

**PNS SCHOOL OF ENGINEERING AND TECHNOLOGY**  
**DEPARTMENT OF ELECTRICAL ENGINEERING**

Branch: Electrical, Etc & Comp.Sc Engg.	Semester: 3rd	Name of the Lecturer: <b>Snigdha Dash</b>
Subject: ES	Classes Allotted in a Week: 5	Duration of Semester: 01.08.2023 - 30.11.2023
Week	Class Day	Theory / Practical Topic
1st	1	<b>The Multidisciplinary nature of environmental studies:</b> Definition
	2	The Multidisciplinary nature of environmental studies:Scope
	3	Importance of the multidisciplinary nature of environment studies
	4	Need for public awareness
	5	<b>Natural Resources:</b> Renewable and non renewable resources:
2nd	1	Natural resources and associated problems
	2	Forest resources: Use and over-exploitation, deforestation, case studies, Timber extraction mining, dams and their effects on forests and tribal people
	3	Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dam's benefits and problems.
	4	Mineral Resources: Use and exploitation, environmental effects of extracting and using mineral resources.
	5	Food Resources: World food problems, changes caused by agriculture and over grazing, effects of modern agriculture, fertilizers- pesticides problems, water logging, salinity.
3rd	1	Energy Resources: Growing energy need, renewable and non-renewable energy sources, use of alternate energy sources, case studies.
	2	LandResources: Landasaresource, landdegradation, man induces landslides, soil erosion, and desertification
	3	Role of individual in conservation of natural resources
	4	Equitable use of resources for sustainable life styles.
	5	<b>Systems:</b> Concept of an eco system.
4th	1	Structure and function of an eco system.
	2	Producers, consumers, decomposers.
	3	Energy flow in the eco systems, Ecological succession.
	4	Ecological succession.
	5	Food chains, food webs and ecological pyramids.
5th	1	Introduction, types, characteristic features, structure and function of the following eco system: Forest ecosystem
	2	Aquatic eco systems (ponds, streams, lakes, rivers, oceans, estuaries).
	3	<b>Biodiversity and it's Conservation:</b> Introduction
	4	Definition: Genetics, species and ecosystem diversity
	5	Biogeographically classification of India

6th	1	Value of biodiversity: consumptive use, productive use, social ethical, aesthetic and optin values.
	2	Biodiversity at global level
	3	Biodiversity at national level
	4	Biodiversity at local level
	5	Threats to biodiversity: Habitats loss, poaching of wild life, man wildlife conflicts
7th	1	<b>Environmental Pollution:</b> Definition
	2	Causes, effects and control measures of: Air pollution
	3	Causes, effects and control measures of: water pollution
	4	Causes, effects and control measures of: soil pollution
	5	Causes, effects and control measures of: marine pollution
8th	1	Causes, effects and control measures of: noise pollution
	2	Causes, effects and control measures of: Thermal pollution
	3	Causes, effects and control measures of: Nuclear hazards
	4	Solid waste Management: Causes, effects and control measures of urban and industrial wastes.
	5	Role of an individual in prevention of pollution
9th	1	Disaster management: Floods and Earth quake,
	2	Disaster management: Cyclone and Landslides
	3	<b>Social issues and the Environment:</b> Form unsustainable to sustainable development.
	4	Urban problems related to energy.
	5	Water conservation, rain water harvesting, water shed management.
10th	1	Resettlement and rehabilitation of people; its problems and concern
	2	Environmental ethics: issue and possible solutions
	3	Climate change, global warming, acid rain, ozone layer depletion
	4	Nuclear accidents and holocaust, case studies.
	5	Air (prevention and control of pollution) Act
11th	1	Water (prevention and control of pollution) Act.
	2	Public awareness.
	3	<b>Human population and the environment:</b> Population growth
	4	Variation among nations
	5	Population explosion
12th	1	Family welfare program
	2	Environment and humanhealth.
	3	Human rights
	4	Value education
	5	Role of information technology in environment and human health.

Signature of the  
Lecturer

Signature of the  
H.O.D.