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B. Tech. (Civil) (Elective-I) 6th Semester (G Scheme)  
Examination, July-2022

WASTE WATER TREATMENT

Paper-PEC-CEEL-302-G

Time allowed : 3 hours]

[Maximum marks : 75

Before answering the questions, candidate 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 all, selecting one question from each section. Question No. 1 is compulsory.*

*All questions carry equal marks.*

1. Describe the following : 15
- (a) Sludge
  - (b) Velocity in sewer
  - (c) Sanitary Fitting
  - (d) Oxygen Demand
  - (e) Flocculation
  - (f) Oxygen sag curve

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**Section-A**

2. (a) What are the importance and necessity of sanitation ? 7
- (b) What are the factor affecting the dry weather flow ? 8
3. (a) Explain in detail joints and sewer appurtenances. 8
- (b) Explain the testing of sewer lines. 7

**Section-B**

4. (a) Explain the types of pipes used in drainage. 7
- (b) Explain in details system of plumbing. 8
5. (a) What are the physical, chemical and biological characteristics ? 8
- (b) Explain the oxygen demand in detail. 7

**Section-C**

6. (a) Explain the primary treatment of sewage. 8
- (b) Explain the design of primary sedimentation tank. 7

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7. (a) Difference between Aerobic and Anaerobic Treatment Process. 7
- (b) Explain the Aerated lagoon and septic tank functions. 8

**Section-D**

8. (a) What is the objective of sludge treatment ? 7
- (b) Explain the working of sludge drying bed. 8
9. (a) What are the standards of waste water disposal ? 7
- (b) Explain in detail sewage farming and soil dispersion system. 8

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