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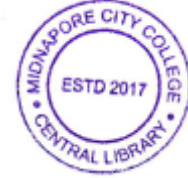
CCFUP/1st Sem/BMLT/w.e.f.2023-24(NEP)

2025

1st Semester Examination (CCFUP : NEP)

BMLT

Paper : AEC 1-T



(Basic Diagnostic Instrumentation)

Full Marks : 40

Time : Two Hours

The figures in the margin indicate full marks.

Candidates are required to give their answers

in their own words as far as practicable.

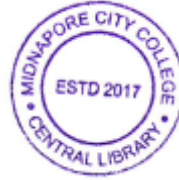
Illustrate the answers wherever necessary.

Group - A

Answer any *five* questions : $2 \times 5 = 10$

- ① What is HEPA filter?
- ② What do you mean by ocular lens?
3. Differentiate visible and UV wavelength of light.
4. Name the bacterium used to test the effectiveness of autoclave.
- ⑤ What is the main difference between a general-purpose incubator and a BOD incubator?

P.T.O.



6. Define sedimentation coefficient.
7. Define RCF and its significance in centrifuge.
8. What are the objectives of using BSCs in diagnostic laboratories?

Group - B

Answer any *four* questions : $5 \times 4 = 20$

9. Discuss different types of forces applied in centrifuge. What is the importance of slow acceleration and slow deceleration in high speed centrifuge? $3+2$
10. Write about working principle of Coulter counter and draw a suitable diagram of it. $3+2$
11. Compare between semi- and full auto- analyzer.
12. What is Beer-Lambert's law? What does it mean by transmittance? $3+2$
13. What is the difference between vertical and horizontal laminar flow cabinets in terms of contamination control? How does the UV light function in a laminar flow cabinet for sterilization? $2\frac{1}{2}+2\frac{1}{2}$
14. How is a colorimeter different from a spectrophotometer? What are the main components of a colorimeter? $2\frac{1}{2}+2\frac{1}{2}$

(3)



Group - C

Answer any *one* question : $10 \times 1 = 10$

15. Differentiate between SEM and TEM. Describe about SOP of autoclave. Define rate zonal centrifugation.

4+4+2

16. How is air recirculated and filtered in a laminar flow cabinet? Write about working principle of Incubator. Describe about the application of 5-Part Blood Cell Counter.

3+4+3
