

No. of Printed Pages : 4                      180742/170742/120742  
Roll No. .... /030742

**4th Sem / Civil, Brick Tech., Constr. Mgmt.,  
Highway Engg.**

**Subject:- Water supply and Waste Water Engineering  
/ Public Health Engg.**

Time : 3Hrs.                                              M.M. : 100

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 Water demand of a city includes  
a) domestic water demand  
b) fire and public use demand  
c) commercial and industrial demand  
d) all of the above
- Q.2 Aeration is done for the removal of  
a) colour                                      b) hardness  
c) turbidity                                      d) bad odour
- Q.3 A GI pipe has a coating of  
a) zinc                                              b) silver  
c) lead                                              d) aluminium
- Q.4 The lowering of pipes is to be done with the help of  
a) derrick                                      b) both a & b  
c) rope                                              d) none of the above

- Q.5 The waste which contain organic matter, light soil is called  
a) liquid waste                                      b) semi liquid Waste  
c) dry waste                                              d) can't say
- Q.6 Storm sewage is the flow of water  
a) runs over the ground  
b) evaporates through atmosphere  
c) percolates through ground  
d) all of above
- Q.7 The width of trench should be at least  
a) 75 mm                                              b) 300 mm  
c) 175 mm                                              d) none of these
- Q.8 PH- test of sewage determines the  
a) alkanity of sewage                                      b) Turbidity of sewage  
c) acidity of sewage                                      d) both a & b
- Q.9 \_\_\_\_\_ sludge is a sludge which remains for a longer period in the tank before removal.  
a) raw                                                      b) stale  
c) septic                                                      d) activated
- Q.10 The process of self purification depends upon  
a) sunlight  
b) temperature of sewage  
c) velocity of water  
d) all of the above

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## SECTION-B

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 What is public use demand?
- Q.12 The \_\_\_\_\_ impurities give colour, odour and turbidity to water.
- Q.13 \_\_\_\_\_ pipes are easy to join
- Q.14 Minimum cover for a water supply pipeline should be \_\_\_\_\_
- Q.15 The process of supporting the sides of trenches by wooden members is termed as \_\_\_\_\_ of trenches.
- Q.16 Define soil waste?
- Q.17 What is D.F.W?
- Q.18 Overflow weir is a common device used for storm relief works. (True/False)
- Q.19 Minimum numbers of filters required are \_\_\_\_\_
- Q.20 Sewer of small size are cleaned by \_\_\_\_\_

## SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Define per capita demand. What are the factors affecting per capita demand?
- Q.22 Explain various types of water demands
- Q.23 Draw a flow diagram of water supply system.
- Q.24 What are bacteriological tests done on water? Give its significance.
- Q.25 Explain the process of plain sedimentation. Also give its advantages.

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- Q.26 Differentiate between Dead End System and Grid Iron System.
- Q.27 Explain tests conducted for checking of pipes.
- Q.28 What are general principles for selection of pipes.
- Q.29 Explain water carriage system, give its disadvantages.
- Q.30 Explain ventilating shaft give its functions.
- Q.31 How lowering and handling of sewers is done?
- Q.32 Write a short note on B.O.D. Also give its limitations.
- Q.33 Write a short note on Sewage disposal by land treatment.
- Q.34 What is aeration tank? Explain with the help of diagram
- Q.35 What are traps? Give its classification. Also draw any three traps.

## SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 What is sedimentation with coagulation? Explain various units of coagulation sedimentation tank with the help of diagram.
- Q.37 Explain appurtenances used For controlling the flow of water. Also draw diagrams.
- Q.38 a) Explain the process of activated sludge.  
b) What are screens its type, also give its objectives. How cleaning and disposal of screening done?

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