

BLACK DIAMOND SCHOOL OF ENGINEERING, JHARSGUDA

LESSON PLAN

Session (2022-2023)

Discipline: Computer Science and Engineering	Semester: 3 th , W/2022	Name of the faculty: Sipra Patel Lecturer, Mechanical Engineering
Subject: Environmental studies (theory-5)	No. of Days/week: 04	Start Date: 14/09/2022 End Date: 21/01/2023

Week	Class Day	Theory/Practical Topics
1st	1st	The Multidisciplinary nature of environmental studies: Definition, scope of environmental studies
	2nd	Importance of environmental studies.
	3rd	Need for public awareness (Cont..)
	4th	Need for public awareness.
2nd	1st	Natural Resources: Renewable and non-renewable resources: a) Natural resources and associated problems. Forest resources: Use and over-exploitation, deforestation, case studies,
	2nd	Timber extraction mining, dams and their effects on forests and tribal people
	3rd	Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dam`s benefits and problems
	4th	Mineral Resources: Use and exploitation, environmental effects of extracting and using mineral resources.
3rd	1st	Food Resources: World food problems, changes caused by agriculture and over grazing, effects of modern agriculture, fertilizers- pesticides problems, water logging, salinity
	2nd	Energy Resources: Growing energy need, renewable and non-renewable energy sources. use of alternate energy sources, case studies.

	3rd	Land Resources: Land as a resource, land degradation. man induces landslides, soil erosion, and desertification.
	4th	Role of individual in conservation of natural resources. Equitable use of resources for sustainable life styles.
4th	1st	Question Answer Discussion
	2nd	Quiz Test
	3rd	Systems: Concept of an eco-system. Structure and function of an eco-system.
	4th	Producers, consumers, decomposers.
5th	1st	Energy flow in the eco systems. Ecological succession.
	2nd	Food chains, food webs
	3rd	ecological pyramids
	4th	Introduction, types, characteristic features, structure and function of the forest eco system
6th	1st	Introduction, types, characteristic features, structure and function of the Aquatic eco systems (ponds, streams, lakes, rivers, oceans, estuaries)
	2nd	Question Answer Discussion
	3rd	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	Value of biodiversity: social ethical, aesthetic and optin values
	3rd	Biodiversity at global, national and local level.
	4th	Threats to biodiversity: Habitats loss, poaching of wild life, man wildlife conflicts.
8th	1st	Question Answer Discussion
	2nd	Practice test
	3rd	Environmental Pollution: Definition Causes, effects and control measures of: Air pollution.
	4th	Definition Causes, effects and control measures of: Water pollution.

9th	1st	Definition Causes, effects and control measures of: Soil pollution
	2nd	Definition Causes, effects and control measures of: Marine pollution
	3rd	Definition Causes, effects and control measures of: Noise pollution.
	4th	Definition Causes, effects and control measures of: Thermal pollution
10th	1st	Definition Causes, effects and control measures of: Nuclear hazards.
	2nd	Solid waste Management: Causes, effects and control measures of urban and industrial wastes.
	3rd	Role of an individual in prevention of pollution.
	4th	Disaster management: Floods, earth quake, cyclone and landslides.
11th	1st	Question Answer Discussion.
	2nd	Quiz Test
	3rd	Social issues and the Environment: Form unsustainable to sustainable development.
	4th	Urban problems related to energy
12th	1st	Water conservation, rain water harvesting, water shed management.
	2nd	Resettlement and rehabilitation of people; its problems and concern
	3rd	Environmental ethics: issue and possible solutions
	4th	Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, case studies.
13th	1st	Air (prevention and control of pollution) Act.
	2nd	Water (prevention and control of pollution) Act
	3rd	Public awareness.
	4th	Question Answer Discussion.
14th	1st	Human population and the environment: Population growth and variation among nations
	2nd	Population explosion- family welfare program.
	3rd	Environment and human health.
	4th	Human rights.
15th	1st	Value education

	2nd	Role of information technology in environment and human health.
	3rd	Revision
	4th	Question Answer Discussion.