

SCHEME OF COURSE WORK

Course Details:

COURSE TITLE	ENVIRONMENTAL SCIENCE		
COURSE CODE	22BC11Z1	L T P C	2 0 0 0
PROGRAM	B.Tech		
SPECIALIZATION	Common to all Branches		
SEMESTER	II		
PREREQUISITES			
COURSES TO WHICH IT IS A PREREQUISITE	N/A		

Course Outcomes (COs):

1	Identify the various resources available and explain their conservation techniques.
2	Classify, describe and explain the concepts of ecosystem, biodiversity and their conservation.
3	Categorize and explain different types of pollution and their control methods.
4	Identify the different types of social issues caused due to today's development and also describe the relevant facts.
5	Assess the effects of population and its growth on environment and human health.

Assessment Methods	Assignment/ Quiz/ Seminar / Case Study/ Mid-Test / End Exam
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Course Outcome Versus Program Outcomes:

COs	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2	PSO3
CO 1	3		3		3			2			2		3		
CO 2		2		3		2			3	2		2			3
CO 3	3		2		3		2		2		2		2		
CO 4	3					3			3			2		3	
CO 5	3	2	2		2	3			2						2

Teaching-Learning & Evaluation

Week	Topic/Contents	Course Outcomes	Sample questions	Teaching learning strategy	Assessment method & schedule
1	Renewable and Resources.	CO-1	1. What is an environment? Enumerate and discuss the various segments of environment in brief.	Lecture	Assignment (Week 4) Mid-Test 1 (Week 9) Quiz-1 (Week-8)
2	Food chains, food webs and ecological pyramids	CO-1	1. What is the impact of food chains on humans	Lecture	Assignment (Week 4) Mid-Test 1 (Week 9) Quiz-1 (Week-8)
3	Concept of an ecosystem	CO-2	1. Explain the concept of ecosystem in brief	Lecture	Mid-Test 1 (Week 9) Quiz-1 (Week 9)
4	Structure and function of the following ecosystem, Threats to biodiversity	CO-2	1. Discuss about various threats to biodiversity	Lecture	Assignment (Week 4) Mid-Test 1 (Week 9) Quiz-1 (Week 8)
5	Bio-geographical classification of India, Threats to biodiversity	CO-2	1. Write short notes on Genetic biodiversity, Species biodiversity, Ecosystem biodiversity	Lecture	Mid-Test 1 (Week 9) Quiz-1 (Week 8)
6	Endangered and endemic species of India, Conservation of biodiversity	CO-2	1. What is the main objective of conservation of biodiversity? State and explain the two basic approaches to the wildlife conservation	Lecture	Mid-Test 1 (Week 9) Quiz-1 (Week 8)

7	Conservation of biodiversity	CO-2	1. What do you understand conservation of biodiversity? Discuss the strategies conservation of biodiversity	Lecture	Mid-Test1 (Week9) Quiz-1 (Week8)
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8	In-situ and Ex-situ Conservation of biodiversity	CO-2	1. Explain in-situ and ex-situ conservation along with their merits and limitations	Lecture	Mid-Test 1 (Week 9) Quiz-1 (Week 8)
9	Mid-Test 1				
10	Definition, Cause, effects and control measures of a) Air pollution b) Water pollution c) Soil pollution d) Marine pollution e) Noise pollution f) Thermal pollution g) Nuclear hazards	CO-3	1. Explain a) Air pollution b) Water pollution c) Soil pollution d) Marine pollution e) Noise pollution in detail	Lecture	Assignment 2 (Week 13) Mid-Test 2 (Week 18)
11	Causes, effects and control measures of urban and industrial wastes. Role of an individual in prevention of pollution	CO-3	1. What is the role of individual in prevention of pollution	Lecture	Assignment 2 (Week 13) Mid-Test 2 (Week 18)
12	From Unsustainable to Sustainable development, Protection Act, Wildlife Protection Act.	CO-4	1. Explain about wildlife protection act in detail	Lecture	Assignment 2 (Week 13) Mid-Test 2 (Week 18)
13	Population growth, Variation among Nations. Population explosion in Family	CO-4	1. Explain population Explosion in detail.	Lecture	Assignment 2 (Week 13) Mid-Test 2 (Week 18)
14	Welfare Programme. Environment and Human health. Human Rights Value Education.- HIV/AIDS	CO-5	1. Explain about HIV/AIDS campaign.	Lecture	Mid-Test 2 (Week 18) Quiz-2/Seminar (Week 17)
15	River/forest grassland/hill/mountain	CO-5	Field Visit	Lecture	Mid-Test 2 (Week 18) Quiz-2/Seminar (Week 17)

16	Urban/Rural/industrial/Agricultural Study of common plants, insects,	CO-5	Field Visit	Lecture	Mid-Test2 (Week18) Quiz-2/Seminar (Week17)
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17	Birds. - Study of simple ecosystems - pond, river, hillslopes	CO-5	Field Visit	Lecture	Mid-Test2
18	Mid-Test2				
19/20	ENDEXAM				