

**Department of Applied Mechanics, IIT Madras**  
**BT1010 Life Sciences End Semester Paper for Graduating Students**  
**on Module “Biosignals and Physiological Modeling”**

**All assumptions and standard table values used are to be clearly explained at appropriate places.**

		Marks
1	Write a short notes on Biosignals.	2
2	How are electrical signals formed in human system?	3
3	How is Electrocardiogram (ECG) recorded? What is diagnosed with the help of ECG?	4
4	How is Electroencephalogram (EEG) recorded from humans? Explain the use of EEG in diagnosis of human ailments.	4
5	Explain the working principle of fundamental unit of muscle. How muscles are engaged in generating force to perform activities in humans.	4
6	Explain the measurement procedure to calculate different volumes and capacities of human respiratory system.	4
7	What is a model of a system? Explain the differences between physical and physiological models. Give appropriate examples.	4

