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4th Sem. Branch: Civil/Brick Tech./ Constr. Mgmt., Highway Engg.
Sub : Water supply & Waste water engineering/Public Health engineering

Time : 3 Hrs. **M.M. : 100**

SECTION-A

Note: Multiple Choice Questions. All Questions are compulsory. (10x1=10)

Q.1 Per capita consumption decreases: (CO2)

a) When use of metering system is adopted
b) Hot climate persist
c) Good quality water is supplied
d) All the above

Q.2 For removal of temporary hardness of water: (CO3)

a) Water is filtered b) Water is boiled
c) Lime is added d) Chlorination is done

Q.3 The process of purifying water by passing it through a bed of fine grained material is called (CO4)

a) Filtration b) Coagulation
c) Sedimentation d) Screening

Q.4 The safe and most reliable system in distribution of water is (CO5)

a) Gravity system b) Pumping system
c) Pumping & Storage system
d) All the above

Q.5 The system in which different types of waste collected manually is called: (CO8)

a) Conservancy system b) Water carriage system
c) Separate system d) Combined system

Q.6 The device which is used at the junction of main sewer ana branch sewer line is called : (CO9)

a) Flushing tank b) Manhole
c) Septic tank d) Soak pit

Q.7 The alignment of sewer line start from : (CO10)

a) Downstream end b) Upstream end
c) Any side d) None of the above

Q.8 B.O.D. means. (CO11)

a) Biological oxygen density
b) Bio-chemical oxygen density
c) Bio-chemical oxygen demand
d) Biological oxygen demand

Q.9 The situation suitable for disposal by dilution is :(CO12)

a) When dissolved oxygen is more in diluting water
b) When sewage is fresh
c) When dissolved oxygen is less in diluting water
d) None of above

Q.10 The purpose of sewage disposal is : (CO12)

a) To provide better sanitary conditions
b) To maintain healthy environment
c) To make the sewage harmless
d) All of the above

Section-B

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

Q.11 Pure water is also known as wholesome water (True/False) (CO3)

Q.12 Alum is used for _____. (CO4)

Q.13 Dead end system is also known as tree system (True/False) (CO5)

Q.14 The direction of pipe should not be changed. _____. (CO6)

Q.15 DWF stand for _____. (CO7)

Q.16 Self cleaning velocity does not depend upon the diameter of the sewer. (True/False) (CO8)

Q.17 Anaerobic bacteria exists in the absence of _____ (CO11)

Q.18 Rectangular section drains are suitable for _____ discharge (CO9)

Q.19 Screen are usually laid at an angle of _____(CO12)

Q.20 The capacity of sewer will be _____ if there are more obstructions. (CO13)

Section-C

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

Q.21 What are the factors responsible for the losses of water? Explain. (CO2)

Q.22 How turbidity test is conducted by using Jackson's turbidity meter? Explain. (CO3)

Q.23 What do you understand by optimum dose required for coagulation. By which method this dose is determined? (CO4)

Q.24 What is aeration? and explain its various functions. (CO4)

Q25 State the various advantages and disadvantages of Grid Iron system? (CO5)

Q.26 Write the various draw backs of intermittent system. (CO5)

Q.27 State in brief the process of Pressure Test conducted for checking of pipes? (CO6)

Q.28 What is the Principle of Sanitation? Explain. (CO8)

Q.29 Give the factors which affect sanitary sewage? (CO9)

Q.30 What do you mean by Obstruction Test? How it is conducted? Explain. (CO10)

Q.31 What are the various physical parameters of sewage? Explain any one. (CO11)

Q.32 Explain the disposal of sewage in sea water. (CO12)

Q.33 What are the different equipments used for sewage treatment? Explain any one. (CO13)

Q.34 What is Primary Clarifiers and their types, explain any one. (CO13)

Q.35 What are the necessary points for layout of house drainage? Explain. (CO14)

Section-D

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

Q.36 Define water treatment. What are the various objectives of water treatment? Explain. (CO4)

Q.37 What is population forecasting? Explain the various methods of population forecasting. (CO3)

Q.38 Explain the Oxidation pond. with construction details and design criteria (CO13)