Seat No.:	Enrolment No.
-----------	---------------

GUJARAT TECHNOLOGICAL UNIVERSITY

B. E. - SEMESTER – IV • EXAMINATION – WINTER 2012

Subj	ect (code: 140302 Date: 31/12/2	012
-		Name: Physiological Measurement Techniques	
		2.30 pm - 05.00 pm Total Marks:	: 70
Insti		ions:	
	1. 2.	Attempt any five questions. Make suitable assumptions wherever necessary.	
		Figures to the right indicate full marks.	
Q.1	(a)	Explain dynamics of neuromuscular reflex motion with its simulink model.	07
	(b)	Explain steady state model of chemical regulation of ventilation.	07
Q.2	(a)		07
	(b)	Explain occulomotor muscle model in detail	07
	<i>-</i> .	OR	. –
	(b)	Explain Robinson experiment for eye muscle tension.	07
Q.3	(a)		07
	(b)	Explain linearized model of respiratory mechanics. OR	07
Q.3	(a)		07
	(b)	Explain linearized model of skeletal muscles.	07
Q.4	(a)	± ±	07
	(b)	Explain linearized dynamic model of chemoreflex control of ventilation.	07
		OR	
Q.4	(a)	Discuss isotonic experiment for evaluation of muscle viscosity.	07
	(b)	Explain simulink model of cardiovascular mechanism.	07
Q.5	(a)	Explain Hodgkin- Huxley model with necessary schematic and	07
	(b)	equations. Explain describing function method for periodic breathing with apnea.	07
	(b)	OR	U/
Q.5	(a)		07
	(b)	Explain modulation of applied light intensity using measurements of pupil area.	07
