

1. Question No.1 is compulsory.
2. Attempt any four questions out of remaining six questions.
3. Figures to the right indicate full marks.
4. Assume suitable data wherever necessary.
5. Draw sketches/diagrams wherever necessary.
6. Use legible handwriting. Use blue/black ink.
- a) Explain using suitable diagram principle of Coulter Blood Cell Counter. [10]
- b) Draw and explain circuit diagram power supply of Spectrophotometer. [10]
- a) Explain the complete process of Electroporation. [10]
- b) Draw and explain block diagram of electromagnetic blood flow meter. [10]
- Draw and explain the block diagram of complete blood gas analyzer and also draw and explain the relevant circuits and mention the equation. [20]
- a) Draw and explain the block diagram of Ear puls oximeter. [10]
- b) Draw and explain wavelength selection using diffraction grating. [10]
- a) Draw a neat labeled diagram and explain the various lung volumes and capabilities. [10]
- b) Draw and explain block diagram of autoanalyser. [10]
- a) Define Cardiac output. Explain any one non invasive method. [10]
- b) Draw and explain the block diagram of Anesthesia machine. [10]
- Write short notes on: (Any four) [20]
- Chromatography
- Beer- Lambert's law
- ELISA reader
- Flame-photometer
- Audiometer
- Centrifuge machine.