

**AMBALA COLLEGE OF ENGINEERING AND APPLIED RESEARCH**

**DEPTT. OF APPLIED SCIENCES & HUMANITIES**

**Lecture Plan**

**Name of Faculty: Dr. Monica Khanna**

**Discipline : B.Tech(Mechanical Engineering)**

**Semester : 3rd**

**Subject : Environmental Sciences, MC-901 A**

**Lecture Plan Duration : 15 Weeks (From October-December,2021)**

**Workload (Lecture/week (in hours): Lectures - 03**

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

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

**Dr. Monica Khanna**

Associate Professor, Chemistry

Dept. of Applied Sciences and Humanities

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