Seat No.:	Enrolment No.
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GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) - EXAMINATION - SUMMER 2017

Subj	ect	Code: 2160310 Dat	e: 08/05/2017
Subj	ect	Name: Rehabiliation Engineering	
•			tal Marks: 70
Instru			
		Attempt all questions.	
	2.	Make suitable assumptions wherever necessary.	
	3.	Figures to the right indicate full marks.	
			MARKS
Q.1		Short Questions	14
	1	What is meant by Rehabilitation Engineering.	
	2	Distinguish between disability and handicap.	
	3	What is Prosthesis?	
	4	What is universal design?	
	5	Enlist the component of upper limb prosthesis.	
	6	What is meant by orthosis?	
	7	Draw and labelled name on ultrasonic cane	
	8	Enlist the various types of walking aids.	
	9	Distinguish between nerve and muscle stimulator.	
	10	Enlist the categories of visual impairment.	
	11	Provide the component to design Cochlear implant.	
	12	What is the importance of universal design?	
	13	What is meant by dyslexia.	
	14	Explain the operation of Tactile device for visually challenged.	0.2
Q.2	(a)	1 *1	03
	(b)	<u>. </u>	04
	(c)	Discuss the Components of lower limb prosthesis with a neat sketch. OR	07
	(c)		07
Q.3	(c) (a)	, 11	
Q.J	(a)	Wheelchair.	3 01 03
	(b)		wer 04
	(6)	wheelchair.	We1 04
	(c)	Explain the various tools and tests required for designing of po	wer 07
		assisted wheelchair.	
		OR	
Q.3	(a)	Enlist the categories of visual impairment.	03
	(b)	Distinguish between laser cane and ultrasound cane.	04
	(c)	Explain the Blind Mobility Aids and Braille Reader in detail.	07
Q.4	(a)	* * *	03
	(b)	• •	04
	(c)	Distinguish between Surgical and non-surgical hearing aids in detail	ails. 07
0.4	()	OR	0.3
Q.4	(a)	<u> </u>	03
	(b)	<u> </u>	04
	(c)	Describe any two sleeping aids in details with its limitation.	07
Q.5	(a)	Describe the role of rehabilitation in sports activity.	03

(b) Explain the role of robots in rehabilitation.

(c) Discuss the Design issues for muscle stimulator in detail.

04

07

		OR	
Q.5	(a)	Enlist the available daily living aids as an application of	03
		rehabilitation.	
	(b)	Write a brief note on Assistive technology for dyslexia.	04
	(c)	What is FES? Explain the working principle of FES with its	07
		advantage.	
