

Roll No.

24381

**B. Tech 6th Semester (Civil)
Examination – May, 2018**

SEWAGE AND SEWAGE TREATMENT

Paper : CE-308-F

Time : Three Hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions in total at least *one* from each Section. Question No. 1 is compulsory. All questions carry equal marks.

1. (a) What is meant by hydraulic equivalent section ?
Give relation between circular section and egg shaped section.
- (b) What is the importance of seeding in BOD test ?
- (c) Define the principle of Grit Chamber.
- (d) What are the objectives of providing sewage treatment ?
- (e) What is photochemical smog ? 5 × 4 = 20

UNIT - I

2. (a) Design a sewer to sewer a population of 36000; the daily per capita water supply allowance being 135 liters of which 80 percent find its way into the sewer ? The slope available for the sewer to be laid is 1 in 625 and the sewer should be designed to carry *four* times the dry weather flow when running full. What would be the velocity of flow in the sewer when running full ? 10
- (b) Write the laying procedure for sewers. 10
3. (a) Write the test for sewer required for straightness. 10
- (b) Enlist the sanitary fittings required for a building. 10

UNIT - II

4. (a) Discuss the Indore method of sewage disposal. 10
- (b) What do you understand self purification ? Draw oxygen sag curve. 10
5. (a) What is sludge digestion process and what are the factors affecting it ? 10
- (b) Explain the test for check the characteristics of sewage. 10

UNIT - III

6. (a) Distinguish between LRTE and HRTE. 10
(b) Why aeration is required in ASP ? What are its methods ? 10
7. (a) Write the working of aeration lagoons. 10
(b) Discuss the principle and working of Imhoff tank. 10

UNIT - IV

8. (a) What is noise mapping? Discuss it. 10
(b) Write the effects of noise in residential and Industrial buildings. 10
9. (a) What is meant by smog ? Discuss its causes and effects. 10
(b) Explain stable and unstable atmosphere. 10
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