



GOVERNMENT POLYTECHNIC, KORAPUT DEPARTMENT OF ELECTRICAL ENGINEERING

Discipline: ELECTRICAL ENGG	Semester: 3RD	Name of the Teaching Faculty: MISS. DIPTI LAXMI BHUYAN
Subject: ENVIRONMENTAL STUDIES	No. of days/pe rweek class allotted :04	Semester From date:01/09/2020 To Date: No. of Weeks:15
COURSE OUTCOMES	After completion of study of environmental studies, the student will be able to: Acquire knowledge about our natural environment, its importance in our life & its benefits. Gather adequate knowledge of different pollutants, their sources and shall be aware of solid waste management systems and hazardous waste and their effects. Develop awareness in society & towards preservation of environment.	
Week	Class Day	Theory
1 ST	1 ST	-A general discussion with students about their basic knowledge on the topic Environment. -Definition & The Multidisciplinary nature of environmental studies.
	2 ND	-Scope and importance of EVS.
	3 RD	-Need for public awareness.
	4 TH	-Overall discussion and note preparation.
2 ND	1 ST	-Natural Resources, types of natural resources. -Renewable and nonrenewable resources with examples. -Introduction of forest resources.
	2 ND	Use and over-exploitation of forest resources. Deforestation, case studies. Timber extraction mining, dams and their effects on forests and tribal people. A general discussion on the local cases & importance of conservation of forest resources.
	3 RD	-Water resources, percentage of saline and fresh water present in nature. -Use and over-utilization of surface and ground water.
	4 TH	-Definition of floods, drought. -Conflicts over water, dam's benefits and problems. -Cases observed in local level.
3 RD	1 ST	-Definition of Mineral Resources. Various minerals found from earth's crusts. -Use and exploitation. -Environmental effects of extracting and using mineral resources
	2 ND	-Food Resources, World food problems.

		-In order to increase the production, changes caused in agriculture and effects of modern agriculture, fertilizers- pesticides. -Problems due to overgrazing, water logging, salinity.
	3 RD	-Energy Resources, Energy found in various form. -Growing energy need, renewable and non-renewable energy sources - Use of alternate energy sources, case studies.
	4 TH	-Land Resources, why it is considered as an important resource. -Land degradation, man induces landslides, soil erosion, and desertification. -Problems arises due to above reasons and precaution.
4 TH	1 ST	-Role of individual in conservation of natural resources. -Equitable use of resources for sustainable life styles.
	2 ND	-Summarization of the chapter and related question discussion.
	3 RD	-Concept of an eco-system, The origin and meaning of the term Ecosystem. -Structure of an eco-system.
	4 TH	-Function of an eco-system with proper chart. -Definition of Producers, consumers, decomposers with example.
5 TH	1 ST	-Energy flow in the eco systems. Laws applicable in the transfer of energy. -Ecological succession, types of succession.
	2 ND	-Food chains, food webs with 2-3 examples.
	3 RD	-Ecological pyramids. -Types of Ecological pyramids and their characteristics.
	4 TH	-Introduction, types, characteristic features, structure and function of the Forest ecosystem, ponds ecosystem.
6 TH	1 ST	- Characteristic features, structure and function of the streams, lakes.
	2 ND	- Rivers, estuaries & oceans ecosystem. - Related question discussion.
	3 RD	-Meaning of Biodiversity, Introduction-Definition of biodiversity. -Genetics, species and ecosystem diversity.
	4 TH	- Biogeographically classification of India with geographical identification.
7 TH	1 ST	-Value of biodiversity: consumptive use, productive use, social ethical,
	2 ND	-Aesthetic and opting values. - Biodiversity at global level.
	3 RD	-Biodiversity at National and local level.
	4 TH	-Threats to biodiversity: Habitats loss, poaching of wild life.
8 TH	1 ST	- Man wildlife conflicts. -Cases observed, Reason of conflict. -Discussion regarding the possible solution. -Summarization of the chapter and related question discussion.
	2 ND	-Environmental Pollution: discussion about what we already know about pollution. - Definition of pollution. -Types of pollutant responsible for pollution.

