Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV (New) EXAMINATION - WINTER 2015

Subject Code:2140305			Date:28/12/2015	
Tiı	me: 2 truction 1.	Attempt all questions.Make suitable assumptions wherever necessary.	: 70	
Q.1	(a) (b)	Draw circuit of Instrumentation amplifier and derive Gain equation. Explain the pulsed excitation amplifier with necessary circuits and waveforms.	07 07	
Q.2	(a) (b)	Enlist the type of Isolation amplifier. Explain any one in details. Discuss the problems associated with power supplies. OR	07 07	
	(b)	Discuss the Electrostatic discharge (ESD) protection techniques.	07	
Q.3	(a) (b)	Explain method of noise coupling. Explain technical aspects of hybrid grounding technique. OR	07 07	
Q.3	(a) (b)	What is ground loop? Explain techniques to break ground loop. Discuss Safety Standards In Medical Electronic Amplifiers.	07 07	
Q.4	(a) (b)	 Explain or define following terms Shot Noise, Flicker Noise, Burst Noise, Op Amp Noise. Explain technical aspects of Butterworth low-lass filters. 	07	
Q.4	(a) (b)	Discuss designing aspects of Notch filter. What is the need of modulation? Explain Pulse width modulation techniques.	07 07	
Q.5	(a) (b)	Describe AM transmitter and receiver design. Draw and explain CRO tube.	07 07	
Q.5		OR Write a technical note on signal analyzer. Discuss the role of function generator in analog circuits. Enlist typical	07	

specifications for a general-purpose function generator.