| Seat No.: | | Enrolment No |
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| GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-V (OLD) - EXAMINATION - SUMMER 2017 | | |

Subject Name: Environmental Engineering

| Time: 02:30 PM to 05:00 H | PM | Total Marks: 70 |
|---------------------------|----|------------------------|
| | | |

Date: 01/05/2017

07

Instructions:

Q.1

1. Attempt all questions.

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- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.
- (b) What is a waterborne disease? Discuss any one waterborne disease, its origin, spread and control in details.

Enlist the quality criteria for drinking water. Explain each of them in details.

- Q.2 (a) Explain the characteristics of domestic and industrial waste water. Discuss how does domestic waste water differs from an industrial waste water.
 - (b) A colony discharges its waste water in to a river. Just after mixing, DO in the river water is 5.4 mg/l while the ultimate BOD is 120 mg/l. Find the critical time in the DO Sag curve. Take k = 0.37/day, r = 1.046/day, Saturation DO = 7.4 mg/l. Will there be anaerobic situation?

OR

- (b) Sketch and explain DO Sag curves under different waste load condition. 07
- Q.3 (a) Discuss principles of house drainage. Sketch and explain use of various types of traps used in house drainage system.
 - (b) Sketch and explain working of an anti-siphonage pipe and a flushing cistern 07

OR

- Q.3 (a) Enlist the types of plumbing system in house drainage. Explain any two of them of in detail with their advantages and disadvantages.
 - (b) Discuss different methods of collection of municipal solid waste. 07
- Q.4 (a) Discuss sources and effects of air pollution on human health. 07
 - (b) Discuss, "Sanitary Land Fill" as a method of solid waste disposal.

OR

- Q.4 (a) Discuss, equipments used for control of particulate matter.
 - (b) Discuss "Composting " of municipal solid waste. 07

| Q.5 | (a) | Discuss, effects of air pollution on vegetation and properties. | 07 |
|-----|------------|---|----|
| | (b) | What is noise? How is noise produced? What are the effects of noise? | 07 |
| | | OR | |
| Q.5 | (a) | Discuss methods of noise pollution control. | 07 |
| | (b) | Discuss, significance of environmental impact assessment and environmental audit in present scenario. | 07 |
