

Code No: **R41048****R10****Set No. 1****IV B.Tech I Semester Supplementary Examinations, February - 2019****BIO-MEDICAL ENGINEERING**
(Electronics and Communication Engineering)**Time: 3 hours****Max. Marks: 75****Answer any Five Questions**
All Questions carry equal marks

- 1 a) Write notes on the following bioelectric potentials: [8]
(i) ECG (ii) EEG (iii) EMG
b) What are the problems encountered in measuring a living system? Explain. [7]
- 2 a) Explain how the Biopotentials are measured with two electrodes. [8]
b) What are biochemical transducers? Explain. [7]
- 3 a) Explain about ECG lead configurations with neat sketch. [8]
b) Describe the working principle of magnetic blood flow meter. [7]
- 4 a) What is the use of inhalators and nebulizer? Explain in detail. [8]
b) Which instrument is used to obtain the spirogram? Explain. [7]
- 5 a) What are the different pacing techniques possible with both internal and external pacemakers? Explain. [8]
b) What are the different types of patient-monitoring displays? Explain. [7]
- 6 a) Write notes on audio meters and hearing aids. [8]
b) Write short notes on diathermy. [7]
- 7 a) Write notes on X-ray and radio-isotope instrumentation. [8]
b) Discuss about the MRI. [7]
- 8 a) How to prevent ground shock hazards? Explain. [8]
b) Describe the working of Biopotential amplifiers. [7]