Question Paper Code: R18A32CE06

R18

ANURAG Engineering College

(An Autonomous Institution)

III B.Tech II Semester Supplementary Examinations, December-2024

ENVIRONMENTAL ENGINEERING

(CIVIL ENGINEERING)

Time: 3 Hours **Max. Marks: 75**

Section – A (Short Answer type questions) (25 Marks)

Answer All Questions		Course Outcome	B.T Level	Marks
1.	What is meant by Per capita demand? How it is determined?	CO1	L1	3M
2.	What are intakes and types of intake structure?	CO1	L2	2M
3.	What are the various methods of purification of water?	CO2	L1	2M
4.	What are discrete and flocculent particles?	CO2	L2	3M
5.	What are various methods of distribution system?	CO3	L1	2M
6.	Differentiate Combined and Separate sewerage system	CO3	L2	3M
7.	What is supernatant liquid	CO4	L1	2M
8.	What are the hydraulic formula used for sewage flow	CO4	L2	3M
9.	Write any three point about Objectives of sewage treatment	CO5	L1	2M
10.	List few methods of sewage disposal	CO5	L2	3M

Section B (Essay Questions)

Answer all questions, each question carries equal marks. **(5 X 10M = 50M)**

11. A) Population of a town as obtained from census report is tabulated below: CO1 L3 10M

Year	1975	1985	1995	2005	2015
Population	80000	71500	86000	98500	98000

Estimate the population of the town in the year 2025, 2035 and 2045 by arithmetical, geometrical and incremental methods.

OR

B) What are the variations in rate of demand of water and its effects on design of water supply schemes and explain. CO1 L3 10M

12. A) Illustrate the working of a rapid sand gravity filter with neat sketch. CO2 L3 10M

OR

B) Explain the different settling zones in a sedimentation tank and brief on the factors affecting sedimentation. CO2 L3 10M

13. A) Explain the chemistry behind corrosion and brief the different methods of preventing corrosion in pipes. CO3 L3 10M

OR

B) Explain about the method of sewage collection with their merits and Demerits. CO3 L3 10M

14. A) Explain about the growth pattern of biological microorganism. CO4 L3 10M

OR

B) Explain any five-sewer appurtenance used in sewerage system with neat diagram. CO4 L3 10M

15. A)	Explain about sludge digestion tank with neat diagram and design consideration.	CO5	L3	10M
	OR			
B)	Explain briefly about the working principle and design of septic tank.	CO5	L3	10M