

Q.No.	Questions	CO	Bloom Taxonomy Category	Marks
Section I				
1	Short Answer type questions.			
a	What is an ecosystem? List and describe its primary components. Mention at least two key functions of an ecosystem.	CO1	Remember	4 x 5 = 20
	or			
b	Define: i. Acid drainage ii. Heavy metal Contamination	CO1	Remember	
	Differentiate Greenhouse effect & Point source & non-point source	CO2	Analyze	
c	or			
	Illustrate the structure of an ecosystem using a labeled diagram. Briefly describe its major functions.	CO2	Remember	
	Outline the major stages in sewage treatment. How does each stage help in reducing water pollution from domestic and industrial sources?	CO3	Understand	
d	or			
	Distinguish the different types of effluents in water pollution.	CO3	Analyze	
	Define the Corporate Social Responsibility (CSR). Discuss the benefits of CSR.	CO4	Remember	
	Discuss about the reclamation & rehabilitation of O/C mines.	CO4	Understand	
Section II				
	Long Answer type questions.			
2	Describe the importance of forest conservation in the context of mining. Do you agree that conservation efforts should be prioritized? Justify your viewpoint.	CO1	Apply	3 x 10 = 30
	or			
3	Analyze the concept of sustainable development and illustrate its importance for future generations with relevant examples, highlighting its role in balancing environmental, economic, and social needs.	CO1	Understand	
	Compare and contrast acid rain and global warming. What are their causes, effects, and preventive strategies?	CO2	Evaluate	
4	or			
	Discuss the significance of dust consolidation techniques in mining operations and evaluate their effectiveness in minimizing air pollution and improving environmental conditions.	CO2	Understand	
5	Explain the major components of a Mine Closure Plan. Briefly explain their roles in environmental sustainability.	CO4	Understand	
	or			
	Write down the key provisions of the Water (Prevention and Control of Pollution) Act, 1974, and analyze its role in regulating water quality within mining operations.	CO4	Understand	
Section III				
	Application based questions			
5	Examine the relationship between the hydrological cycle and water management in mining, emphasizing key processes such as precipitation, infiltration, surface runoff, groundwater recharge, and their impact on water usage and pollution control.	CO3	Create	1 x 20 = 20
	or			
	A wastewater effluent has a BOD ₅ of 95 mg/L and a reaction rate constant of 0.18 per day. Determine the ultimate BOD in mg/L.	CO3	Apply	

COURSE OUTCOME

CO1 Understand the sustainable development and environmental as well as ecological conservation along with mining activities.

CO2 Learn the composition of mine and atmospheric air and the source of pollutants of air, water and sound.

CO3 Apply the knowledge on control of pollution of water and its treatment for purification using important parameters such as-BOD, COD and DO.

CO4 Apply the knowledge on environmental impact assessment of the project and laws related to land acquisition and rehabilitation as well as mine closure and corporate social responsibility.