Reg. No.													

Question Paper Code	11764

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL/MAY 2023

Eighth Semester

Civil Engineering

CE 8018 – GE0-ENVIRONMENTAL ENGINEERING

(Regulations 2017)

Duration: 3 Hours | Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks, K-Level, CO
1.	How are wastes classified?	2,K1,CO1
2.	Outline the factors governing the soil pollution interaction with clay minerals.	2,K2,CO1
3.	Define recycling.	2,K1,CO2
4.	What are geosynthetics?	2,K1,CO3
5.	Compare diffusion and dispersion.	2,K2,CO4
6.	Define advection.	2,K1,CO4
7.	Define solidification.	2,K1,CO5
8.	What are the methods to be adapted for stabilizing organic wastes?	2,K1,CO5
9.	Define Bioremediation.	2,K1,CO6
10.	Outline about airsparging.	2,K2,CO6

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11.	a)	Explain the failures of foundation due to waste movement.	13, K2,CO1
		OR	
	b)	Explain carbon and nitrogen cycles with neat sketch.	13, K2,CO1
12.	a)	Explain the process of safe disposal of wastes in India.	13, K2,CO2
		OR	
	b)	Explain briefly the cover slope stability of landfills.	13, K2,CO2
13.	a)	Summarize the methods of contaminant transport and the factors that decide the rate of transport in subsurface?	13, K2,CO4
		OR	
	b)	Explain in detail about the groundwater pollution and its monitoring process.	13, K2,CO4

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

14. a) Explain the various methods to be adapted for stabilizing inorganic wastes. *13, K2,CO5*

OR

b) Explain the types of encapsulation process. *13, K2,CO5*

15. a) Explain the insitu and exsitu remediation process with its advantages and disadvantages. *13, K2,CO6*

OR

b) Explain the process of Bio-venting with a neat sketch. *13, K2,CO6*

PART - C (1 × 15 = 15 Marks)

16. a) Explain about containment systems at solid waste disposal sites. *15,K2,CO3*

OR

b) Explain how geosynthetics acts as liner system in solid waste Management. *15,K2,CO3*