

December—2020

(Held in 2021)

MEDICAL LABORATORY TECHNICIAN/
MEDICAL LABORATORY AND MOLECULAR
DIAGNOSTIC TECHNOLOGY

QP : Phlebotomy Technician

Paper : MLT-VC-1026

(Biochemistry—I)

Full Marks : 60

Time : 3 hours

*The figures in the margin indicate full marks
for the questions*

1. Fill in the blank/Answer the following : 1×7=7

- (a) _____ is used to hold filter papers when filtering fluids or for pouring liquids into narrow neck containers.
- (b) _____ is used for measuring liquids.
- (c) 6 gm of solute is present in 500 ml of solution. What is the concentration of solution in gm/liter?

- (d) What is the use of stopwatch in laboratory?
- (e) Mention the importance of heparin in laboratory.
- (f) How is a quality of a chemical laboratory maintained?
- (g) What is the usage of distilled water in clinical laboratory?

2. Answer the following questions : 2×4=8

- (a) Write any two job responsibilities of a Phlebotomy Technician in a laboratory.
- (b) Differentiate between calibration and standardization.
- (c) What are the different types of cleaning solution used for glassware in laboratory?
- (d) Write the significances of borosilicate glassware in laboratory.

3. Answer any *three* of the following questions :

5×3=15

- (a) Mention the different ways to express the percentage solution preparation in laboratory.

(3)

- (b) What volume of 5.0 mol dm^{-3} acetic acid is needed to prepare 100 cm^3 of 0.3 mol dm^{-3} acetic acid?
- (c) Write the differences between colorimeter and spectrophotometer.
- (d) Mention the different types of pipette with diagram. Write about the proper way how to measure by a pipette. $3+2=5$
- (e) Write the preparation of standard solution by weighing method with an example.

4. Answer any *three* of the following questions :

$10 \times 3 = 30$

- (a) Write the principle of colorimeter. Mention the different parts of the colorimeter. Write about the applications of colorimetric assay. $2+5+3=10$
- (b) Draw a labelled diagram of laboratory balance. Write the different types of analytical balance. Mention the measuring and cleaning procedure of a laboratory balance. $3+4+3=10$

(4)

- (c) What are the types of specimen? How are they preserved? Mention some preservatives and anticoagulants. $2+2+6=10$
- (d) Define standard solution. Write in detail about the four different ways to express the strength of a solution. $2+8=10$
- (e) What is Relative Centrifugal Force (RCF)? Write about use, care and applications of centrifugation. $2+2+2+4=10$
