

Date: 02-11-2017



Subject Code: 180301

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII(OLD) • EXAMINATION - WINTER 2017

Ti	•	Name: Rehabilitation Engineering 2:30 pm to 05:00 pm Total Marks: 7 ns:	70
	1. 2. 3.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	 Explain following terms with example. Residual Capacity Orthosis Disability 	07
	(b)	Write a descriptive note on Rehabilitation engineers attempt to restore the functions of basic human senses.	07
Q.2	(a) (b)	Explain engineering concept in motor rehabilitation. Explain control mechanism of intelligent prosthetic knee during swing and stance phase.	07 07
	(b)	OR	07
	(b)	Describe, how FES can restore muscular movements in human with paralyzed?	07
Q.3	(a) (b)	Explain concept of hybrid assistive system. Explain control strategy of myoelectric hand and arm prostheses. OR	07 07
Q.3	(a) (b)	Discuss the factors that affect design of wheelchair. Draw and explain various canes design used for visually impaired person.	07 07
Q.4	(a)	 Explain following electronic travel applications Path sounder Ultrasonic Tourch 	07
	(b)	Explain tactual vision substitution concepts. OR	07
Q.4	(a) (b)	Explain visual & tactual auditory substitution concepts. Explain disability measurement objectives and approaches.	07 07
Q.5	(a) (b)	Explain available rehabilitation aids/technology for mentally impaired person. Explain available stair climb aids used for disable. OR	07 07
Q.5	(a) (b)	Explain available walking & postural aids Explain design aspects of various wheelchair for sports related applications used for disable person.	07 07