Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE SEMESTER- 1st / 2nd (SPFU) EXAMINATION - WINTER 2016

Subject Code: TEE011 Subject Name: Basic Electronics			Date: 02/02/2017	
Tir	U	2:30 PM TO 5:00 PM Total Marks: 7	70	
	1. 2.	Attempt any five questions.		
Q.1	(a)	What do you mean by circuit element & circuit? Classify the circuit elements and explain any two of them.	07	
	(b)	Draw the simplified block diagram of CRO and explain in brief.	0'	
Q.2	(a) (b)	State and prove KCL and KVL with suitable example. State Thevenin's theorem, also calculate the current in 5 Ω resistor using same (See Fig. 1).	0'. 0'.	
Q.3	(a)	For the given network (See Fig. 2), determine current in the loop 1 and 2 respectively as indicated by $I_1 \& I_2$.	07	
	(b)	State and prove Superposition theorem with suitable example.	0'	
Q.4	(a)	What do you mean by Operational Amplifier? Draw the symbol and equivalent circuit diagram of the same.	0′	
	(b)	Draw the Pin diagram of Operational Amplifier IC741. Also Enlist the characteristic of the Ideal Operational Amplifier.	07	
Q.5	(a)	 Answer the followings: 1) Define CMRR and Calculate CMRR for an OP-AMP having Differential Gain of 10⁵ and Common Mode Gain of 0.5. 2) Define Slew Rate and Calculate the Slew Rate for an OP-AMP has the output voltage rises to 15 V in 3 μs. 	0'	
	(b)	Write a brief note on Universal Gates.	0'	
Q.6	(a) (b)	Write the truth table of the Full Adder and obtain the logic circuit for the same. Draw Schematic of a Basic Microprocessor and explain in brief.	0' 0'	
Q.7	(a) (b)	Define computer networks. And explain the types of computer network in brief. Classify the network topology, explain any one in brief with advantage and disadvantage.	0'. 0'.	


