

Total number of printed pages = 3

19/4th Sem/DCE 402

2022

**WATER SUPPLY AND SANITARY  
INSTALLATION**

Full Marks – 100

Time – Three hours

The figures in the margin indicate full marks  
for the questions.

Answer any *five* questions.

1. (a) Define sewer ? Write a note on different types of sewer. What should be the characteristics of materials to be used for sewers? 10
- (b) Describe in brief the various types of water carriage system ? Compare the continuous and intermittent systems of water. 10
2. (a) Describe the procedures for laying and testing of sewer. 10
- (b) Briefly explain the various types of valves in water work practice. 5
- (c) Explain in brief preventive measures of pipe corrosion. 5

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3. (a) Mention the various types of pumps. Describe with the neat sketch, the working of centrifugal pump. 10
- (b) Differentiate between : 10
- (i) Catch basin and Clean out
- (ii) Access shaft and Working chamber.
4. (a) Explain the various principles that should be kept in mind while designing a house drainage system. 6
- (b) Explain the various types of traps commonly used. 6
- (c) Describe with the help of a neat sketch, the components of a septic tank, along with the functions of each. 8
5. (a) Define the following terms : 1×10=10
- (i) Sewage
- (ii) Sullage
- (iii) Vent pipe
- (iv) Crown corrosion
- (v) Self-cleansing velocity
- (vi) Soil pipe





- (vii) Traps
  - (viii) Anti-siphonage pipe
  - (ix) Gully trap
  - (x) Timbering of trench.
- (b) What do you understand by sewer appurtenances, enumerate the various appurtenances commonly used ? 10
6. (a) Design a septic tank for the following data : 2×3=6  
No. of persons : 100  
Sewage/capita/day : 120 litres  
Desludging period : 1 year.
- (b) Explain the working of manhole with the help of a neat diagram. 6
- (c) Explain with the help of diagrams, various systems of plumbing used in house drainage. 8