

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-V • EXAMINATION – SUMMER • 2014**

**Subject Code:151006****Date: 24-06-2014****Subject Name: Applied Electronic****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 regulated power supply? List the types of regulated power supply used in the field and explain any one of them. **07**
- (b) What is Switched Mode Power Supply? Properly draw and explain SMPS in detail. **07**
- Q.2** (a) What is operational amplifier? Draw and explain equivalent circuits of an Opamp in detail. **07**
- (b) List the types of closed loop configuration of an Opamp. Also draw and explain any one of them with necessary equation. **07**
- OR**
- (b) Properly draw and explain the 555 timer circuits as a monostable multivibrator circuits. **07**
- Q.3** (a) List the types of inductive transducer available and properly draw and explain LVDT in detail. **07**
- (b) List the types of transducer used to sense the temperature. Also draw and explain any one of them in detail. **07**
- OR**
- Q.3** (a) Properly explain photoconductive principle. List the types of photoconductive sensor available and explain any of them. **07**
- (b) What is Liquid Crystal Display? Properly explain principle, construction and operation of LCD. **07**
- Q.4** (a) Draw and explain principle, construction and operation of Light Activated Silicon Control Rectifier in detail. **07**
- (b) What is DIAC? Properly explain with required wave form the DIAC as a AC switch in detail. **07**
- OR**
- Q.4** (a) What is Cathode Ray Oscilloscope ? Draw and explain the block diagram of CRO in detail. **07**
- (b) List types of schemes available to measure the R, L, C, and Q of the circuits and explain any one of them in detail. **07**
- Q.5** (a) Properly draw and explain fuzzy logic system to improve the performance of washing machine in detail. **07**
- (b) What is RFID? List the application of RFID system and explain any one of the system in detail. **07**
- OR**
- Q.5** (a) What are combinational and sequential circuits? Also give the difference between them. **07**
- (b) List the application of 8051 and explain any one of them in detail. **07**

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