



- b) i) Draw and explain the 10-20 electrode system used for EEG measurement. (8)
 ii) Explain the different lead systems used in an ECG recorder. (5)
12. a) Discuss about the measurement of pH and pO_2 of the blood with the help of neat diagrams. (13)
 (OR)
- b) Explain the different techniques used in the measurement of pulse rate. (13)
13. a) Explain the different modes of cardiac pacemakers. (13)
 (OR)
- b) i) Explain the principle and operations of dc defibrillators. (6)
 ii) Elucidate the application of heart lung machine during open heart surgery. (7)
14. a) Explain the following :
 i) Short-wave diathermy. (6)
 ii) Microwave diathermy. (7)
 (OR)
- b) i) What is radio pill ? (5)
 ii) Draw the block diagram of single channel ECG telemetry system and explain the components. (8)
15. a) i) Write short notes on Helium-Neon Laser and its general applications in medicine. (8)
 ii) What is an endoscope ? With diagram, discuss its working. (5)
 (OR)
- b) i) Write notes on cryogenic surgery. (5)
 ii) Explain how telemedicine helps the patients and medical practitioners. (8)

PART - C

(1×15=15 Marks)

16. a) Compare the signal characteristics of ECG, EEG, EMG and PCG. (15)
 (OR)
- b) What is the need of electrical safety in hospital ? Discuss the various physiological effects of electricity. (15)