

Programme: B. Tech

Course Name: Environmental Engineering - I

Course Code: ECE 358

Assignment – 2

Topics Covered – Unit 1 (CO1)

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1. Discuss the different water demands that need to be met while supplying water from a source by the municipality of a town.
2. Write a short note on how to reduce water losses in a distribution system.
3. Determine the volume of water required for fire fighting purposes for a town having a population of 2, 50,000. Use all the available formulae for calculating the demand.
4. Determine the volume of water required for fire fighting for a town for a period of 3 years with average fire duration being 50 minutes.
5. Derive and explain the different factors affecting per capita demand of water
6. With a neat sketch briefly explain the fluctuations in rate of demand. Explain Goodrich's formula in this context. Using this formula, calculate the variations for (a) monthly (b) weekly and (c) daily demands. Explain, the results for the variation
7. With appropriate sketches and figures (if necessary) explain (a) logistic method (b) ratio method and (c) comparative graphical method for population forecasting.
8. Write a short note on the master plan method.
9. Explain why the logistic curve method involves application of different other population forecasting methods.
10. Explain the concept of saturation population. In this context, explain why the method of population forecasting using this concept may be better suited for population forecasting than other methods