

THE KAVERY ENGINEERING COLLEGE*(An Autonomous Institution)***B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV/DEC 2025***Fifth Semester**Biomedical Engineering***BM3591 – Diagnostic and Therapeutic Equipment***Regulations – 2021**Duration : 3 Hrs**Maximum : 100 Marks**PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)*

<i>Q.No</i>	<i>Questions</i>	<i>BTL</i>	<i>CO</i>	<i>Marks</i>
1.	What is the function of a defibrillator protection circuit?	L1	1	2
2.	List the components of a Holter monitor and mention its purpose.	L2	1	2
3.	State the importance of EEG.	L2	2	2
4.	Identify the types of evoked potentials used in clinical diagnosis.	L2	2	2
5.	Name two instruments used for static biomechanical measurement.	L1	3	2
6.	Define Electromyography EMG.	L1	3	2
7.	Differentiate Nebulizers and inhalators.	L2	4	2
8.	List out the instruments used for measurement of breathing.	L2	4	2
9.	Describe how galvanic skin response is measured.	L2	5	2
10.	Outline the steps for measuring intraocular pressure.	L2	5	2

*PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)*

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a Explain the working principle and waveform interpretation of an Electrocardiograph (ECG).	L2	1	16
	Or			
	b Describe the design and operation of cardiac assist devices.	L2	1	16
12.	a Illustrate with neat diagram discuss the operation and application of EEG multi-channel recording system.	L3	2	16
	Or			
	b How the EEG recording plays an important role to identify neurological disorders.	L3	2	16
13.	a Explain the principle, recording, and analysis of EMG signals and their clinical applications.	L2	3	16
	Or			
	b Discuss the working principles of muscle and nerve stimulators with biomechanical measurements.	L2	3	16

14.	a	Interpret the functions of auxiliary respiratory devices: humidifiers, nebulizers, and inhalators.	L2	4	16
		Or			
	b	Discuss in detail about pacemaker and defibrillator.	L2	4	16
15.	a	With neat sketch discuss the working and clinical applications of an audiometer.	L2	5	16
		Or			
	b	Demonstrate the use of an auto refractometer for refractive error assessment.	L2	5	16