

6610
BOARD DIPLOMA EXAMINATION
JUNE - 2019

* **DIPLOMA IN APPLIED ELECTRONICS AND INSTRUMENTATION**
BIOMEDICAL INSTRUMENTATION
FIFTH SEMESTER EXAMINATION

Time: 3 Hours

Total Marks: 80

PART - A (3m x 10 = 30m)

Note 1: Answer all questions and each question carries 3 marks

2: Answers should be brief and straight to the point and shall not exceed 5 simple sentences

1. List any three types of electrodes used for EEG measurement
2. Define bioelectric potentials
3. Mention the amplitude and duration of electrocardiogram
4. Draw the building Blocks of an electro cardio graph (ECG)
5. Draw the diagram of electromagnetic blood flow meter
6. List any three types of Direct blood pressure measurements.
7. Compare the internal pacemakers over external pacemakers in any three aspects
8. State the need of defibrillators
9. List any three properties of X-Ray
10. List the effects of electro magnetic radiation on human body

PART - B (10m x 5 = 50m)

Note 1: Answer any five questions and each carries 10 marks

2: The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer

11. Explain the electrical activity of heart
12. Explain the arrangement of electrodes while monitoring EEG
13. Draw the block diagram set up for EMG recording and mention the frequency and amplitude of EMG
14. Explain indirect blood pressure measurement using Sphygmomanometer and Stethoscope
15. Explain the working of Ultrasonic blood flow meter based on Doppler type with diagram

16. Explain the circuit diagram of AC defibrillator.
17. Explain the production of x-ray with diagram
18. (a) Define macro shock
(b) Mention any four preventive measures to reduce shock hazards

- xxx -

A.A.N.M & V.V.R.S.R POLYTECHNIC , GUDLAVALLERU , KRISHNA