BME 4303

Exam Date & Time: 12-Jul-2023 (02:30 PM - 05:30 PM)



about:srcdoc

MANIPAL ACADEMY OF HIGHER EDUCATION

SIXTH SEMESTER B.TECH MAKE UP EXAMINATIONS, JULY - 2023

REHABILITATION ENGINEERING [BME 4303]

Marks	: 50	Duration: 180 mins.				
	\mathbf{A}					
Answe	Answer all the questions.					
Instruc	Instructions to Candidates: Answer ALL questions Missing data may be suitably assumed					
1)	Explain the various rehabilitation process for physical disability					
		(3)				
A)						
B)	Classify and explain the popular rehabilitation practices	(3)				
		(3)				
C)	Explain the basic structure of a neuron and its working	(4)				
- `						
2)	Stress the utility and functional significance of sodium potassium pump?					
		(3)				
A)						
B)	State the importance and utility of models in the development of assistiv	e devices (3)				
<i>C</i>)	Grand in the state of the CEMC in the	` ,				
C)	State the important characteristics of EMG signals	(4)				
3)	What is an MMG signal? Explain the characteristics of the same.					
3)	what is an initio signar: Explain the characteristics of the same.	(4)				
		(4)				
A)	What are the different terms of modeling to also Duigfly available and of the	L				
B)	What are the different types of modeling tools? Briefly explain each of the	nem. (3)				
C)	Illustrate the mechanism of controlling the dynamics of muscle moveme	nt				
C)	mustrate the incommism of controlling the dynamics of musere moveme	(3)				
4)	Illustrate the structure of action potential wave initiated by a stimulus.					
ŕ		(4)				
A)						
B)	State the important steps to be followed for developing assistive devices	(2)				
D)	zum me imperium steps to se fonomea for developing assistive devices	(3)				

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C	C)	Formulate an algorithm for processing EMG signal for assistive device design purpose.	(3)
5)		Illustrate the roll of mathematical models in physical rehabilitation process.	
			(5)
A	()		
В	3)	What is a verbal model? Where and how it is used?	(3)
C	C)	What are physical models? Explain with examples?	(2)
E	nd		

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