| Seat No.: | Enrolment No. |
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Subject code: 711706N

## GUJARAT TECHNOLOGICAL UNIVERSITY M. E. - SEMESTER – I • EXAMINATION – WINTER • 2013

Date: 06-01-2014

**Subject Name: Environmental Sanitation** 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) What is an epidemic? How should it be controlled? **07** (b) Discuss spread of Typhoid. Discuss its preventive and controlling measures. **07 07** Q.2(a) Discuss various components of good housing program. **(b)** How does over population affect the good hygiene program? **07** OR (b) Discuss significance and need for good ventilation for dwelling units and related 07 Discuss source, application and biological effects of UV radiations. **07** Q.3**(b)** Explain nuclear chain reaction. 07 OR Discuss principles of radiation protection. **07** Q.3(b) Discuss source, application and biological effects of Microwave radiations. **07** (a) Discuss pros and cons of a nuclear power plant as source of energy in India. **07** 0.4 **(b)** Discuss, practice of safety in a nuclear power plant. 07 OR What is maximum permissible dose of radiation? How is it measured? Discuss **Q.4** 07 measurement by chemical effect and light generation. **(b)** Discuss effects of radiation on living cells. 07 0.4 (a) What is radioactive half life? How do the effects differ with different half life? 0.5 07 Discuss delayed somatic effects of radiation. (b) Discuss principles of radioactive liquid waste treatment. Explain one of the methods 07 of treatment of high activity radioactive liquid waste. OR Q.5 (a) Classify radioactive solid waste. Discuss various methods of treatment of 07 radioactive solid waste. (b) Discuss, radioactive solid waste disposal methods. 07

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