Seat No.:	Enrolment No.
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GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII • EXAMINATION - WINTER 2013

Su	bject	t Code: 171705 Date: 03-12-201	3
Ti	me: 1 tructio 1. 2.	t Name: Instrumentation for Bio-medical Applications 10:30 TO 01:00 Total Marks: 7 ons: Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	70
Q.1	(a) (b)	Explain the respiratory system in detail. Explain the blood circulatory system in detail.	07 07
Q.2	(a) (b)	Discuss different measuring errors and remedies to it. Discuss noise in cascade amplifier in detail. OR	07 07
	(b)	Define transducers and differentiate active and passive transducers.	07
Q.3	(a) (b)	Explain medical surface electrodes in detail. Draw and discuss the ECG signal.	07 07
Q.3	(a) (b)	OR Explain any one noninvasive blood pressure measuring system. Explain peripheral nervous system and automatic nervous System.	07 07
Q.4	(a) (b)	Discuss typical EEG system artifacts and faults. Discuss ICU and CCU equipments. OR	07 07
Q.4	(a) (b)	Define hemodialysis and explain the hemodialysis machine Discuss absorption and attenuation of ultrasound energy. Explain biological effects of ultrasound.	07 07
Q.5	(a) (b)	Explain flame photometer in detail. Explain Defibrilator circuits. OR	07 07
Q.5	(a) (b)	Explain Pacemakers. Discuss isolation amplifiers.	07 07
