

Roll No. :

Total No. of Questions : 9] [Total No. of Pages : 3

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**B.Tech. (Civil) 6th Semester (Supplementary)
Examination, July-2021
(G Scheme)
(Elective-I)**

WASTE WATER TREATMENT

Paper-PEC-CEEL-302-G

Time : Three Hours]

[Maximum Marks : 75

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 all, selecting one question from each Section. Question No. 1 is compulsory. All questions carry equal marks.

1. Describe the following :

- (a) Sewage
- (b) Dry Weather flow
- (c) Storm water sewers

- (d) Reuse of treated water
 - (e) Coagulations
 - (f) Sewage Farming
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Section-A

2. (a) What are the sewerage system used now-a-days ?
 - (b) What are the flow variation and their effects on design of sewerage system ?
- 7,8
3. (a) Explain in detail different types of sewers.
 - (b) Explain the material used for sewer construction.
- 8,7

Section-B

4. (a) Explain the principle of house drainage.
 - (b) Explain in detail house drainage plan and ventilation of house drainage.
- 7,8
5. (a) What are the guidelines for reuse of treated waste water ?
 - (b) Explain Indian standards for disposal of effluents into Inland Surface sources and on land.
- 8,7

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Section-C

6. (a) Explain the Screening and grit removal units.
 - (b) What are the objectives conventional treatment units ?
- 8,7
7. (a) Explain in detail Activated sludge process.
 - (b) Explain the UP-Flow Anaerobic sludge blanket process.
- 7,8

Section-D

8. (a) What is the digestion and disposal of treated sludge ?
 - (b) Explain the factor affecting the sludge digestion.
- 7,8
9. (a) What are the modes of disposal of treated sludge ?
 - (b) Explain in detail self-purification of streams.
- 7,8

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