Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

	•	ect Code:2160310 Date:17/05/202	16
Γ	ime	ect Name: Rehabiliation Engineering : 10:30 AM to 01:00 PM Total Marks: ctions:	70
11	isti uc	 Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. 	
Q.1	(a)	Give answer of following questions1. Define Disability.2. Give difference between Orthosis and Prosthesis.3. What do you mean by myoelectric arm?	07
	(b)	Explain engineering concepts in sensory and motor rehabilitation.	07
Q.2	(a) (b)	Explain design of Ultrasonic cane to assist visually impaired person. Give the classification of visual impairment and explain devices for visual augmentation.	07 07
		OR	
	(b)	Explain FES system with its application.	07
Q.3	(a) (b)	Explain auditory substitution devices in detail. Enlist and explain ergonomic consideration in designing wheel chair.	07 07
		OR	
Q.3	(a)	Explain Braille as a Tactile Reading Substitute.	07
	(b)	Explain tactual vision substitution technique.	07
Q.4	(a) (b)	Explain role of Rehabilitation in sport related activity. Explain structure of Laser cane with their features and limitations.	07 07
		OR	
Q.4	(a) (b)	Draw and explain schematic of wheel chair for stair up or down mechanisms. Enlist and explain design concept of various orthotics or Prosthetics devices for lower limb.	07 07
Q.5	(a) (b)	Discuss design of walking aids for mentally impaired patients. Explain the structure of hearing aids with block diagram.	07 07
Q.5	(a) (b)	OR Discuss design of sleeping aids for mentally impaired patients. Write an introductory note on wheelchair Structure and their Component Design.	07 07