1. Answer the following briefly: 10
   (a) Define Standard deviation and Precision.
   (b) What are analytical variables?
   (c) Differentiate standard and control.
   (d) What are the consumable laboratory items?
   (e) Define management in the clinical laboratory.

2. Answer any two of the following: 12
   (a) Discuss in detail the collection, transport and storage of various specimens in clinical laboratory.
   (b) What is the importance of quality control in clinical laboratory? Elaborate in detail external quality control.
   (c) Explain in detail the importance of effective communication in clinical laboratory.
3 Explain the ordering storage and maintenance of laboratory chemicals and equipments in clinical laboratory.

OR

3 Write an essay on safe clinical laboratory design.

4 Write short notes on any two of the following:

(a) Biosafety levels

(b) Quality assurance

(c) Laboratory goals.