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GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER- III (NEW)• EXAMINATION – SUMMER 2015

Subject Code: 2130305		Date: 09/06/2015		
Ti	me: 0 truction 1.	Attempt all questions.	Total Marks:	70
Q.1	(a) (b)	Draw the internal block diagram of 555 timer IC. 1. Derive relation between α and β for a transistor. 2. Why CE configuration is preferred for amplification?		07 07
Q.2	(a) (b)	Explain the working of a triangular and square wave generator for a frequency of oscilla 1. Does thermal runaway take place in FET? Why? 2. Define parameters of FET and state relationship among the OR	ation of 3 KHz.	07 07
	(b)	Compare V-I characteristics of Silicon and Germanium p-n ju	nction diode.	07
Q.3	(a) (b)	Explain OP-AMP application as integrator. Explain the operation of Emitter follower amplifier. Why is it follower?	named as emitter	07 07
		OR		
Q.3	(a) (b)	Draw CE transistor configuration and give its input and outp Also derive the relation between current gain of CE, CB and C Draw and explain the block diagram of an Op-Amp.		07 07
Q.4	(a) (b)	Design RC phase shift oscillator for the frequency of 3kHz. State and explain any seven characteristics of an ideal Op-Am OR	p.	07 07
Q.4	(a) (b)	What is CMRR? What is the significance of CMRR? List methods to improve the CMMR. What is oscillator? Explain the concept of oscillation. Explain oscillation properly with Barkhausen criteria.		07 07
Q.5	(a) (b)	Draw the block diagram of a voltage series feedback amplified equation for input impedance, output impedance and the voltage. What do you understand by precision rectifier? Draw full wave circuit and explain with necessary waveforms. OR	ge gain.	07 07
Q.5	(a) (b)	Explain the application of op-amp as a subtractor and summin State the use of clipping circuits. Discuss with neat sketch wor Series clipper.	~ A	07 07
