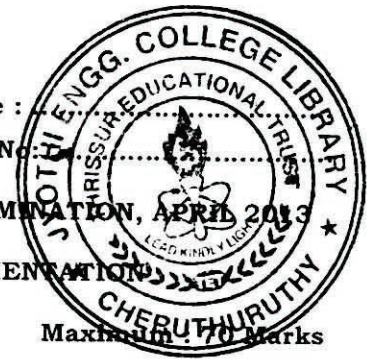


Name : _____

Reg. No. _____

EIGHTH SEMESTER B.TECH (ENGINEERING) DEGREE EXAMINATION, APRIL 2013**AI 09 L09 - ADVANCED BIOMEDICAL INSTRUMENTATION
(2009 Admission)****Time : Three Hours****Maximum : 70 Marks****Part A***Answer all questions.*

1. Define SPECT and PET. (2)
2. What is microwave diathermy? (2)
3. What is the function of kidneys? (2)
4. Define infusion pumps. (2)
5. What is signal averaging? (2)

Part B*Answer any four questions.*

6. Discuss about NMR principles with neat block diagrams. (5)
7. Discuss about short wave diathermy types and applications. (5)
8. Bring out the Blocks for artificial kidney machines. (5)
9. Describe about the types of modern ventilators. (5)
10. Discuss about filtering techniques for QRS peak detection in ECG wave forms. (5)
11. Describe portable arrhythmia monitoring system for ventricular tachycardia. (5)

Part C*Answer all questions.*

12. (a) Explain the principles of radio isotopes used in medical image processing. (10)
(Or)
- (b) Discuss about Biological effects of NMR Imaging. (10)
13. (a) Explain the principles of microwave diathermy with Block diagram. (10)
(Or)
- (b) Explain the function of portable kidney machine. (10)
14. (a) Explain about the Insulin infusion pumps with a neat schematic diagram. (10)
(Or)
- (b) Discuss about the principles of lithotripsy with an example. (10)
15. (a) Discuss about data deduction techniques for ECG signals. (10)
(Or)
- (b) Compare and Contrast AZTEC, Turning point and FAN algorithms. (10)