

AMBALA COLLEGE OF ENGINEERING AND APPLIED RESEARCH

DEPTT. OF BIOTECHNOLOGY ENGINEERING

Lesson Plan

Name of Faculty : Dr. Monica Khanna
Discipline : B.Tech (Biotechnology Engineering)
Semester : 4th
Subject : Environmental Studies, MC-901A
Lesson Plan Duration : 15 Weeks (From April-August,2021)
Work Load (Lecture/week (in hours): Lectures - 03

Week	Theory	
	Lecture Day	Topic (including Assignment/Test)
1 st	1 st	Introduction of Environmental Studies, Definition and its Scope.
	2 nd	Renewable Resources and Non Renewable Resources, Natural Resources.
	3 rd	Forest Resources: Use and Over-exploitation, Deforestation, Effects of Timber extraction, mining, dams and their effects on forests and tribal people. Case Study.
2 nd	4 th	Water Resources: Use and over-utilization of surface and ground water. Dams-benefits and problems. Case study.
	5 th	Mineral Resources: Environmental effects of extracting and using mineral resources, Case study.
	6 th	Food Resources: Effects of Modern agriculture, fertilizer-pesticide problems, water logging, salinity, Case study.
3 rd	7 th	Energy Resources: Use of Alternate Sources, Case study.
	8 th	Land Resources: Land Degradation, Soil erosion and desertification, Role of individual in conservation of natural resources.
	9 th	Revision, Assignment on various Resources.
4 th	10 th	Ecosystem: Concept, Energy flow in the ecosystem, Food Chains, Food Webs. Ecological Succession.
	11 th	Introduction of Ecological Pyramids, its Types and characteristics.
	12 th	Forest Ecosystem, Grassland Ecosystem, Desert Ecosystem, Aquatic Ecosystems.
5 th	13 th	Revision
	14 th	Test
	15 th	Biodiversity
6 th	16 th	Biodiversity and its conservation, Genetic, Species and ecosystem diversity.
	17 th	Bio geographical classification of India.
	18 th	Value of Biodiversity, its use.
7 th	19 th	Biodiversity of global, National and local levels.
	20 th	India as a mega diversity nation.
	21 st	Threats to biodiversity, Habitat loss.
8 th	22 nd	Conservation of Biodiversity.
	23 rd	Test.
	24 th	Environmental Pollution: Cause, effects and its control.
9 th	25 th	Air Pollution: Cause, effects and its control.
	26 th	Water Pollution: Cause, effects and its control.
	27 th	Soil Pollution: Cause, effects and its control.

10 th	28 th	Marine Pollution: Cause, effects and its control.
	29 th	Noise Pollution and Thermal Pollution: Cause, effects and its control.
	30 th	Nuclear Hazards: Cause, effects and its control.
11 th	31 st	Solid waste management – causes, effects and control measures of urban and nuclear wastes.
	32 nd	Role of an individual in prevention of pollution.
	33 rd	Disaster management: Floods, earthquake, cyclone and landslides.
12 th	34 th	Social issues and the Environment.
	35 th	Water conservation, Rain water harvesting, and watershed management.
	36 th	Resettlement and rehabilitation of people, its problems and concerns, case study. Environmental ethics-issues and possible solutions.
13 th	37 th	Global warming, Acid rain, Ozone layer depletion, Nuclear accidents, Nuclear accidents and holocaust, Case study
	38 th	Wasteland Reclamation, Consumerism and waste products.
	39 th	Environment Protection Act. Air (Prevention and Control of Pollution) Act.
14 th	40 th	Water (Prevention and Control of Pollution) Act. Wild Life Protection Act, Forest Conservation Act.
	41 st	Human Population and the Environment, Public Awareness, Human Rights, Women and Child welfare.
	42 nd	Family Welfare Programme, Role of Information Technology in Environment and Human Health.
15 th	43 rd	Drugs and their effects; Useful and harmful drugs, Use and abuse of drugs.
	44 th	Stimulant and depressant drugs, Concept of drug de-addiction.
	45 th	Legal position on drugs and laws related to drugs.

Dr. Monica Khanna

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