

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI (NEW) EXAMINATION – WINTER 2018****Subject Code:2160310****Date:04/12/2018****Subject Name:Rehabilitation Engineering****Time: 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	(a) Define Rehabilitation Engineering, Orthosis & Prosthesis.	03
	(b) Write short note on Ultrasonic Cane.	04
	(c) Explain about Universal design in Rehabilitation engineering.	07
Q.2	(a) How to choose a good Prosthesis?	03
	(b) Explain Grade-I Braille.	04
	(c) Write short note on Cochlear Implant.	07
	OR	
	(c) Explain design of Lower Limb Prosthesis.	07
Q.3	(a) Explain Anatomy of Ear.	03
	(b) Explain about Upper-Extremity Orthosis.	04
	(c) Explain design of Prosthetic Hand.	07
	OR	
Q.3	(a) Explain different level Amputations in Upper limb.	03
	(b) Explain Mowat Sensor.	04
	(c) Explain different types of Retinal Implants.	07
Q.4	(a) Give classification of Visual and Auditory impairment devices.	03
	(b) Explain design of Hearing aids.	04
	(c) Explain design of various components of Wheelchair.	07
	OR	
Q.4	(a) Write short note on Optacon.	03
	(b) Explain Rehabilitation engineering in Sports activity.	04
	(c) Explain about design of Power Wheelchair with its Standards.	07
Q.5	(a) Explain working principle of CCTV.	03
	(b) Explain different types of Stimulation current.	04
	(c) Explain FES system with its applications.	07
	OR	
Q.5	(a) Explain different types of Visual Augmentative devices for Reading.	03
	(b) Write short note on Path Sounder.	04
	(c) Explain design of Muscle stimulator.	07
