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Roll No. 030742

4th Sem / CIVIL ENGINEERING/BRICK TECH/ Constr. Mgmt, Highway Engg.

Subject:- Water supply & 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 Under normal conditions, the average domestic consumption in India per person per day in litres is
a) 150 b) 135 (CO2)
c) 180 d) 215

Q.2 Chlorination of water is done for (CO4)
a) removal of sediments
b) removal of suspended solid
c) removal of hardness
d) removal of bacteria

Q.3 Asbestos pipes are joined by means of (CO5)
a) flanged joint
b) flexible joint
c) simplex joint
d) dresser coupling joint

Q.4 The process of supporting the sides of trenches by wooden members is termed as.....of trenches
a) excavation b) timbering (CO6)
c) setting out d) bedding

Q.5 The waste which include grass, furniture, wastepaper, waste fruits is called..... (CO8)

- a) dry waste b) rubbish
c) both a & b d) none of these

Q.6 Which one does not affect the sanitary sewage (CO9)

- a) population of area b) rain water
 - c) plan of area d) none of these

Q.7 Timbering of trenches is necessary for (CO10)

- a) supporting the sides of trenches
 - b) when water table rises
 - c) proper joints of sewer
 - d) both a & b

Q.8 The degree of turbidity can be measured by (CO11)

- a) Turbidity rod b) turbidimeter
c) both a & b d) none of these

Q.9 At about Moisture, the sludge become dry.

Q.10 The ratio of amount of diluting water to sewage is called (CO12)

- a) dilution factor
 - b) sewage factor
 - c) disposal factor
 - d) none of these

SECTION-B

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

- Q.11 What is design period ? (CO2)
Q.12 Explain screening ? (CO4)

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- Q.13 Sluice valve is also known as gate valve(True/False) (CO5)
- Q.14 The process of placing the excavated soil back into the trench all round the pipes is called..... (CO6)
- Q.15 Human excreta is a waste (CO8)
- Q.16 Masonry sewer are used when the size..... (CO9)
- Q.17 Water test is conducted for..... (CO10)
- Q.18 Aerobic bacteria takes free oxygen in a (CO11)
- Q.19 In primary clarifiers water is detained for.....hours (CO12)
- Q.20 Raw sludge contains..... of moisture content (CO13)

SECTION-C

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

- Q.21 What is population forecasting? Explain any two methods of population forecasting (CO2)
- Q.22 Explain variation in rate of demand (CO2)
- Q.23 What is hydrological cycle? explain diagrammatically (CO1)
- Q.24 Explain different types of impurities present in water (CO3)
- Q.25 Write a short note on sedimentation with coagulation (CO4)
- Q.26 What is water meter ? Give its advantage and disadvantages. (CO5)
- Q.27 Explain excavation of trench and what are precaution taken during excavation (CO6)

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- Q.28 Explain any five water supply fixture and their installations. (CO7)
- Q.29 Explain conservancy system give its advantages (CO8)
- Q.30 Explain construction of drop manhole and give its function (CO9)
- Q.31 Explain air test (CO10)
- Q.32 Write a short note explaining C.O.D. (CO11)
- Q.33 Write a short note on nuisance due to sewage disposal (CO12)
- Q.34 Explain the working of sludge digestion tank (CO13)
- Q.35 Draw and explain different types of cristerns. (CO14)

SECTION-D

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

- Q.36 What is filtration ? give its significance. Also explain type of filters. (CO4)
- Q.37 What is water distribution system ? Give its requirement and explain methods used for distributing water. Also explain different types of distribution layout (CO5)
- Q.38 a) Explain trickling filters with the help of diagram.
b) Explain skimming tanks give its objectives. Also explain its construction & disposal (CO13)

Note: Course Outcome (CO) mentioned in the question paper is for official purpose only.

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