

Discipline :- <b>CIVIL, ELECT. &amp; MECH. ENGG.</b>	Semester:- <b>3rd</b>	Name of the Teaching Faculty:-  <b>TUSHAR RANJAN MOHANTA</b> LECTURER IN CHEMISTRY
Subject:- <b>ENVIRONMENTAL STUDIES</b>	No of Days/per Week Class Allotted :- <b>4</b>	Semester From date : 01/10/2021 To Date:8/01/2022  No of Weeks:- <b>15</b>
<b>Week</b>	<b>Class Day</b>	<b>Theory/ Practical Topics</b>
1 <sup>st</sup>	1 <sup>st</sup>	Definition, scope of Environmental studies
	2 <sup>nd</sup>	Multidisciplinary nature of environment
	3 <sup>rd</sup>	Importance
	4 <sup>th</sup>	Need for public awareness
2 <sup>nd</sup>	1 <sup>st</sup>	Natural resources and associated problems.
	2 <sup>nd</sup>	Forest resources: Use and over-exploitation, deforestation, case studies, Timber extraction mining
	3 <sup>rd</sup>	Forest resources: dams and their effects on forests and tribal people.
	4 <sup>th</sup>	Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water
3 <sup>rd</sup>	1 <sup>th</sup>	Water resources: dam's benefits and problems
	2 <sup>nd</sup>	Mineral Resources: Use and exploitation, environmental effects of extracting and using mineral resources
	3 <sup>rd</sup>	Food Resources: World food problems, changes caused by agriculture and over grazing, effects of modern agriculture, fertilizers- pesticides problems, water logging, salinity
	4 <sup>th</sup>	Energy Resources: Growing energy need, renewable and non renewable energy sources, use of alternate energy sources, case studies
4 <sup>th</sup>	1 <sup>st</sup>	Land Resources: Land as a resource, land degradation, man induces landslides, soil erosion and desertification
	2 <sup>nd</sup>	Role of individual in conservation of natural resources. Equitable use of resources for sustainable life styles
	3 <sup>rd</sup>	Concept of an eco system. Structure and function of an eco system.
	4 <sup>th</sup>	Producers, consumers, decomposers
5 <sup>th</sup>	1 <sup>st</sup>	Energy flow in the eco systems
	2 <sup>nd</sup>	Ecological succession
	3 <sup>rd</sup>	Food chains, food webs and ecological pyramids
	4 <sup>th</sup>	Introduction, types, characteristic features, structure and function of Forest ecosystem
6 <sup>th</sup>	1 <sup>st</sup>	Introduction, types, characteristic features, structure and function of Aquatic eco systems (ponds, streams)
	2 <sup>nd</sup>	Introduction, types, characteristic features, structure and function of Aquatic eco systems (rivers, oceans, estuaries)
	3 <sup>rd</sup>	Introduction: Biodiversity and it's Conservation
	4 <sup>th</sup>	Definition: genetics, species and ecosystem diversity
7 <sup>th</sup>	1 <sup>st</sup>	Biogeographically classification of India
	2 <sup>nd</sup>	Value of biodiversity: consumptive use, productive use
	3 <sup>rd</sup>	Value of biodiversity: social ethical, aesthetic and optin values
	4 <sup>th</sup>	Biodiversity at global, national and local level

8 <sup>th</sup>	1 <sup>st</sup>	Threats to biodiversity: Habitats loss, poaching of wild life
	2 <sup>nd</sup>	Threats to biodiversity: man wildlife conflicts.
	3 <sup>rd</sup>	Air pollution: Causes, effects
	4 <sup>th</sup>	Air pollution: Control measures
9 <sup>th</sup>	1 <sup>st</sup>	Water pollution: Causes, effects
	2 <sup>nd</sup>	Water pollution: Control measures
	3 <sup>rd</sup>	Soil pollution
	4 <sup>th</sup>	Marine pollution
10 <sup>th</sup>	1 <sup>st</sup>	Noise pollution
	2 <sup>nd</sup>	Thermal pollution
	3 <sup>rd</sup>	Nuclear hazards
	4 <sup>th</sup>	Solid waste Management: Causes, effects and control measures of urban and industrial wastes.
11 <sup>th</sup>	1 <sup>st</sup>	Role of an individual in prevention of pollution
	2 <sup>nd</sup>	Disaster management: Floods, earth quake, cyclone and landslides
	3 <sup>rd</sup>	Form unsustainable to sustainable development
	4 <sup>th</sup>	Urban problems related to energy
12 <sup>th</sup>	1 <sup>st</sup>	Water conservation, rain water harvesting, water shed management
	2 <sup>nd</sup>	Resettlement and rehabilitation of people; its problems and concern
	3 <sup>rd</sup>	Environmental ethics: issue and possible solutions.
	4 <sup>th</sup>	Climate change, global warming, acid rain
13 <sup>th</sup>	1 <sup>st</sup>	Ozone layer depletion, nuclear accidents and holocaust, case studies.
	2 <sup>nd</sup>	Air (prevention and control of pollution) Act
	3 <sup>rd</sup>	Water (prevention and control of pollution) Act
	4 <sup>th</sup>	Public awareness
14 <sup>th</sup>	1 <sup>st</sup>	Population growth
	2 <sup>nd</sup>	Population explosion- family welfare program.
	3 <sup>rd</sup>	Environment and human health.
	4 <sup>th</sup>	Human rights.
<b>15<sup>th</sup></b>	1 <sup>st</sup>	Value education
	2 <sup>nd</sup>	Role of information technology in environment
	3 <sup>rd</sup>	Role of information technology in Human health
	4 <sup>th</sup>	Previous Year Question paper discussion