

II B. Tech II Semester Supplementary Examinations, February - 2022
ENVIRONMENTAL ENGINEERING - I
 (Civil Engineering)

Time: 3 hours

Max. Marks: 75

Answer any **FIVE** Questions each Question from each unit
 All Questions carry **Equal** Marks
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- 1 a) What are the factors effecting per capita consumption? [8M]  
 b) Write the significance & methods of population forecasting for a town. [7M]
- Or
- 2 a) Explain Arithmetical and incremental increasing methods in forecasting the population. [8M]  
 b) What is design period? Explain the advantages of design period. [7M]
- 3 a) Explain how would you determine the quality and yield from a deep well. [8M]  
 b) Describe the mass curve method of determine storage capacity of a service reservoir. [7M]
- Or
- 4 a) What is meant by spring? Explain in detail and construction. [8M]  
 b) What are the general factors to be considered in the design of a service reservoir? [7M]
- 5 a) Explain the terms coli form index and M.P.N. What is their significance? [8M]  
 b) Write a note on pH of water and residual chlorine. [7M]
- Or
- 6 a) Discuss briefly water quality standards for agriculture and construction. [8M]  
 b) Discuss "IS:10500-2012". [7M]
- 7 a) What is meant by surface overflow rate? Explain in detail. [8M]  
 b) Write any seven differences between slow sand filters and rapid sand filter. [7M]
- Or
- 8 a) Find the daily requirement of chemical required if alum dosage required to treat 20 MLD of water with an alkalinity 8.4 mg/l as  $\text{CaCO}_3$  is 55 mg/l. [8M]  
 b) What is plain sedimentation? Write the factors effecting sedimentation. [7M]
- 9 a) Discuss the water main appurtenances in a distribution system. [8M]  
 b) Write a note on ideal water supply. [7M]
- Or
- 10 a) Describe the various layouts of distribution network in water supply system. [8M]  
 b) Name the various pipes and fittings used in water distribution system. [7M]

