

**Program: BE Electronics**  
**Curriculum Scheme: Revised 2019**  
**Examination: Third Year**  
**Semester V**  
**Course Code: ELDO501 and**  
**Course Name: Biomedical instrumentation**

<b>Q1.</b>	<b>Choose the correct option for following questions. All the Questions are compulsory and carry equal marks</b>
1.	-----lead configuration is used for ECG
Option A:	12
Option B:	1
Option C:	8
Option D:	10
2.	Recording electrical activities associated with heart is known as _____
Option A:	EEG
Option B:	EOG
Option C:	EMG
Option D:	ECG
3.	The following parameter is not monitored in a baby incubator
Option A:	ECG
Option B:	Temperature
Option C:	Humidity
Option D:	Blood Pressure
4.	Pacemakers are devices that are used to _____
Option A:	Replace the Heart and Lung function
Option B:	help to maintain the pacing of the heart to maintain adequate Cardiac output
Option C:	Reverse Atrial Fibrillation
Option D:	Support the function of the kidneys
5.	Which one is the clinical instrument
Option A:	Pacemaker
Option B:	ECG amplifier
Option C:	CT scanner
Option D:	Autoanalyzer
6.	Before placing the electrodes the skin should be _____
Option A:	Wet
Option B:	Dry
Option C:	Hairy
Option D:	Oily

7.	P wave in ECG indicates
Option A:	Depolarization of right ventricle
Option B:	Depolarization of left ventricle
Option C:	Depolarization of both atria
Option D:	Atria to ventricular conduction time
8.	Which rhythm is the principal component of the EEG that indicates the alertness of the brain?
Option A:	Theta rhythm
Option B:	Gamma rhythm
Option C:	Beta rhythm
Option D:	Alpha rhythm
9.	Which are the types of biomedical instruments ?
Option A:	Analytical, , Therapeutic
Option B:	Diagnostic
Option C:	Surgical
Option D:	All of above
10.	EMG stands for
Option A:	Electrometrogram
Option B:	Electromuscalgraph
Option C:	Electromyography
Option D:	Electrocardiogram

<b>Q.2 (20 Marks Each)</b>	<b>Solve any Two Questions out of Three</b>	<b>10 marks each</b>
A	Explain working of ECG machine with 12 lead electrode configuration .	
B	Explain working of Electromagnetic blood flow measurement technique .	
C	Explain the working of pacemaker with suitable block diagram. Also mention various modes of pacemaker	

<b>Q.3 (20 Marks Each)</b>	<b>Solve any Two Questions out of Three</b>	<b>10 marks each</b>
A	Explain with neat diagram type of electrodes are used for ECG,EMG,EEG	
B	Define fibrillation and explain working of DC defibrillator machine .	
C	Draw block diagram and explain working of EEG machine with 10-20 electrode system placement .	

<b>Q.4 (20 Marks Each)</b>	<b>Write short notes on (any Two)</b>	<b>10 marks each</b>
A	Phonocardiography (PCG) .	
B	Patient monitoring system .	
C	MRI Imaging .	