

**RAJA KISHORE CHANDRA ACADEMY OF
TECHNOLOGY,NILGIRI,BALASORE**

DEPARTMENT OF MECHANICAL ENGINEERING

LESSON PLAN

SUBJECT-ENVIRONMENTAL STUDIES

BRANCH-MECHANICAL

NAME OF THE FACULTY-ER.NIMAIN PRASAD DHAMUDIA

SEMESTER-3RD

SESSION- 2024-25

MODULE	DATE	LECTURE NO	TOPIC TO BE COVERED
01		1	Introduction & Definition of Environmental studies
		2	Multidisciplinary nature of Environmental studies
		3	Scope and importance of Environmental studies.
		4	Need for public awareness of Environmental studies.
02		5	Forest resources: Use and over-exploitation, deforestation, case studies.
		6	Timber extraction mining, Dams and their effects on forests and tribal people.
		7	Water resources; Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dam's benefits and problems.
		8	Mineral Resources: Use and exploitation, environmental effects extracting and using mineral resources.
		9	Food Resources: World food problems, changes caused by agriculture and overgrazing.
		10	Effects of modern agriculture, Fertilizers pesticides problems, water logging, salinity.
		11	Energy Resources: Growing energy need, renewable and non-renewable energy sources, use of alternate energy sources, case studies.
		12	Land Resources: Land as a resource, land degradation, man induces landslides, soil erosion and desertification.
		13	Role of individual in conservation of natural lifestyles.
		14	Equitable use of resources for sustainable lifestyles.
03		15	Concept of an ecosystem.
		16	Structure and function of an ecosystem
		17	Producers, consumers, decomposers.
		18	Energy flow in the ecosystems. Ecological succession.
		19	Food chain, food web and ecological pyramids.
		20	Introduction, types, characteristic features, structure and function of the following ecosystems.
		21	Forest ecosystems
		22	Aquatic ecosystems (ponds, streams lakes, rivers, oceans and estuaries.)
04		23	Introduction of Genetics, species and ecosystem diversity.
		24	Definition of Genetics, species and ecosystem diversity.
		25	Biogeographically classification of India.
		26	Value of biodiversity: consumptive use, productive use
		27	Value of biodiversity: social ethical, aesthetic and opt in values.
		28	Biodiversity at global, national and local level.

		29	Threats to biodiversity: Habitats loss, poaching of wild life, man wildlife conflicts.
		30	Revision & Class Test
05		31	Definition Causes, effects and control measures of: Air pollution.
		32	Definition Causes, effects and control measures of: Water pollution.
		33	Definition Causes, effects and control measures of: Soil pollution
		34	Definition Causes, effects and control measures of: Marine pollution
		35	Definition Causes, effects and control measures of: Noise pollution.
		36	Definition Causes, effects and control measures of: Thermal pollution
		37	Definition Causes, effects and control measures of: Nuclear hazards.
		38	Solid waste Management: Causes, effects and control measures of urban and industrial wastes.
		39	Role of an individual in prevention of pollution.
		40	Disaster management: Floods and earth quake.
		41	Disaster management: cyclone and landslides.
		42	Revision & Class Test
06		43	Unsustainable to sustainable development.
		44	Urban problems related to energy.
		45	Water conservation, rain water harvesting, water shed management.
		46	Resettlement and rehabilitation of people; its problems and concern.
		47	Environmental ethics: issue and possible solutions.
		48	Climate change, global warming, acid rain, ozone layer depletion
		49	Nuclear accidents and holocaust, case studies.
		50	Air (prevention and control of pollution) Act
		51	Water (prevention and control of pollution) Act.
		52	Public awareness of Social issues and the Environment
		53	Human population and the environment
		54	Population growth and variation among nations.
		55	Population explosion-family welfare program.
07		56	Environment and human health.
		57	Human rights
		58	Value education
		59	Role of information technology in environment and human health.
		60	Revision & CLASS TEST

SIGNATURE OF FACULTY MEMBER

SIGNATURE OF H.O.D