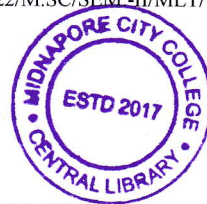


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PG (CBCS)
M.Sc. Semester- II Examination, 2023
MEDICAL LABORATORY TECHNOLOGY
PAPER: MLT 202
(DIAGNOSTIC MOLECULAR BIOLOGY & EPIDEMIOLOGY)

Full Marks: 40

Time: 2 Hours

The figures in the right-hand margin indicate full marks.
 Candidates are required to give their answers in their own words as far as practicable.

GROUP-A

Answer any **FOUR** from the following questions: 4×2=8

1. What is capping? Write the composition of RNA polymerase holoenzyme.
2. Write the function of helicase and SSBP in DNA replication?
3. What is epidemiological triangle?
4. What is incidence rate of a disease? Give example.
5. Define apoptosis? What do you mean by transposon?
6. Which type of enzyme is called molecular scissor? Give an example of that enzyme and show how it cuts a DNA.

GROUP-B

Answer any **FOUR** from the following questions: 4×4=16

7. What is DNA foot printing? Write its importance in diagnostic molecular biology. 2+2
8. What is the function of SSC and FSC in flowcytometry? What do you mean by Laser 'interigation'? 2+2
9. Simply discuss the process of SOS repair of DNA.
10. What is TATA box? Write down the process of Rho dependent termination of transcription. 1+3
11. Write the criteria of a good questionnaire.
12. Write a short note on gene therapy.

GROUP-C

Answer any **TWO** from the following questions: 2×8=16

13. What do you mean by DNA damage? Write down the process of BER, NER and mismatched repair of DNA damage. 1+7
14. Write down the principle of site directed mutagenesis and flow cytometry? 4+4
15. Describe the process of DNA replication. 8
16. Write the criteria of a good sampling followed in epidemiology. Define attack rate. 6+2
