

Discipline : MECHANICAL ENGINEERING.	Semester : 3RD	Name of the Teaching Faculty: SHUBHAJIT BISWAL
Subject: ENVIRONMENTAL STUDIES(TH-5)	No. of days/per weekclass allotted: 04	SemesterFromDate:15/09/2022ToDate:22/12/2022 No. of Weeks: 15
Week	Class Day	Theory Topics
1ST	1ST	Unit-1- Multidisciplinary nature of environmental studies- Introduction,
	2ND	<ul style="list-style-type: none"> • Definition , Scope and importance
	3RD	<ul style="list-style-type: none"> • Need for public awareness
	4TH	<ul style="list-style-type: none"> • Discussion of probable question
2ND	1ST	Unit-2- -RENEWABLE AND NON- RENEWABLE RESORCES Natural resources & Associated problems Forest Resources- Use & over exploitation, deforestation, Case studies
	2ND	<ul style="list-style-type: none"> • Timber extraction, mining, dams and their effects on forests and tribal people
	3RD	<ul style="list-style-type: none"> • Water resources- use & over utilization of surface & ground water, floods, drought
	4TH	<ul style="list-style-type: none"> • Conflicts over water, dams benefits and problems, Mineral resources- use & exploitation, environmental effects of extracting and using mineral resources
3RD	1ST	<ul style="list-style-type: none"> • Mineral resources- use & exploitation, environmental effects of extracting and using mineral resources
	2ND	<ul style="list-style-type: none"> • Food resources- World food problem, Changes caused by agriculture & over grazing,
	3RD	<ul style="list-style-type: none"> • Effects of modern agriculture, fertilizers & pesticide problems, water logging & salinity
	4TH	<ul style="list-style-type: none"> • Energy resources- Growing energy need, Renewable & non- renewable energy source, use of alternate energy sources
4TH	1ST	<ul style="list-style-type: none"> • Case studies, Land resources- land as a resource, land degradation, man induced landslides,
	2ND	<ul style="list-style-type: none"> • Soil erosion, desertification, Role of individual in conservation of natural resources,Equitable use of resources for sustainable lifestyles
	3RD	<ul style="list-style-type: none"> • Unit-3- • Ecosystem: concept of ecosystem, structure & function of an Ecosystem, Function of ecosystem, Producers, consumers, decomposers
	4TH	<ul style="list-style-type: none"> • Energy flow in ecosystem ,ecological succession, Food chain, food web, ecological pyramid
5TH	1ST	<ul style="list-style-type: none"> • Forest ecosystem- definition, types, characteristics
	2ND	<ul style="list-style-type: none"> • Forest ecosystem- structure & function
	3RD	<ul style="list-style-type: none"> • Aquatic ecosystem,Pond ecosystem
	4TH	<ul style="list-style-type: none"> • Stream ecosystem, Lake ecosystem, River ecosystem
6TH	1ST	<ul style="list-style-type: none"> • Ocean ecosystem, Estuaries ecosystem
	2ND	<ul style="list-style-type: none"> • CLASS TEST
	3RD	Unit -4- <ul style="list-style-type: none"> • Biodiversity & its conservation: introduction,

		<ul style="list-style-type: none"> definition, genetics, species, and ecosystem diversity
	4 TH	<ul style="list-style-type: none"> Biogeographical classification of India
7 TH	1 ST	<ul style="list-style-type: none"> Value of biodiversity, consumptive use, productive use
	2 ND	<ul style="list-style-type: none"> Social ethical ,aesthetic and opt in values.
	3 RD	<ul style="list-style-type: none"> Biodiversity at global level
	4 TH	<ul style="list-style-type: none"> Biodiversity at national level,
8 TH	1 ST	<ul style="list-style-type: none"> Threats to bio diversity ,Habitat loss,
	2 ND	<ul style="list-style-type: none"> poaching of wildlife, Man wildlife conflicts
	3 RD	<ul style="list-style-type: none"> Unit-5- Environmental pollution: introduction, definition, effects and control measures of -
	4 TH	<ul style="list-style-type: none"> Air pollution, Control of air pollution
9 TH	1 ST	<ul style="list-style-type: none"> Water pollution, Control of water pollution
	2 ND	<ul style="list-style-type: none"> Soil pollution, Marine pollution
	3 RD	<ul style="list-style-type: none"> Noise pollution ,Thermal pollution
	4 TH	<ul style="list-style-type: none"> Nuclear pollution
10 TH	1 ST	<ul style="list-style-type: none"> Solid waste management-
	2 ND	<ul style="list-style-type: none"> causes, effect &Control measures of urban an industrial wastes
	3 RD	<ul style="list-style-type: none"> Waste management, Role of individual in prevention of pollution
	4 TH	<ul style="list-style-type: none"> Disaster management Flood management
11 TH	1 ST	<ul style="list-style-type: none"> Earthquake management, Cyclone management, Landslides management,
	2 ND	<ul style="list-style-type: none"> CLASSTEST
	3 RD	<ul style="list-style-type: none"> Unit-6- Social issues & the environment: From unsustainable to sustainable development, urban problems related to energy.
	4 TH	<ul style="list-style-type: none"> Water conservation , rain water harvesting
12 TH	1 ST	<ul style="list-style-type: none"> Watershed management , resettlement and rehabilitation of people; its problem and concern
	2 ND	<ul style="list-style-type: none"> Environmental ethics: issue and possible solutions.
	3 RD	<ul style="list-style-type: none"> Climate change, global warming, Acid rain , ozone layer depletion,
	4 TH	<ul style="list-style-type: none"> Nuclear accidents and holocaust, case studies,
13 TH	1 ST	<ul style="list-style-type: none"> Environmental ethics: issue and possible solutions.
	2 ND	<ul style="list-style-type: none"> Air (prevention and control of pollution) Act
	3 RD	<ul style="list-style-type: none"> Water (prevention and control of pollution) Act, Public awareness
	4 TH	<ul style="list-style-type: none"> Probable question discussion
14 TH	1 ST	<ul style="list-style-type: none"> Unit 7- Human population and the Environment: population growth and variation among nations (introduction)
	2 ND	<ul style="list-style-type: none"> population growth and variation among nations
	3 RD	<ul style="list-style-type: none"> Population explosion, family welfare program
	4 TH	<ul style="list-style-type: none"> Environment and human health
15 TH	1 ST	<ul style="list-style-type: none"> Human rights, Value education
	2 ND	<ul style="list-style-type: none"> Role of information technology in environment and human health
	3 RD	<ul style="list-style-type: none"> Doubt clearing, revision
	4 TH	<ul style="list-style-type: none"> CLASS TEST

Learning Resources:

Sl.No	Title of the Book	Name of Authors	Name of Publisher
1	Text book of Environmental studies	Erach Bharucha	# UGC
2	Fundamental concepts in Environmental Studies	,D.D .Mishra	S. Chand&Co-Ltd
3	Textbook of Environmental Studies	K.Raghavan Nambiar	SCITECH Publication Pvt. Ltd.
4	Environmental Engineering	V.M.Domkundwar	- DhanpatRai&Co

Prepared By
Shubhajit Biswal
Lecturer Mechanical Engg Deptt
G.I.E.T (Polytechnic), Jagatpur, Cuttack