

October 2016

Time – Three hours
(Maximum Marks: 75)

[N.B: (1) Answer any fifteen questions in PART – A and division (A) or division (B) of each question in PART – B.

(2) Each question carries 1 (one) mark in PART – A and 12 (twelve) marks in PART – B.]

PART – A

1. Define action potential.
2. What is the use of electrodes?
3. Define blood pH.
4. Define respiration rate.
5. Define ECG.
6. Mention the clinical uses of EEG.
7. Define EMG.
8. Give the applications of audiometer.
9. What is pacemaker?
10. Give the types of blood pump.
11. Define hemo dialysis.
12. State the principle of endoscopy.
13. Give the applications of bio telemetry system.
14. Define micro shock.
15. What is grounding?
16. What are the various types of leakage current?
17. Mention any two properties of laser beam.
18. List the various special techniques in X-ray imaging.
19. Define angiography.
20. Define MRI.

[Turn over.....]

PART - B

21. (A) Explain the various types of electrodes with neat sketch.
(Or)
(B) Explain the principle and operation of chromatography with neat sketch.
22. (A) Explain 10-20 lead system used in EEG with neat sketch.
(Or)
(B) Explain the principle and working of audiometer with neat sketch.
23. (A) Explain the different types of defibrillators with diagram.
(Or)
(B) Explain the principle and working of peritoneal dialysis with neat sketch.
24. (A) Draw the block diagram of bio telemetry system and explain its operation.
(Or)
(B) Explain the safety aspects in electro surgical units in detail.
25. (A) Explain the ultrasonic imaging techniques in detail with diagram.
(Or)
(B) Draw the block diagram of MRI and explain its working in detail.