

2005 JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY

III B.TECH I SEMESTER SUPPLEMENTARY EXAMINATIONS
BIO-MEDICAL EQUIPMENT
 (BIO -MEDICAL ENGINEERING)

NOVEMBER 2005

TIME – 3 HOUR
 MARK – 80

Answer any FIVE Questions
 All Questions carry equal marks

1. Explain briefly preamplifier, filters and writing part used in EEG? How is evoked potentials recorded in EEG and discuss various waveforms of EEG? [16]
2. (a) Explain with schematic the principle of operation of KLiNa flame system?
 (b) Discuss any five types of interferences that effect flame photometry and how do you rectify them? [8+8]
3. (a) What is a phonocardiograph? Explain the origin of heart sounds? Explain how it is measured using a phonocardiograph?
 (b) List out general considerations for bioelectric recorder amplifier? [8+8]
4. (a) Define a 'pacemaker'. What are the types of pacemakers. Which are available in the market? Compare their performances.
 (b) Discuss the power sources used for Implantable pacemakers? [8+8]
5. (a) Explain the production of microwave.
 (b) with a neat schematic explain the microwave Diathermy? [8+8]
6. Explain the principle of operation of electrosurgical Diathermy with a neat block diagram? Discuss unipolar and bipolar techniques? [16]
7. With a neat schematic explain a surgical microscope? [16]
8. List different leakage currents. Discuss a method to reduce it? [16]