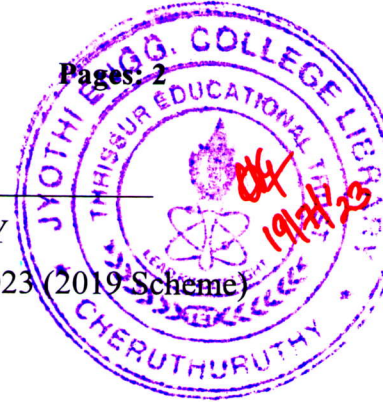


Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Sixth Semester B.Tech Degree Regular and Supplementary Examination June 2023 (2019 Scheme)

**Course Code: MRT322****Course Name: BIOMEDICAL INSTRUMENTATION****Max. Marks: 100****Duration: 3 Hours****PART A***Answer all questions, each carries 3 marks.*

		Marks
1	What are action potential and resting potential.	(3)
2	What is the principle of Piezoelectric sensors?	(3)
3	What is chopper amplifier?	(3)
4	Define the term latency in EMG	(3)
5	Define Pulse rate and Respiration rate	(3)
6	Differentiate systolic and diastolic pressure.	(3)
7	What is the principle of computed tomography	(3)
8	Write about the Heart Lung machine	(3)
9	Describe about micro shock and macro shock?	(3)
10	What is Radio pill?	(3)

PART B*Answer any one full question from each module, each carries 14 marks.***Module I**

- 11 a) Draw a block diagram of a Bio-medical Instrument system and briefly explain the components. (14)

OR

- 12 a) Explain the different parts of central nervous system and their activity. (14)

Module II

- 13 a) Classify different types of electrodes used in Medical field & give a brief description about micro electrode, needle electrode and surface electrodes. (14)

OR

- 14 a) Explain the working of ECG recorder with neat diagram? (14)

Module III

- 15 a) Describe in detail about Indicator dilution method and Dye dilution method for measuring cardiac output (14)

OR

- 16 a) Discuss about direct and indirect method of blood pressure measurement (14)

Module IV

- 17 a) Describe in detail about the working principle and generation of X-rays with neat diagram (14)

OR

- 18 a) What is diathermy? Classify its types and discuss in detail about any two types of diathermy. (14)

Module V

- 19 Describe in detail about the Electrical safety measures adopted in Medical environment (14)

OR

- 20 Discuss about Telemedicine in detail? How it is useful in remote areas. (14)
