

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V • EXAMINATION – WINTER • 2014****Subject Code: 150603****Date: 03-12-2014****Subject Name: Environmental Engineering****Time: 10.30 am - 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) Define environment. Explain the role of microorganism in the environment. **07**
 (b) Enlist the different physical, chemical, biological parameters for drinking water. **07**
 Explain any one physical parameter in detail.
- Q.2** (a) Define the following terms. **07**
 (1) COD (2) Manhole (3) Plumbing system (4) Phototrophs (5) Rubbish
 (6) Air pollution (7) Mist.
 (b) Write drinking water quality standards as per BIS. **07**
- OR**
- (b) Give classification of trap. Explain with sketch intercepting trap. **07**
- Q.3** (a) Write a short note on “composting as a method of disposal of solid waste”. **07**
 (b) Define Air pollution. Write sources of air pollution. **07**
- OR**
- Q.3** (a) Explain in brief different factors affecting self purification capacity of the river or stream. **07**
 (b) Define Environmental Audit. Explain in detail steps involved in conducting the Environmental Audit. **07**
- Q.4** (a) Explain the different factors affecting rate of water demand. **07**
 (b) The following data have been noted from the census department: **07**
- | Year | Population |
|------|------------|
| 1950 | 80,000 |
| 1960 | 1,55,000 |
| 1970 | 2,50,000 |
| 1980 | 4,78,000 |
| 1990 | 8,53,000 |
| 2000 | 9,80,000 |
- Calculate Probable Population in the year 2030 using Incremental increase method. **07**
- OR**
- Q.4** (a) Describe the characteristics of the waste generated from the following industries. **07**
 (1) Paper and pulp industry (2) dairy industry
 (b) Explain Eutrophication and sewage sickness. Also discuss their role in Environmental engineering. **07**
- Q.5** (a) Enlist the different equipments/devices used for control of particulate matter. Explain with neat sketch Gravitational settling chamber. Also write its advantages and disadvantages. **07**
 (b) Explain in brief methodology of Environmental Impact Assessment. **07**
- OR**
- Q.5** (a) Write the different control measures for noise pollution **07**
 (b) Explain the growth pattern of microorganisms based on mass. **07**
