

CIVIL ENGINEERING

QUESTION BANK

Course Title : SOLIDWASTEMANAGEMENT

Course Code : 23CE716

Regulation : NR23

UNIT-V

Hazardous waste Management

S.No	Questions	BT	CO	P O
Part - A (Short Answer Questions)				
1	Define hazardous waste.	L2	C05	2
2	List the major sources of hazardous waste.	L4	C05	2
3	What are the characteristics of hazardous waste?	L6	C05	2
4	Define risk assessment.	L5	C05	2
5	What is a secured landfill?	L1	C05	2
6	What is hazardous waste incineration?	L6	C05	6
7	Define biomedical waste.	L1	C05	6
8	What is e-waste?	L1	C05	6
9	Mention the types of nuclear waste.	L2	C05	4
10	What is industrial waste management?	L1	C05	4
Part - B (Long Answer Questions)				
1 1	a) Define hazardous waste. Explain the various sources and characteristics of hazardous wastes. Discuss their classification and importance of proper management.	L2	C05	5
	b) Describe the physical, chemical, and biological characteristics of hazardous wastes. How do these characteristics influence waste treatment and disposal methods?	L1	C05	1
1 2	a) What is risk assessment in hazardous waste management? Explain the steps involved in risk assessment, including hazard identification, exposure assessment, dose-response assessment, and risk characterization.	L5	C05	2
	b) Describe the various methods of hazardous waste disposal. Compare physical, chemical, biological, and thermal treatment techniques used for hazardous wastes.	L1	C05	1
1 3	a) Explain the design, construction, operation, and environmental safeguards of secured landfills used for hazardous waste disposal. Discuss their advantages and limitations.	L5	C05	2
	b) Discuss the principle and operation of hazardous waste incineration. Explain different types of incinerators, emission control systems, advantages, and disadvantages.	L1	C05	2
1 4	a) Explain the importance of monitoring in hazardous waste management. Discuss groundwater monitoring, leachate monitoring, air quality monitoring, and post-closure monitoring of disposal sites.	L5	C05	2
	b) Define biomedical waste. Explain the sources, segregation, collection, transportation, treatment, and disposal methods of biomedical wastes with suitable examples.	L6	C05	2
1 5	a) What is E-waste? Discuss its sources, composition, environmental impacts, recycling methods, resource recovery techniques, and	L2	C05	6

		challenges in E-waste management.			
	b)	Explain the sources, classification, characteristics, and hazards of nuclear wastes. Discuss the methods of storage, treatment, transportation, and disposal of radioactive wastes.	L1	C05	2
1 6	a)	Discuss industrial waste management in detail. Explain waste minimization, recycling, resource recovery, cleaner production technologies, treatment methods, and sustainable industrial waste management practices.	L6	C05	2
	b)	Discuss the effects of hazardous wastes on the environment and human health. Explain their impact on air, water, soil, ecosystems, and public health.	L4	C05	5