

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE- SEMESTER-VII EXAMINATION – WINTER 2025****Subject Code: 3160611****Date: 17-11-2025****Subject Name: Environmental Engineering****Time: 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

**MARKS**

Q.1 (a) Give the classification of different sources of water. 03  
 (b) Give the sanitary significance of color and turbidity in water 04  
 (c) Explain how can you come to a final quantity of water required to be supplied to a town or city? 07

Q.2 (a) Explain in brief Arithmetic increase method of population forecasting. 03  
 (b) What are intake towers? Differentiate between ‘dry’ and ‘wet’ intake towers. 04  
 (c) Give IS standards for drinking water in India. 07

**OR**

(c) Write a short note on “Rapid sand filter.” 07

Q.3 (a) Differentiate between “BOD and COD”. 03  
 (b) Define the following terms.  
     (1) Relative stability. (2) population equivalent. 04  
 (c) Draw a complete flow diagram of wastewater treatment plant and describe The function of each unit. 07

**OR**

Q.3 (a) Explain in brief Aerobic and Anaerobic process 03  
 (b) Write a brief note on various physical properties of waste water 04  
 (c) Write a short note on “Activated sludge process.” 07

Q.4 (a) Explain in brief Nanhi trap. 03  
 (b) Discuss different factors governing choice of combined system. 04  
 (c) Give comparison between conservancy and water carriage system of sewage disposal. 07

**OR**

Q.4 (a) Define the following terms.  
     (1) Trap (2) anti-siphonage pipe (3) Sewer 03  
 (b) State the principles of house drainage system. 04  
 (c) Write a short not on “one pipe plumbing system”. 07

Q.5 (a) Differentiate between “Sound and Noise” 03  
(b) Define the following terms.  
    (1) Garbage (2) Leachate (3) putrefaction (4) refuse 04  
(c) Describe effect of Air pollution on man and material. 07

**OR**

Q.5 (a) Explain in brief “curb service “as a method of solid waste collection. 03  
(b) Give classification of solid waste. 04  
(c) Write a short note on Environment (protection) Act. 07

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