

NAME _____

ROLL NO _____

2008 ANNA UNIVERSITY
B.E/B.TECH DEGREE EXAMINATION
BIOMEDICAL INSTRUMENTATION
(ELECTRICAL AND ELECTRONIC ENGINEERING)

DECE-2008

TIME-3HOUR
MARKS-100

ANSWER ALL QUESTIONS

PART - A [10x2=20]

1. What are resting and action Potentials?
2. What is meant by central nervous system?
3. Distinguish between metallic microelectrode and non-metallic microelectrode
4. State the requirements for physiological amplifiers?
5. List the different methods used for direct measurement of blood pressure?
6. What do chemo-receptors, PCO₂ sensors do in human system?
7. What is lithotripsy?
8. State any two problem which arises due to leakage currents in an equipment
9. What is the purpose of Audiometer?
10. What is the function of synchronous pacemaker?

PART - B [5x16=80]

11. a. i. Describe the generation and features of action potential.
ii. Explain the function of human respiratory system
or
b. i. Explain the working of piezoelectric transducer as arterial pressure sensor
ii. Explain how piezoelectric transducer produces ultrasonic waves
12. a. i. Draw a buffer amplifier circuit and explain its working
ii. Explain the working of chopper amplifier
or
b. Explain the working of i. ECG recorder ii. EMG system
13. a. With suitable figure explain how PH, PCO₂, PO₂ are measured
or
b. i. Explain any one method of measuring blood pressure
ii. Write a note on Plethysmography
14. a.i. Explain the working of X-ray machine
ii. Write a note on endoscopy
or
b.i. Explain the different elements involved in biotelemetry circuit.
ii. Explain about patient monitoring system.
15. a. With neat diagram, describe the workng of i. Heart lung machine ii. Dializer
or
b. Explain briefly any one type of pacemaker circuit and defibrillator circuit