Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V (OLD) - EXAMINATION – SUMMER 2017

Subject Code: 151006 **Date: 15/05/2017**

Subject Name: Applied Electronics (Institute Elective - II)

Time: 02:30 PM to 05:00 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)**	Enlist the characteristics of ideal op-amp.	**07**
	(b)	Classify Transducers.	**07**
Q.2	**(a)**	Enlist Application of 555 Timer circuits and explain one of them.	**07**
	(b)	What is Ideal Voltage source? Also explain factors affecting the voltage Regulation with block diagram of Shunt voltage regulator.	**07**
		OR	
	(b)	Explain (1) Load Regulation (2) Line Regulation	**07**
Q.3	**(a)**	Explain the working principle of SMPS.	**07**
	(b)	Write Short note on LED	**07**
		OR	
Q.3	**(a)**	Enlist the types of closed loop configuration of an Op-amp and explain one of them.	**07**
	(b)	Write short note on Opto coupler.	**07**
Q.4	**(a)**	Explain SCR in Detail.	**07**
	(b)	Write Short note on CRO.	**07**
		OR	
Q.4	**(a)**	Explain UJT in Detail.	**07**
	(b)	Enlist Devices used in Consumer Electronics.	**07**
Q.5	**(a)**	Explain architecture of 8051 with block diagram.	**07**
	(b)	Explain fuzzy logic system to improve the performance of washing machine in detail.	**07**
		OR	
Q.5	**(a)**	Explain Karnaugh map representation with example.	**07**
	(b)	Explain A/D convertor in detail.	**07**

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