

GOVERNMENT POLYTECHNIC JAJPUR

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DEPARTMENT OF MECHANICAL ENGINEERING(2021-2022)

LESSON PLAN

Discipline: Mechanical	Semester: 3rd	Name of the Teaching faculty: UMAKANTA NANDA
Subject: EVS (TH-5)	No of Days/Week class allotted: 4	Semester from Date: 01 . 08 . 2023 To Date: 31.11.2023 No of weeks: 15
Week	Class Day	Topics
1st	1st	Unit 1: The Multidisciplinary nature of environmental studies Definition and scope of environment.
	2nd	Importance of environment.
	3rd	Need for public awareness.
	4th	Need for public awareness.
2nd	1ST	Unit 2: Natural Resources i) Use and over-exploitation of forest resources. ii) Deforestation, case studies of forest resources.
	2nd	Timber extraction mining, dams and their effects on forests and tribal people.
	3rd	Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dam's benefits and problems.
	4th	Use and exploitation of mineral resources. Environmental effects of extracting and using mineral resources.
3rd	1st	World food problems ,changes caused by agriculture and overgrazing
	2nd	Effects of modern agriculture,fertilizers ,pesticides problems, water logging, salinity,.
	3rd	Growing energy need, renewable and nonrenewable energy sources, use of alternate energy sources, case studies .
	4th	Land as a resource ,land degradation ,man induces landslides, soil erosion, and desertification
4th	1st	Role of individual in conservation of natural resources.
	2nd	Equitable use of resources for sustainable lifestyles.
	3rd	Unit 3: Systems Concept of an ecosystem. Structure and function of an ecosystem.
	4th	Producers, consumers, decomposers.
5th	1st	Energy flow in the ecosystems.
	2nd	Ecological succession and food chains.
	3rd	Food web sand ecological pyramids.

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	4th	Introduction, types, characteristic features, structure and function of the following ecosystem:
6th	1st	Forest ecosystem.
	2nd	Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries).
	3rd	Unit 4: Biodiversity and it's Conservation Introduction-Definition: genetics, species and ecosystem diversity.
	4th	Biogeographically classification of India.
7th	1st	Value of biodiversity: consumptive use, productive use
	2nd	Social ethical, aesthetic and opt in values.
	3rd	Biodiversity at global, national and local level.
	4th	Threats to biodiversity: Habitats loss.
8th	1st	poaching of wild life, man wildlife conflicts.
	2nd	CLASS TEST 1
	3rd	Unit 5: Environmental Pollution. Definition Causes, effects and control measures of : Air pollution.
	4th	Definition Causes, effects and control measures of:Air pollution.
9th	1st	Definition Causes, effects and control measures of:Water pollution
	2nd	Definition Causes, effects and control measures of:Soil pollution
	3rd	Definition Causes, effects and control measures of:Marine pollution
	4th	Definition Causes, effects and control measures of: noise pollution
10th	1st	Definition Causes, effects and control measures of: noise pollution
	2nd	Definition Causes, effects and control measures of:Thermal pollution
	3rd	Definition Causes, effects and control measures of:Nuclear pollution
	4th	Solid waste Management: Causes, effects and control measures of urban and industrial wastes
11th	1st	Role of an individual in prevention of pollution.
	2nd	Disaster management: Floods, earth quake, cyclone and landslides.
	3rd	Unit 6: Social issues and the Environment Urban problems related to energy.
	4th	Water conservation, rain water harvesting, water shed management.
12th	1st	Resettlement and rehabilitation of people; its problems and concern.
	2nd	Environmental ethics: issue and possible solutions.
	3rd	Climate change, global warming, acid rain,
	4th	ozone layer depletion,
13th	1st	acid rain, nuclear accidents and holocaust, case studies.
	2nd	Air (prevention and control of pollution) Act.
	3rd	Water (prevention and control of pollution) Act. Public awareness.
	4th	Public awareness.
14th	1st	Unit 7: Human population and the environment Population growth and variation among nations.
	2nd	Population explosion-family welfare program.

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	3rd	Environment and human health.
	4th	Human rights. Value education
15th	1st	Role of information technology in environment and human health.
	2nd	Previous year question discussion.
	3rd	Previous year question discussion.
	4th	CLASS TEST 2

Signature of Faculty

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

Umananta Nandor