

**COMPULSORY PAPER ON ENVIRONMENTAL STUDIES
FOR PARTIAL FULFILLMENT OF B.A. III SEMESTER COURSE
UNDER RAJIV GANDHI UNIVERSITY, RONO HILLS, ITANAGAR**

Unit 1: The multidisciplinary nature of environmental studies

1-5

Definition, scope and importance of Environmental Studies.

Need for public awareness

Unit 2: Natural Resources:

6-28

Renewable and non-renewable resources:

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

29-44

- 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, ocean estuaries)

Unit 4: Biodiversity and its conservation

45-51

- Introduction – Definition: genetic, species and ecosystem diversity
- Biogeographical classification of India
- Value of biodiversity: consumptive use, productive use, social, ethical & aesthetic 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

52-71

Definition, 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 pollution
- 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

72-96

- From unsustainable to sustainable development
- Urban problems and 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
- Environmental Protection Act
- Air (Prevention and Control of Pollution) Act
- Water (Prevention and control of Pollution) Act
- Wildlife Protection Act and • Forest Conservation Act
- Issues involved in enforcement of environmental legislation
- Public awareness

Unit 7: Human Population and the Environment

97-106

- Population growth, variation among nations
- Population explosion – Family Welfare Programmes
- Environment and human health
- Human Rights
- Value Education
- HIV / AIDS
- Women and Child Welfare
- Role of Information Technology in Environment and Human Health
- Case Studies

ENVIRONMENTAL STUDIES
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UNDER RAJIV GANDHI UNIVERSITY

FORMAT FOR MANDATORY **PROJECT** SUBMISSION (INTERNAL ASSESSMENT)

A. **COVER PAGE:** *The cover page should contain the*

- *Subject, Paper Code, Paper Title, Topic of Project, along with the*
- *Name, Class & Roll No. of student clearly written in large CAPITAL LETTERS.*

The 2nd page should contain the Household details of the student, like

- *Address/ Colony of the household:*
- *Father's Name & Age:*
- *Mother's Name & Age:*
- *No. of siblings (Sisters & Brothers) with age:*
- *Total No. of family members:*
- *Occupation of Head of Family:*
- *Keep Livestock: Yes or No, etc.*

B. **BODY OF PROJECT REPORT:** *The project must be handwritten on plain A4 size paper. Printed Project Works will not be evaluated. However, photograph cuttings and maps of study area may be included. Hard Cover, Stick file Cover or Spiral Binding may be avoided. Papers should be simply pinned along the outer LHS margin. The project work may be written under the following main headings:*

1. **AIM:** *To make a detailed environmental study of my residence and its surroundings.*
2. **MATERIALS AND METHODS:** *Write about how you have conducted the survey and collected data. Write about how proper hygiene and clean environment are important for an individual and for the society. If you have collected any information/data through survey, or by means of interview or questionnaire, write about the ways and means, about how you have interviewed people, what sort of questions you have asked.*
3. **OBSERVATIONS:** *Make separate listings of your observations systematically. Like, write about the cleanliness and maintenance of individual rooms/ portions of your house, living room, bedrooms, kitchen, fireplace, bathroom, toilet, etc. under separate sub-headings. Write about windows and ventilations. Also write about water source, drainage, kitchen garden, backyard, front garden, etc. Also write about upkeep of the neighbourhood and surroundings. You may make lists about types of pollutants (like polythene bags, plastic bottles, glassware, etc) and categorize them into biodegradable and non-biodegradable wastes. You may mark each pollutant on the basis of how much pollution they cause. You may also write about different sources of these pollutants. You must mention any livestock rearing in the household, like chicken, pigs, dog, cattle, etc.*
4. **RESULT & DISCUSSION:** *Under this heading, you have to write about the outcome of your observations, like you may make remarks about how clean or dirty your household is maintained, making room by room analysis of status and suggest ways to redress any observed problems. You may make an analysis about the roles*

of each family member in the upkeep of the household. You may write about any observed problem/pollution in the surroundings outside your household also. Discuss on the status of drainage, drinking water, garbage disposal of household and of neighbours, etc. You should explain how environmental pollutions can cause serious diseases in the inhabitants. You should make suggestions to improve the living conditions of your household wherever you observe any such problems.

5. **ACKNOWLEDGEMENT:** In this section, you may express your gratitude to any people who have helped you in any way in successful completion of the project. You have to thank your sources of information, like any person whom you have interviewed, etc. You may also thank any teacher who have mentored you to complete this project.

➤ **When is the Last Date to submit your Project Work?**

The last date for submission of finished project report is **10th November 2021**. No late submission will be entertained after the expiry of last date in any case.

➤ **Where to submit your Project Work?**

University Roll No.			Submit to Department
From		To	
18A00103	TO	18A00685	PHYSICS
19A00213	TO	19A01121	
20A00002	TO	20A00241	
20A00242	TO	20A00501	CHEMISTRY
20A00502	TO	20A00758	MATHEMATICS
20A00759	TO	20A01003	ZOOLOGY
20A01004	TO	20A01254	GEOGRAPHY
20A01255	TO	LAST	BOTANY