

7. Demineralisation is also known as CO1-U
 (a) de-ionization (b) de-chlorination
 (c) de-fluorination (d) Softening
8. Brackish Water refers to CO1-U
 (a) salt water (b) fluoride water (c) chloride water (d) sugar water
9. Which statement is correct with reference to “Grid Iron” water distribution system? CO1-U
 (a) Suitable for well-planned town and cities (b) Requires less number of sluice valves
 (c) cost of construction is low (d) all the above
10. Water is supplied all 24 hours in the day is referred as CO1-U
 (a) Continuous System (b) Intermittent System
 (c) Non-Gravity System (d) Gravity System

PART – B (5 x 2= 10 Marks)

11. Define BOD CO1-U
12. If the annual average hourly demand of the city is 1500 m³/h, what is the maximum hourly consumption (assume daily peak factor as 1.8 and hourly peak factor as 1.5) CO2-App
13. Define detention period. CO1-U
14. What are the methods of desalination? CO1-U
15. What are the layouts of water distribution systems? CO1-U

PART – C (5 x 16= 80 Marks)

16. (a) Explain about the Design Period for Planning of Water Supply Projects and write about the factors affecting the Design Period. Describe about the various Methods employed for Population Forecasting. CO1 - U (16)
- Or
- (b) Explain in brief different methods used for prediction of future population of a city, with reference to the design of a water supply system. CO1 - U (16)

17. (a) Analyse the different types of Pumps and Pipes used in Plumbing in terms of Water Supply. CO2 - App (16)

Or

- (b) A large service reservoir supplies water two colonies as under: CO2 - App (16)
 Colony A : Population 12000
 Colony B : Population 60000

Determine (a) the size of the supply conduits (b) the hydraulic gradient at which the pipelines should be laid. Assume average daily water consumption as 200litres/capita/day.

18. (a) Design a clariflocculator for a proposed water treatment plant with a daily demand of 80MLD and draw neat sketch of it. CO2 - App (16)

Or

- (b) Design a rapid sand filter required for a town having a population of 80000 with an average rate of demand 180LPCD. Assume data necessary. CO2 - App (16)

19. (a) Discuss the different methods of defluoridation. CO1 - U (16)

Or

- (b) Evaluate the merits and demerits of Adsorption, Nalgonda Technology and Reverse Osmosis. CO1 - U (16)

20. (a) Describe briefly about Appurtenances in the Distribution system. CO2 - U (16)

Or

- (b) Calculate the head losses and the corrected flows in the various pipes of a distribution network shown in figure. The diameter and the lengths of the pipes used are given against each pipe. Make use of Hardy – Cross method with William Hazen’s formula. Compute the corrected flow after two corrections. CO6 - App (16)



