

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

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| 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 Nani 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 |

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| 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

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| 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 |
