

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2017

Subject Code: 2150603

Date: 08/11/2017

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.

MARKS

- Q.1*** (a) Which are the sources of water? Mention the factors affecting selection of water source. **03**
- (b) Which are the methods of solid waste collection? Explain any one method in short. **04**
- (c) Explain DO Sag curve with neat sketch. **07**
- Q.2** (a) Explain: How to forecast the population by Geometrical increase method? **03**
- (b) Define rubbish and garbage. Write composition of solid waste for Indian cities. **04**
- (c) Explain system of plumbing for house drainage with neat sketch. **07**
- OR**
- (c) Which are the main components of house drainage system? Explain types of traps in detail. **07**
- Q.3** (a) Enlist the pollutants in industrial wastewaters. **03**
- (b) Write in brief: Growth pattern of microorganism based on mass. **04**
- (c) Explain factors affecting rate of water demand. **07**
- OR**
- Q.3** (a) Which are the conditions favorable for disposal by dilution method? **03**
- (b) Write short note on “Role of Microorganism in environment”. **04**
- (c) Enlist the characteristics of water and explain any two characteristics in detail. **07**
- Q.4** (a) What is Sewage sickness? **03**
- (b) The BOD₅ of a waste has been measured as 450 mg/l. If rate constant at 20°C is 0.12. Find ultimate BOD and 3 day BOD at 27°C. **04**
- (c) Explain sanitary land filling method for solid waste disposal. **07**
- OR**
- Q.4** (a) The pH of influent and effluent of an Industry is 4.3 and 7.5 respectively. Find average pH of waste water. **03**
- (b) What is relative stability? Explain. **04**
- (c) Why solid waste management is important. Draw solid waste management system flow chart with brief detail. **07**
- Q.5** (a) Mention the objectives of The Environmental protection Act, 1986. **03**
- (b) Define Noise pollution and its unit of measurement. Which are the sources of Noise pollution? **04**
- (c) Enlist methods to control particulate matter from air. Discuss any one method in detail. **07**
- OR**
- Q.5** (a) Which are the powers given to central government under The Environmental protection Act, 1986? **03**
- (b) Explain ill effects of noise pollution. **04**
- (c) Define Air pollution and explain its classification in detail. **07**
