

# GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER- V (New) EXAMINATION – WINTER 2019

Subject Code: 2150603

Date: 04/12/2019

Subject Name: Environmental Engineering

Time: 10:30 AM TO 01:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1**
- (a) Enlist the different chemical parameters for water. Explain any one chemical parameter in detail. **03**
  - (b) Differentiate quality wise surface water and ground water sources. **04**
  - (c) What is a waterborne disease? Discuss any one waterborne disease, its origin, spread and control in details **07**
- Q.2**
- (a) What are the limitations of BOD test? **03**
  - (b) Enlist the different types of microorganism and explain their role in environment. **04**
  - (c) Write a short note on self-purification of natural streams **07**
- OR**
- (c) Write a short note on transfer stations. How location of transfer stations is decided? **07**
- Q.3**
- (a) Explain with neat sketch one pipe plumbing system. **03**
  - (b) Write a short note on sewage sickness. **04**
  - (c) Which are the main components of house drainage system? Explain different types of traps in detail. **07**
- OR**
- Q.3**
- (a) Discuss relationship between different components of environment. **03**
  - (b) Define the following terms : **04**  
(1)Vent pipe,(2) Rainwater pipe, (3)soil pipe, and (4)S Anti-siphonage pipe
  - (c) Why solid waste management is important. Draw solid waste management system flow chart with brief detail. **07**
- Q.4**
- (a) What are the sources of Alkalinity in water? **03**
  - (b) Write effects of Air Pollution on Property and Material. **04**
  - (c) Define Noise pollution and its unit of measurement. Which are the sources of Noise pollution? **07**
- OR**
- Q.4**
- (a) What are the objectives of solid waste management? **03**
  - (b) Define(i) Rubbish (ii) Garbage (iii) BOD (iv) Aerosol **04**
  - (c) Explain in detail the D.O. sag curve. **07**
- Q.5**
- (a) Write a brief note on Anglo Indian type water closet with sketch. **03**
  - (b) Write short note on "mechanical composting." **04**
  - (c) Write drinking water quality standards as per BIS. **07**
- OR**
- Q.5**
- (a) Write note on EIA. **03**
  - (b) Explain in brief The environment (Protection) Act – 1986. **04**
  - (c) Enlist the different equipments used for control of particulate pollution. Explain any one in detail with advantages and disadvantages. **07**

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