

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

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

**Subject:- Water Supply and Waste Water Engineering /
PublicHealth 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: (CO2)
a) domestic water demand
b) commercial and industrial demand
c) fire and public use demand
d) all the above
- Q.2 For public water supply hard water is not used because: (CO3)
a) it consumes more soap
b) it is turbid
c) it possesses bad taste and odors
d) all the above
- Q.3 The first stage in water treatment is: (CO4)
a) sedimentation
b) filtration
c) disinfection
d) coagulation and mixing
- Q.4 The system which requires uniform rate of pumping is: (CO5)
a) pumping without storage system
b) gravitational system
c) pumping and storage system
d) all of the above

(1) 180742/170742/
120742/030742

- Q.5 The excess water from rainwater which runs off on the surface of the ground is called: (CO8)
a) waste water b) storm water
c) drain water d) none of the above
- Q.6 The velocity of sewer which is responsible for floating of suspended matters is called: (CO9)
a) self cleaning velocity
b) sewage velocity
c) limiting velocity
d) none of these
- Q.7 The gradient of sewer line should be proper for: (CO10)
a) smooth flow of sewage
b) gravity flow
c) natural flow
d) all of the above
- Q.8 The presence of excess of nitrates in water causes: (CO11)
a) typhoid b) malaria
c) dysentery d) Blue Baby disease
- Q.9 Nuisance due to disposal is: (CO12)
a) physical nuisance b) bacterial nuisance
c) chemical nuisance d) all of the above
- Q.10 The temperature of sewage as compared to temperature of water is: (CO12)
a) higher b) lower
c) equal d) cannot say

(2) 180742/170742/
120742/030742

SECTION-B

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

- Q.11 Turbidity is expressed in parts per million (PPM). (True/False) (CO3)
- Q.12 Slow sand filter require _____ area. (CO4)
- Q.13 Elevated reservoirs are commonly known as overhead tanks. (True/False) (CO5)
- Q.14 The pipeline should be laid in _____. (CO6)
- Q.15 Kitchen waste is _____. (CO7)
- Q.16 The manholes are provided to achieve the ventilation of sewers. (True/False) (CO8)
- Q.17 Anaerobic bacteria exist in the absence of _____. (CO11)
- Q.18 Semi circular drains are suitable for _____ discharges. (CO9)
- Q.19 The sewage if not treated will create _____. (CO12)
- Q.20 The digestion sludge is _____. (CO13)

SECTION-C

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

- Q.21 Explain daily and hourly variation in rate of demand of water. (CO2)
- Q.22 Explain various preventive measures for water borne disease. (CO3)
- Q.23 Give any five difference between slow sand filter and rapid sand filter. (CO4)
- Q.24 Define breakpoint chlorination with graph. (CO4)
- Q.25 Explain radial system for water distribution. (CO5)
- Q.26 What are the advantages and disadvantages of cast iron pipes? Explain. (CO5)

(3) 180742/170742/
120742/030742

- Q.27 What are the various steps involved during laying of pipes for sewers? Explain any one. (CO6)
- Q.28 Explain for operation of connection to the water main with neat sketch. (CO7)
- Q.29 Give any five difference between Water Carriage System and Conservancy System. (CO8)
- Q.30 What are the various points to be considered while selecting material for sewers. (CO9)
- Q.31 What are the different test conducted for sewer lines? Explain any one. (CO11)
- Q.32 What are the situations suitable for dilution? Explain. (CO12)
- Q.33 What is the difference between sludge digestion and sludge drying? Explain. (CO13)
- Q.34 What is Grit Chambers? What are objectives of Grit removal? Explain. (CO13)
- Q.35 Define the following terms: (CO14)
- i) sinks
 - ii) water closets
 - iii) urinal pot

SECTION-D

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

- Q.36 Explain jar test with neat sketch. Why it is performed? Explain. (CO4)
- Q.37 What are the various factors affecting per capita demand? Explain each factor. (CO2)
- Q.38 What did you understand by self purification of streams? What are the various factors affecting it, explain in detail. (CO12)

(**Note:** Course outcome/CO is for office use only)

(2140) (4) 180742/170742/
120742/030742