Course Code: 1960124 **Roll No:** **MLRS-R19**

MARRI LAXMAN REDDY
INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(AN AUTONOMOUS INSTITUTION)
(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)
Accredited by NBA and NAAC with 'A' Grade & Recognized Under Section2(f) & 12(B)of the UGC act,1956

III B.Tech II Sem Regular End Examination, June 2022

Environmental Engineering

(Civil Engineering)

Time: 3 Hours. **Max. Marks: 70**

Note: 1. Question paper consists: Part-A and Part-B.
2. In Part – A, answer all questions which carries 20 marks.
3. In Part – B, answer any one question from each unit.
Each question carries 10 marks and may have a, b as sub questions.

PART- A

(10*2 Marks = 20 Marks)

1.	a)	Write about sources of water.	2M	CO1	BL1
	b)	Define intakes and infiltration galleries.	2M	CO1	BL1
	c)	Distinguish between coagulation and flocculation.	2M	CO2	BL4
	d)	Write down the types of disinfections in treatment of water.	2M	CO2	BL3
	e)	Define BOD. Give expression for first stage BOD.	2M	CO3	BL3
	f)	Write about flushing tanks.	2M	CO3	BL2
	g)	What is meant by sewage sickness?	2M	CO4	BL2
	h)	Explain aerobic and anaerobic sludge digestion.	2M	CO4	BL2
	i)	What are the various types and sources of air pollution?	2M	CO5	BL1
	j)	List the classification of air pollutants.	2M	CO5	BL5

PART- B

(10*5 Marks = 50 Marks)

2	a)	Explain in detail about the population forecasting methods.	5M	CO1	BL4
	b)	By using Incremental increase method of population forecasting find out the probable population of a town in 2050AD for the given data below.	5M	CO1	BL3

Year	1980	1990	2000	2010	2020
Population	39000	54000	65000	83000	117000

OR

3		Discuss in detail different water quality parameters and their testing.	10M	CO1	BL2

4	a)	Briefly discuss the theory of filtration.	5M	CO2	BL2
	b)	What is Disinfection? Explain the Break Point Chlorination.	5M	CO2	BL4
		OR			
5		Discuss different types of layouts of water distribution system with neat sketches.	10M	CO2	BL5
6	a)	Briefly discuss the advantages and disadvantages of combined system of sewage.	5M	CO3	BL2
	b)	Compare the differences between one pipe and two pipe systems.	5M	CO3	BL4
		OR			
7		Explain different systems of plumbing.	10M	CO3	BL4
8	a)	What is ASP? Give the advantages and disadvantages of it.	5M	CO4	BL1
	b)	Write a note on sludge conditioning. Why elutriation is necessary before chemical conditioning?	5M	CO4	BL3
		OR			
9		Design an oxidation pond for treating sewage for a town of 20,000 persons. Sewage flow = 200 lpcd, BOD of raw sewage=300 mg/l, Organic loading rate 300kg/hectare/day and depth of pond = 1.2m.	10M	CO4	BL4
10	a)	Explain the causes and effects of inversion of atmosphere.	5M	CO5	BL2
	b)	Write a note on gravity settlers.	5M	CO5	BL1
		OR			
11		Write a detail note on control of particulates and control of gaseous pollutants.	10M	CO5	BL4

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