

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER– VI EXAMINATION – SUMMER 2026

Subject Code:3160310

Date:26-05-2026

Subject Name: Rehabilitation Engineering

Time: 10:30 AM TO 01:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

MARKS

Q.1	(a)	Define Rehabilitation Engineering and provide various sub fields of it.	03
	(b)	Give comparison of Impairment, disability, handicap.	04
	(c)	Explain MODELS of Rehabilitation Engineering in detail.	07
Q.2	(a)	Give difference between prosthesis and orthosis.	03
	(b)	Explain methods for Diagnosis of Disability.	04
	(c)	Provide classification of amputation types.	07
		OR	
	(c)	In details explain design Criteria of prosthesis.	07
Q.3	(a)	Explain use of splints for Traumatic injuries of upper extremities.	03
	(b)	Explain various Types of cervical orthosis	04
	(c)	Explain lower all limb orthosis.	07
		OR	
Q.3	(a)	Draw construction of Ultrasonic Torch.	03
	(b)	Explain various materials used for wheel chair.	04
	(c)	Discuss Structure and design aspects and criteria of wheel Chair.	07
Q.4	(a)	Explain Electro Roftalam electronic travel aid.	03
	(b)	Explain types of visual impairments.	04
	(c)	Explain working of Power wheel chair along with necessary diagrams.	07
		OR	
Q.4	(a)	Draw anatomy of ear.	03
	(b)	Draw and explain construction of tactile device for visually challenged.	04
	(c)	Explain hearing functional assessment with example.	07
Q.5	(a)	Explain various types of deafness.	03
	(b)	Explain various non-surgical hearing aids.	04
	(c)	Explain working and assessment of GAIT trainer.	07
		OR	
Q.5	(a)	Write down use of robotics in rehabilitation.	03
	(b)	Briefly explain use of rehabilitation in sports.	04
	(c)	Explain design of Brain computer Interface.	07
