

[AHS 0321]

MARCH 2021

Sub. Code: 1510

(AUGUST 2020 EXAM SESSION)

B.Sc. CARDIAC TECHNOLOGY

FIRST YEAR (Regulation 2014-2015)

PAPER III – MEDICAL ELECTRONICS, BIOPHYSICS AND COMPUTER

USAGE RELEVANT TO CARDIAC TECHNOLOGY BASIC

ELECTROCARDIOGRAPHY

Q.P. Code : 801510

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(3 x 10 = 30)

1. Explain the working principle of DC defibrillator. What are the advantages of AC defibrillator over DC defibrillator?
2. Explain various methods of monitoring Radiation exposure.
3. What are unipolar limb leads and how are they different from augmented limb leads?

II. Write notes on:

(8 x 5 = 40)

1. What is the importance of Blood pressure measurement?
2. Method of measuring oxygen saturation using pulse oximetry.
3. How ultrasound image is produced?
4. Strain gauge transducer.
5. Use of computers in medicine.
6. Write colour coding for the placement of electrodes for any one of the system.
7. What is clockwise and counterclockwise rotation of heart?
8. What is normal QRS complex duration? What are the reasons for QRS prolongation?

III. Short answers on:

(10 x 3 = 30)

1. Physiological monitor.
2. Impedance plethysmography.
3. Action potential.
4. Three methods to reduce radiation exposure.
5. Electromagnetic radiation.
6. What is Einthoven's triangle?
7. Ventricular tachycardia.
8. Calibration check in Electrocardiography.
9. Draw ECG pattern in V
10. U wave.
