Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

SIXTH SEMESTER B.TECH DEGREE EXAMINATION(R&S), MAY 2019

Course Code: EE372

Course Name: BIOMEDICAL INSTRUMENTATION

Max. Marks: 100 Duration: 3 Hours

PART A

Answer all questions, each carries5 marks. Marks

1		Explain biochemical system of human body.	(5)
2		Explain Einthoven triangle.	(5)
3		With the help of neat diagram explain ultrasonic method of blood pressure measurement.	(5)
4		What is the difference between internal and external pacemakers?	(5)
5		Enumerate uses of X-rays-diagnostic still picture.	(5)
6		Enumerate commonly used chemical tests on blood cells.	(5)
7		Explain telemedicine.	(5)
8		Explain basic principle of ultrasonic imaging system.	(5)

PART B

Answer any two full questions, each carries10 marks.

9	a)	Draw block diagram and explain different components of man-instrument system.	(7)
	b)	Enumerate different rhythms in EEG with frequency ranges.	(3)
10	a)	Explain equivalent circuit of bio-potential electrode interface.	(5)
	b)	Write a short note on 1) resting potential 2) action potentials.	(5)
11	a)	Describe different bio-potential electrode used to measure bioelectric events.	(6)
	b)	Explain events related to different waves in ECG	(4)

PART C

Answer any two full questions, each carries10 marks.

12	a)	With the help of neat diagram explain phonocardiography	(5)
	b)	Explain with the help of neat diagram, impedance plethysmograph for measurement of blood flow.	(5)
13	a)	What is blood pressure? How it is measured?	(5)
	b)	Explain DC defibrillator with the help of neat diagram	(5)

14 a) Explain standered 10-20 electrode placement system for EEG measurement (5)

b) Explain spirometer for measurement of respiratory parameters (5)

PART D

Answer any two full questions, each carries 10 marks.

15 a) Explain heart lung machine with the help of neat diagram. (7)

b) What is infant incubator? How it works? (3)

16 a) With the help of a block diagram explain the basic principle of Computer tomograph. (5)

b) Explain different methods of electric accident prevention. (5)

17 a) Explain in detail different clinical tests conducted on blood. (10)

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