

Lesson Plan

Name of the Faculty: Akash Shrivastva

Discipline: civil engineering

Semester: 3rd sem

Subject: Environmental studies

Work Load (Lecture/Practical) per week (in hours): Lectures- , Practicals-

Week	Theory		Practical	
	Lecture day	Topic (including assignment/test)	Practical day	Topic
1 st	1 st	The multidisciplinary nature of environmental studies.	1 st	
	2 nd	Definition, Scope and Importance. Need for public awareness. . Natural Resources: Renewable and Non-Renewable Resources: Natural resources and associated problems		
	3 rd	a) Forest Resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people. (b) Water Resources- Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams benefits and problems.		
	4 th	(c) Mineral Resources- Use and exploitation, environmental effects of extracting and using mineral resources, case studies		
2 nd	5 th	(d) Food Resources- World Food Problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies	2 nd	
	6 th	e) Energy Resources- Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, case studies.		

	7 th	f) Land Resources- Land as a resource, land, degradation, man induced landslides, soil erosion and desertification.		
	8 th	Role of an individual in conservation of natural resources		
3 rd	9 th	Equitable use of resources for sustainable lifestyle.	3 rd	
	10 th	Assignment-I		
	11 th	Ecosystem- Concept of an ecosystem, Structure , ,		
	12 th	Ecosystem function of an ecosystem, Producers, consumers and decomposers,		
4 th	13 th	Food Chains, food webs and ecological pyramids	4 th	
	14 th	Energy flow in the ecosystem.Ecological succession		
	15 th	.. Introduction, types, characteristic features, structure and function of the following ecosystem		
	16 th	a. Forest Ecosystem b. Grassland Ecosystem		
5 th	17 th	c. Desert Ecosystem	5 th	
	18 th	d. Aquatic Ecosystems (ponds, streams, lakes, rivers, oceans, estuaries		
	19 th	Field Work: Visit to a local area		
	20 th	document Environment assets		
6 th	21 st	river/forest/grassland/ hill/ mountain. Visit to a local	6 th	
	22 nd	polluted site - - Urban		
	23 rd	/Rural/Industrial/Agricultural. Study of common plants		
	24 th	, insects and birds. Study of simple ecosystemspond		
7 th	25 th	river, hill, slopes etc. (Field work equal to 5 lecture hours).	7 th	
	26 th	UNIT TEST -I		
	27 th	Biodiversity and its conservation..		
	28 th	Introduction, Definition: genetic, species and ecosystem diversity		
8 th	29 th	Biogeographical	8 th	

		classification of India		
	30 th	Value of biodiversity: consumptive use, productive use,		
	31 st	. social, ethical, aesthetic and option values		
	32 nd	Biodiversity of global, National and local levels		
9 th	33 rd	India as a mega-diversity nation Hot spots of Biodiversity	9 th	
	34 th	Threats to biodiversity: Habitat loss, poaching of wild life, man-wildlife conflicts.		
	35 th	- In situ and Ex-Situ Endangered and endemic species of India.Conservation of Biodiversity		
	36 th	Environmental Pollution: Definition,		
10 th	37 th	(a) Air Pollution Cause, effects and control measures	10 th	
	38 th	Water Pollution Cause, effects and control measures		
	39 th	Soil Pollution Cause, effects and control measures		
	40 th	Marine Pollution Cause, effects and control measures		
11 th	41 st	Noise Pollution Cause, effects and control measures	11 th	
	42 nd	Thermal Pollution Cause, effects and control measures		
	43 rd	Nuclear Hazards Cause, effects and control measures		
	44 th	Solid waste management cause, effects and control measures - of urban and industrial wastes. Role of an individual in prevention of pollution.Pollution case studies		
12 th	45 th	. Disaster management: floods, earthquake, cyclone and landslides	12 th	
	46 th	Assignment-II		
	47 th	UNIT TEST-II		
	48 th	Social Issues and the Environment, From unsustainable to sustainable development, Urban problems related to energy,		

13th	49th	Water conservation, rain water harvesting, watershed management	13th	
	50th	Resettlement and rehabilitation of people: Its problems and concerns.		
	51st	Case Studies. Environmental ethics issues and possible solutions, Climate change, global warming, acid rain, ozone layer depletion		
	52nd	nuclear accidents and holocaust, Case studies.		
14th	53rd	Wasteland Reclamation, Consumerism and waste products, Environment Protection Act, Air (Prevention and Pollution) Act	14th	
	54th	Control of , Water (Prevention and Control of Pollution) Act, Wildlife Protection Act, Forest Conservation Act, Issues involved in enforcement of environmental legislation		
	55th	Public Awareness, Human population and the Environment,		
	56th	Population growth, variation among nations. Population explosion-Family Welfare Programme, Environment and human health,		
15th	57th	Human rights, Value Education, HIV/AIDS, Women and Child Welfare, Role of Information	15th	
	58th	Technology in Environment and Human Health, Case Studies		
	59th	Assignment-III		
	60th	UNIT TEST-III		