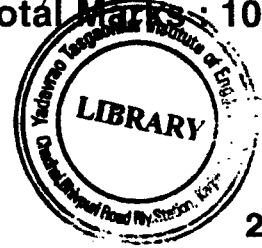


Sub: - Biomedical Instrumentation - III
Sem-VII (Rev) - Bio-Med - May - 2012

720-12.

Bio-Medical Instrumentation - III GN-6467
(REVISED COURSE)

YTIET/LIB/ENGG/BBM/Sem^(3 Hours)-VII/BMI-III/21 [Total Marks: 100] May 2012



N.B. : (1) Question No. 1 is compulsory.
(2) Solve any four questions out of remaining six questions.

1. Answer the following :—
 - (a) What are the different techniques used to calculate Heart Rate ?
 - (b) Explain Power sources for Implantable pacemaker
 - (c) Why Defibrillators are important to save patient's life?
 - (d) Draw and list various types of Electro-Surgery Techniques commonly used.

2. (a) What is the main function of Kidneys ? Draw schematic diagram of Haemodialysis machine. 10
 (b) With a neat circuit diagram explain Short Wave Diathermy unit. 10

3. (a) Explain with block diagram ventricular synchronous demand pacemaker. 10
 (b) List different types of Lasers with it's characteristics and Medical Applications. 10
 Discuss any one Application of it in detail.

4. (a) Explain in detail Surgical Diathermy Machine. Also Draw the waveforms generated by it. 10
 (b) Draw and explain DC Defibrillator with it's Electrodes. 10

5. (a) Explain in detail how Ultrasonic therapy is used in medical field. 10
 (b) Write short note on Nerve and Muscle stimulator. 10

6. (a) Write short note on Infrared and UV lamp use in Medical Instrumentation. 10
 (b) Explain in detail how radiation therapy is used to cure the Cancer in patient ? 10

7. (a) Explain the Leads and Electrodes used in implantable pacemaker. Also discuss the problems associated with it. 10
 (b) Write short note on Haemodialysis Membranes. 10