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B.Sc./4th Sem (H)/BOT/23(CBCS)

2023

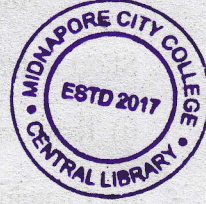
4th Semester Examination

BOTANY (Honours)

Paper : C 8-T

(Molecular Biology)

[CBCS]



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.*

Group - A

Answer any *five* questions of the following :

2×5=10

1. What is replisome?
2. What is 'Kornberg's enzyme'?
3. Define micro RNA.
4. Define C-value.
5. Why RNA primer is required for DNA replication?
6. What is the use of 5' cap in maintaining RNA structure?

P.T.O.

(2)

7. What is nucleosome?
8. What is Wobble hypothesis?

Group - B

Answer any *four* of the following : 5×4=20

9. Short notes on : 2½+2½

(i) Termination of translation.

(ii) Charging of amino acid.

10. Briefly describe the post-transcriptional modification of proteins. 5
11. Write the principle of Griffith's experiment. Briefly describe the confirmative experiment of genetic material. 1+4
12. What is spliceosome? Briefly describe the process of splicing. 2+3
13. State the major features of genetic code and their exceptions. 5
14. Define operon. Who proposed the operon concept? Explain the negative control of Lac operon. 1+1+3

Group - C

Answer any *one* of the following : 10×1=10

15. Describe the negative control of lactose operon. What is heat shock protein? 8+2

(3)

16. Explain the role of various enzymes involved in DNA replication. Briefly describe the θ -model of DNA replication. What is fidelity of translation? 4+4+2

