

Date: 11/12/12

sem - VII (Rev)

Biomedical

30 : 2nd half-12-(h) JP

BIOMED

Con. 8378-12.

Bio-medical Instrumentation

KR-1212

(3 Hours)



[Total Marks : 100

- N.B.:** (1) Question No. 1 is **compulsory**.
(2) Solve any **four** questions out of remaining **six** questions.
(3) Assume **suitable** data if **necessary**.

1. Solve any **four** :—

- What are the sources of Cardiac Arrhythmias ?
- Specification of power supply used in pacemaker and defibrillator.
- Specification of electro surgical unit.
- Different types of Laser used in Biomedical, their specification and application.
- Heart rate measurement tech.

2. (a) If person's AV node becomes completely failed. How will be its nature of ECG ? How do you overcome it ?
(b) In what situation defibrillator is used ? Describe the different tech. of delivering electric shock. State their specification also.

3. (a) Differentiate in between different therapy units according to —

- Tech. involved
- Application
- Specification
- Process
- Demerits/Merits.

(b) Explain clearly the use of radiation therapy for different diseases.

4. (a) Explain surgical diathermy machine in detailed. 12

(b) What is use of nerve muscle stimulator and what kind of precaution taken during application ? 8

5. (a) Explain in detail of measurement of any single physical parameter by using laser tech.

(b) Short notes on Implantable defibrillator.

6. (a) Describe different types of Laser used in medical application.

(b) Explain briefly Hemodialysis machine.

7. Short notes on :—

- Pacing modes of pacemaker
- Surgical diathermy analyzer
- Laser delivery system.