	3 RD	-Causes, effects and control measures of Air pollution.
	4 TH	- Causes, effects and control measures of Water pollution.
9 TH	1 ST	- Causes, effects and control measures of Soil pollution.
	2 ND	- Causes, effects and control measures of Marine pollution.
	3 RD	-Causes, effects and control measures of Noise pollution.
	4 TH	-Causes, effects and control measures of Thermal pollution
10 TH	1 ST	-Causes, effects and control measures of Nuclear hazards.
	2 ND	-Solid waste Management. - Causes, effects and control measures of urban and industrial wastes.
	3 RD	-Role of an individual in prevention of pollution. -What is Disaster, men made and natural Disaster.

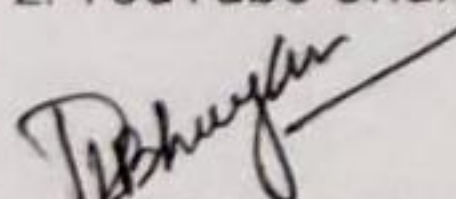
11 TH	4 TH	-Disaster management: Floods, earth quake.
	1 ST	- Disaster management of cyclone and landslides. -Summarization and overall discussion of the chapter.
	2 ND	Social issues and the Environment: -Discussion on various social issues arising out related to environment. -Form unsustainable to sustainable development with some basic example.
	3 RD	-Urban problems related to energy. -Summarization of resource of water. -Water conservation.
12 TH	4 TH	- Rain water harvesting, water shed management.
	1 ST	-Resettlement and rehabilitation of people. - Its problems and concern.
	2 ND	-Environmental ethics: issue and possible solutions. -Climate change.
	3 RD	-Acid rain, ozone layer depletion. - Global warming.
13 TH	4 TH	-Nuclear accidents and holocaust. -case studies, Various incident in the past.
	1 ST	- Air prevention and control of pollution Act. - Water prevention and control of pollution Act.
	2 ND	-Public awareness regarding cause effect and control of environmental pollution. -Summarization of the chapter with related question.
	3 RD	-Human population and the environment: Discussion on current population of different countries. - Population growth and variation among nations.
14 TH	4 TH	-Population explosion. - Causes responsible for population explosion. -Problems arising out of population explosion.
	1 ST	- Family welfare program. -Various program carried out by the Govt. of India.
	2 ND	- Environment and human health. - Human rights.
	3 RD	-Value of education. -Summarization of the chapter.
15 TH	4 TH	-Doubt clearing and discussion of topics.
	1 ST	- Doubt clearing and discussion of topics.
	2 ND	-Probable question discussion for the semester exam.
	3 RD	-Probable question discussion for the semester exam.
	4 TH	-Probable question discussion for the semester exam.

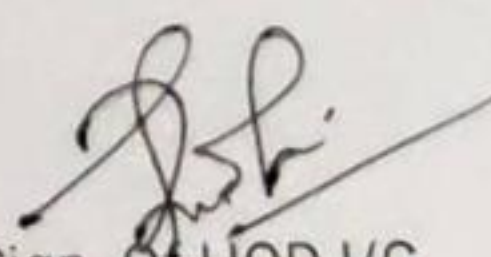
LEARNING RESOURCES:

1. Fundamental concepts in Environmental Studies by D.D. Mishra. S.Chand & Co-Ltd publication.
2. Text book of Environmental Studies by K. Raghavan Nambiar. SCITECH Publication Pvt. Ltd.

WEBSITE RESOURCES:

1. Wikipedia.
2. YouTube Channel "Lets studies" by Himanshi Singh.


Sign. Of Faculty
concerned


Sign. Of HOD I/C