Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER- V • EXAMINATION – WINTER 2016

Subject Code: 151006 Subject Name: Applied Electronics			Date: 28/11/2016	
Tiı	me: 1 tructio	10:30AM – 01:00PM Total Marks: ons: Attempt all questions.	70	
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Q.1	(a) (b)	Explain in detail switch mode power supply (SMPS). Explain op-amp as inverting amplifier. Also derive the equation of gain for same.	07 07	
Q.2	(a) (b)	Properly draw and explain the 555 timer circuits as a monostable multivibrator. What is Liquid Crystal Display? State and explain different types of LCD. OR	07 07	
	(b)	Explain optocoupler /isolator in detail with its types.	07	
Q.3	(a)	What is LVDT? Explain principle and operation of LVDT. Also list the advantages of LVDT.	07	
	(b)	What is DIAC? Properly explain with required wave form the DIAC as an AC switch in detail.	07	
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Q.3	(a) (b)	Draw and explain characteristic, construction and working of SCR. List the types of temperature transducer. Also draw and explain any one of them in detail.	07 07	
Q.4	(a)	What are combinational and sequential circuits? Explain NOR as universal gate.	07	
	(b)	Explain the principle of Digital Storage Oscilloscope with block diagram. OR	07	
Q.4	(a) (b)	Write short note on RFID. Explain 8051 architecture in detail	07 07	
Q.5	(a)	Draw and explain Block diagram and voltage transfer characteristics of an Ideal Op-amp.	07	
	(b)	What is Bar Code Scanner? Draw and explain the operation of Bar Code Scanner with required figure.	07	
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Q.5	(a) (b)	Compare Microprocessor with Microcontroller. What is Ideal Voltage source? Explain factors affecting the voltage regulation with block diagram of Shunt voltage regulator.	07 07	
