Reg. No. :

Question Paper Code: 45105

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Fifth Semester

Civil Engineering

14UCE505 - WATER SUPPLY ENGINEERING

(Regulation 2014)

Duration: One hour   Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. Which source of water, among the following, is not a surface source?

    (a) river   (b) well   (c) ocean   (d) lake

2. Coincident draft in relation to water demand is based on

    (a) peak hourly demand   (b) maximum daily demand
    (c) maximum daily + fire demand   (d) greater of (a) and (c)

3. The formula which is most appropriate to the design of pressure pipes is

    (a) Darcy weisbach formula   (b) Mannings formula
    (c) Chezy's formula   (d) Dupuit's formula

4. Water hammer pressures can be reduced by using

    (a) Fast closing valves   (b) Slow closing valves
    (c) Critically closing time, valves (d) None of these

5. Sedimentation can remove in organic particles, having specific gravity upto, say

    (a) *2.65*   (b) 1.65   (c) 1.2   (d) *1.03*

6. The percentage of chlorine in fresh bleaching powder is about

    (a) 10-15   (b) 20-25   (c) 30-35   (d) 50-60

7. The suitable method for disinfection of swimming pool water is

   (a) ultra violet rays treatment   (b) lime treatment
   (c) chlorination   (d) potassium permanganate

8. Iron and manganese can be removed from water by

   (a) boiling   (b) aeration followed by coagulation
   (c) chlorination   (d) activated carbon

9. The water meter, which is installed on individual house connections, on municipal supplies, is

   (a) a velocity meter   (b) An inferential meter
   (c) a displacement meter   (d) None of these

10. The suitable layout for a water supply distribution system, for a city of roads of rectangular pattern is

   (a) dead end system   (b) grid iron system
   (c) ring system   (d) radial system

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Discuss the factors governing selection of particular sources of water. (8)

12. Describe in detail about the various joints that are used in cast iron pipes with

   neat sketches. (8)

13. A system of water has to purify the water for a town whose daily demand is 9×10^6 litres/day. Design the suitable sedimentation tank. Assume the velocity of flow as 22cm/min and the detention period as 8 hours. (8)

14. Discuss the Lime Soda process and Zeolite Process for removing permanent Hardness in water. (8)

15. How the detection of leakage in the underground distribution pipes is carried out? Discuss various methods in detail. (8)

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