

**B.Sc. CARDIAC TECHNOLOGY
(New Syllabus 2014-2015)**

FIRST YEAR

**PAPER III – MEDICAL ELECTRONICS, BIOPHYSICS AND
COMPUTER USAGE RELEVANT TO CARDIAC TECHNOLOGY
BASIC ELECTROCARDIOGRAPHY**

Q.P. Code : 801510

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. What is Ultra-Sound? Explain modes of Ultra-Sound Scan.
2. Explain Electro Cardiographic processing and display system.
3. Explain the methods of Blood Pressure Measurements.

II. Write Notes on:

(8 x 5 = 40)

1. What is the importance of Blood Pressure Measurement?
2. Write the stages of Hypertension.
3. Mention the types of Pulse Oximeter probes and it's parts.
4. Blood Pressure Cuff selection and sizing.
5. Advantages of Biphasic Defibrillator over Monophasic Defibrillator.
6. Augmented limb leads.
7. What is electrical axis?
8. What is left axis and right axis deviation?

III. Write Notes on:

(10 x 3 = 30)

1. What is Radioactivity, half life period and decay constant?
2. What is action potential?
3. If there are 7 R Wave in 60 seconds strip, calculate the Heart rate.
4. What is computer tomography?
5. Difference between transducers and sensors.
6. What is Piezoelectric effect?
7. Mention the Ultra-Sound frequency for superficial and deeper structure scanning.
8. Write the recommended range for delivering shock during Defibrillation.
9. What is pressure transducer?
10. Write the types of Defibrillator electrodes.
