

Code No: **R32102****R10****Set No. 1****III B.Tech II Semester Supplementary Examinations, April - 2018****BIO-MEDICAL INSTRUMENTATION****(Electronics and Instrumentation Engineering)****Time: 3 hours****Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks

- 1 a) Explain Man Instrumentation system and its components with neat block diagram [7M]
b) Define sources of bioelectric potential and explain Resting and Action potential with waveforms. [8M]
- 2 a) Explain different types of electrodes for measuring bioelectric potentials. [8M]
b) List and discuss briefly various types of transducers for biomedical applications. [7M]
- 3 a) With neat waveforms, explain briefly about ECG. [7M]
b) What is the importance of blood Flow meter? Discuss any two methods used to measure blood Flow. [8M]
- 4 a) Explain the physiology of Respiratory System. [7M]
b) Write short notes on
i. Tidal volume ii. Residual volume [8M]
iii. Vital capacity iv. Total lung capacity
- 5 a) What is fibrillation? How you can correct it? Draw and explain d.c defibrillator? [8M]
b) Explain about various respiratory therapy equipment [7M]
- 6 a) Define the following and explain.
i. Electro retinogram ii. Electro oculogram [8M]
b) Define the following and Explain.
i. Diathermy ii. Biomaterials iii. Simulators [7M]
- 7 a) Explain how telemetry can be done for ECG measurement during exercise. List the advantages of telemetry. [8M]
b) Explain the working principle of CT scan with block diagram. [7M]
- 8 a) Discuss strip chart records and galvanometric recorders with suitable diagrams. [8M]
b) List various methods for accident prevention with diagrams. [7M]
