

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0423]

APRIL 2023

Sub. Code: 1510

**B.Sc. CARDIAC TECHNOLOGY
FIRST YEAR (Regulations 2014-2015, 2018-2019 & 2021-2022 onwards)
PAPER III – MEDICAL ELECTRONICS, BIOPHYSICS AND COMPUTER
USAGE RELEVANT TO CARDIAC TECHNOLOGY AND
BASIC ELECTROCARDIOGRAPHY**

Q. P. Code: 801510

Time: Three hours

Maximum : 100 Marks

Answer ALL Questions

I. Elaborate on: **(3 x 10 = 30)**

1. Discuss in detail about the techniques for Monitoring Radiation Exposure.
2. Explain the uses of Defibrillators and its functions.
3. What is Ultrasound Waves and write its application in Medicine?

II. Write notes on: **(8 x 5 = 40)**

1. Describe about impedance Plethysmography.
2. What are the procedures to be done in Catheterization lab?
3. What is Pulse oximeter and explain its types.
4. Explain the types of waves in ECG.
5. What is Pre-cordial chest leads?
6. How defibrillator restores the normal rhythm of heart?
7. What is bio-impedance signal?
8. Explain the types of ECG tests.

III. Short answers on: **(10 x 3 = 30)**

1. Define ALARA.
2. Properties of X-rays.
3. Computer use in Medical care.
4. Atrial repolarization.
5. Piezo-electric effect.
6. Define Radiation.
7. Ionization.
8. C-arm Fluoroscopy.
9. U wave.
10. Mean arterial pressure.
