

III B. Tech I Semester Supplementary Examinations, June/July-2022
ENVIRONMENTAL ENGINEERING – II

(Civil Engineering)

Time: 3 hours

Max. Marks: 75

Answer any **FIVE** Questions **ONE** Question from **Each unit**

All Questions Carry Equal Marks

UNIT-I

1. a) State the merits and demerits of Separate system of sewage and Combined system of sewage. [8M]
b) What is partially combined system of sewage? Why it is considered most suitable for Indian conditions? [7M]

(OR)

2. a) Write short note on the addition due to Infiltration and subtraction allowance in the sewage quantity. [8M]
b) Describe the method of estimating sanitary sewage of a city. [7M]

UNIT-II

3. a) What points should be kept in mind while locating the site of pumping stations? What are the requirements of a sewage pump? [8M]
b) With the help of a neat diagram describe pneumatic ejectors. [7M]

(OR)

4. a) Explain about drainage system in hotels. [8M]
b) Name the various types of sanitary fittings? Describe any one with the help of a neat diagram. [7M]

UNIT-III

5. a) Derive an expression for first stage BOD exertion. Why COD values are always higher than BOD values? [8M]
b) Calculate BOD of sewage sample if the initial DO, final DO and dilution percentage are 10 mg/l, 2 mg/l and 1% respectively. [7M]

(OR)

6. a) What are the two mechanisms known to contribute oxygen to surface waters? [8M]
b) Write about Disposal by Dilution. [7M]

UNIT-IV

7. a) What is the purpose of screenings in sewage? [8M]
b) Compare and contrast Activated Sludge Process and Trickling Filter. [7M]

(OR)

8. a) How the disposal of skimmings is done. [8M]
b) Explain about (i) aerated lagoon (ii) oxidation ponds. [7M]



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SET - 1

UNIT-V

9. a) What are the important components of septic tank design? [8M]
Explain.
- b) Define Sludge Volume Index and explain its significance. [7M]

(OR)

10. a) Discuss about the removal of phosphates. [8M]
- b) Write the working principle of septic tank with a neat sketch. [7M]

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