Code: 21EVS100

Max. Marks (Theory): 80

Nomenclature: Environmental Studies

Internal Evaluation (Field Work): 20

Instruction to the paper setter:

There will be 9 questions in all divided into 2 sections.

Section -I (10x3=30 marks) :There will be 15 short answer type questions (around 50 words each) covering the entire syllabus out of which students will be required to attempt 10 questions . Each question from this section will carry 3 marks.

Section -II (5x10=50 marks): There will be 8 long answer type questions (One from each unit) out of which students will be required to attempt any 5. Each question from this section will carry 10 marks.

Instructions for Internal Evaluation of Field Work:

Attendance:	05 marks*
Report of the Field Work:	10 marks
Viva Voce:	05 marks

*Division of Marks for Attendance will be as under:

(i)	85% and above	05 marks
(ii)	80% to less than 85%	04 marks
(iii)	75% to less than 80%	03 marks
(iv)	65% to less than 75%	02 marks

Unit 1

The Multidisciplinary nature of environmental studies

(2 lectures)

Definition, scope and importance
Need for public awareness.

Unit 2

Natural Resources:

(8 lectures)

Renewable and non-renewable resources:

S. K. L.

Natural resources and associated problems.

- a) **Forest resources:** Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people
- b) **Water resources:** Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
- c) **Mineral resources:** Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
- d) **Food resources:** World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies
- e) **Energy resources:** Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources. Case studies.
- f) **Land resources:** Land as a resource, land degradation, man induced landslides, soil erosion and desertification.
 - Role of an individual in conservation of natural resources.
 - Equitable use of resources for sustainable lifestyles.

Unit 3

Ecosystems

(6 lectures)

- Concept of an ecosystem.
- Structure and function of an ecosystem.
- Producers, consumers and decomposers.
- Energy flow in the ecosystem.
- Ecological succession.
- Food chains, food webs and ecological pyramids.

Introduction, types, characteristic features, structure and function of the following ecosystem:-

- a. Forest ecosystem
- b. Grassland ecosystem
- c. Desert ecosystem
- d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

Unit 4

Biodiversity and its conservation

(8 lectures)

S. h. h. /

- Introduction — Definition: genetic, species and ecosystem diversity.
- Biogeographical classification of India
- Value of biodiversity : consumptive use, productive use, social, ethical, aesthetic and option values
- Biodiversity at global, National and local levels.
- India as a mega-diversity nation
- Hot-spots of biodiversity.
- Threats to biodiversity : habitat loss, poaching of wildlife, man-wildlife conflicts.
- Endangered and endemic species of India
- Conservation of biodiversity : In-situ and Ex-situ conservation of biodiversity.

Unit 5

Environmental Pollution Definition

(8 lectures)

- Causes, effects and control measures of :-
 - a) Air pollution
 - b) Water pollution
 - c) Soil pollution
 - d) Marine pollution
 - e) Noise pollution
 - f) Thermal pollution
 - g) Nuclear hazards
- Solid waste Management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution.
- Pollution case studies.
- Disaster management : floods. earthquake. cyclone and landslides.

Unit 6

Social Issues and the Environment

(7 lectures)

- From Unsustainable to Sustainable development
- Urban problems related to energy
- Water conservation, rain water harvesting, watershed management
- Resettlement and rehabilitation of people ; its problems and concerns. Case studies.
- Environmental ethics : Issues and possible solutions.
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies.
- Wasteland reclamation.
- Consumerism and waste products.

ShkL

- Environment Protection Act.
- Air (Prevention and Control of Pollution) Act.
- Water (Prevention and control of Pollution) Act
- Wildlife Protection Act
- Forest Conservation Act
- Issues involved in enforcement of environmental legislation.
- Public awareness.

Unit 7

Human Population and the Environment

(6 lectures)

- Population growth, variation among nations.
- Population explosion — Family Welfare Programme.
- Environment and human health.
- Human Rights.
- Value Education.
- HIV / AIDS.
- Women and Child Welfare.
- Role of Information Technology in Environment and human health.

Unit 8

Field work

(Field work equals to 5 lectures all)

- Visit to a local area to document environmental assets- river/forest/grassland/hill/mountain
- Visit to a local polluted site — Urban / Rural / Industrial / Agricultural
- Study of common plants, insects, birds.
- Study of simple ecosystems-pond, river, hill slopes, etc.

S. H. L.