Reg. No. : | | | | | | | | | | |

Question Paper Code: 55105

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

Fifth Semester

Civil Engineering

01UCE505 – WATER SUPPLY ENGINEERING

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. When fluoride concentration in water exceeds 1.5 mg/l or so, the disease that may cause is

   (a) Methemoglobinemia (b) Fluorosis
   (c) Dental carries in children (d) Poliomyelitis

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. The maximum pressure, which a pipe can withstand without any leakage, during hydrostatic pressure test, is called the

   (a) working pressure (b) test pressure
   (c) design pressure (d) hydrostatic pressure

5. The fine screens are generally not used these days, in water treatment, as the fine suspended particles are removed in

   (a) filtration (b) sedimentation
   (c) aeration (d) disinfection

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 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

10. 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

PART - B (5 x 16 = 80 Marks)

11. Given the following data, calculate the future population for the year 2030 by incremental increase method. (8)

Year	1970	1980	1990	2000	2010
Population	85000	110500	144000	184000	221000

12. Explain the different types of Intake structures. (8)

13. Enumerate the coagulation and flocculation process in detail. (8)

14. Explain the Zeolite method of water softening with its advantages. (8)

15. Discuss about the service reservoirs in detail. (8)