

GOVERNMENT POLYTECHNIC JAGATSINGHPUR

LESSON PLAN OF 3rd SEMESTER(2022-23) CHEMICAL ENGINEERING

Discipline :- CHEMICAL	Semester:- 3RD	Name of the Teaching Faculty SUBHASHREE PRIYADARSHINI
Subject:- Environmental Studies	No of Days/per Week Class Allotted :-04	Semester From:- September To:- December
Course Code: TH 5		
Week	Class Day	Theory/ Practical Topics
1 st	1 st	CHAPTER-1: The Multidisciplinary nature of environmental studies Introduction
	2 nd	Definition, scope and importance.
	3 rd	Need for public awareness.
	4 th	CHAPTER-2: Natural Resources: Forest resources: Use and over-exploitation, deforestation, case studies,
2 nd	1 st	Timber extraction mining, dams and their effects on forests and tribal people.
	2 nd	Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dam's benefits and problems.
	3 rd	Mineral Resources: Use and exploitation,
	4 th	Environmental effects of extracting and using mineral resources.
3 rd	1 st	Food Resources: World food problems, changes caused by agriculture and over grazing
	2 nd	Effects of modern agriculture, fertilizers- pesticides problems, water logging, salinity
	3 rd	Energy Resources: Growing energy need
	4 th	Renewable and non-renewable energy sources, use of alternate energy sources, case studies.
4 th	1 st	Land Resources: Land as a resource, land degradation,
	2 nd	Landslides, soil erosion, and desertification.
	3 rd	Role of individual in conservation of natural resources
	4 th	Equitable use of resources for sustainable life styles.
5 th	1 st	CHAPTER-3: Systems: Concept of an eco-system.
	2 nd	Structure and function of an eco-system
	3 rd	Producers, consumers, decomposers.
	4 th	Energy flow in the eco systems.
6 th	1 st	Ecological succession.
	2 nd	Food chains, food webs and ecological pyramids
	3 rd	Introduction, types, characteristic features of eco system:
	4 th	structure and function of the following ecosystem:
7 th	1 st	Forest ecosystem:

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