

[3 Hrs]

Total Marks : 80

N.B

- 1) Question No. 1 is compulsory.
- 2) Attempt any three questions out of remaining five questions.
- 3) Figures to the right indicate full marks.
- 4) Assume suitable data if necessary, stating your assumption.



- Q1. a) Explain the optical ray diagram of Spectrophotometer. [05]  
b) Explain with suitable diagram working of Infusion Pump. [05]  
c) Explain pO<sub>2</sub> electrode. [05]  
d) Explain using suitable diagram basic principle of Dialysis. [05]
- Q2. a) Draw and explain the working of Coulter's Blood Cell Counter. [10]  
b) Explain using Spirogram various lung volumes and capacities. [10]
- Q3. a) Explain in details block diagram of ventilator. [10]  
b) Explain with suitable circuit diagram working of Ultrasonic diathermy. [10]
- Q4. a) Explain protein separation technique using electrophoresis. [10]  
b) Explain using suitable block diagram working of Hemodialysis machine. [10]
- Q5. a) Explain with suitable circuit diagram 6V, 1 Amp power supply of analytical instrument. [10]  
b) Explain using suitable block diagram working of Auto-analyser. [10]
- Q6. Write short notes on any Four
- a) Pneumotachometer. [05]
  - b) Application techniques in shortwave diathermy. [05]
  - c) ELISA reader and wash. [05]
  - d) List different types of dialyzers and explain any one. [05]
  - e) Beer-Lambert's Law. [05]

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