

2023

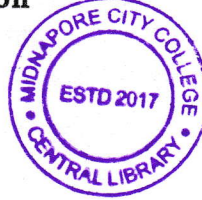
BMLT 2nd Semester Examination

Diagnostic Laboratory Instrumentation

PAPER — CC4T

Full Marks : 40

Time : 2 hours



The figures in the right-hand margin indicate marks.

*Candidates are required to give their answers
in their own words as far as practicable.*

Illustrate the answers wherever necessary.

Answer from **all** the Groups as directed.

GROUP—A

1. Answer *any five* questions : $2 \times 5 = 10$
- (a) What is magnifying power of a microscope?
 - (b) Write any two differences between spectrophotometer and colorimeter.
 - (c) What is sedimentation coefficient?



(2)

- (d) Write the full form of HEPA and state its pore size.
- (e) Why is the standard autoclave temperature set to 121 °C?
- (f) Write the functions of blood cell counter.
- (g) If HRP is the enzyme in ELISA, what is the substrate?
- (h) Differentiate between normal phase and reverse phase HPLC.

GROUP—B

Answer *any four* questions : 5×4=20

- 2. What is buoyant force? Write a note on density gradient centrifugation. 2+3=5
- 3. Define resolving power and limit of resolution. How does the oil immersion lens work? 2+3=5
- 4. Describe the process of RIA for assessment of any specific antigen present in patient's serum. 5
- 5. Write the major components used in HPLC. 5
- 6. State the principle of autoclave. 5
- 7. Discuss the major classification of immunoassay techniques. 5

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(Continued)

GROUP—C

(3)

Answer *any one* question : 10×1=10

- 8. Discuss the principle and application of UV-VIS spectrophotometer. 5+5=10
- 9. State different parts present in auto-analyzer. Discuss different biosafety cabinets used in pathological laboratory. 3+7=10

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