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B.Sc./1st Sem (H)/BOTA/22(CBCS)

2022

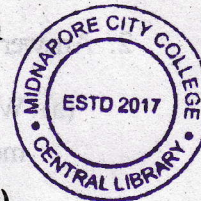
1st Semester Examination

BOTANY (Honours)

Paper : C 2-T

(Biomolecules and Cell 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.*

1. Answer any **five** of the following : $2 \times 5 = 10$

(a) Why are mitochondria considered as semi-autonomous organelles?

(b) What do you mean by lock and key hypothesis?

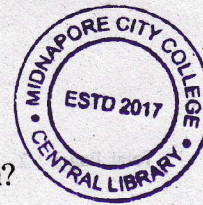
(c) Write two main characteristic features of prokaryotic and eukaryotic cell.

(d) What is buffer? Cite example.

(e) Cite one example of each oligo- and polysaccharides.

(f) What are essential fatty acids?

P.T.O.



(g) What is meant by protein denaturation?

(h) What is endocytosis?

2. Answer any **four** of the following : $5 \times 4 = 20$

(a) Write the major differences between mitosis and meiosis cell division. 5

(b) What is ER? Write its structure and functions. 5

(c) Briefly describe the structure of t-RNA. 5

(d) Write differences between holo- and apo- enzyme.
What are cofactors and prosthetic group? $3 + 2 = 5$

(e) Write down the classification of carbohydrates with example. 5

(f) Discuss the structure of microtubules and microfilaments. 5

3. Answer any **one** of the following : $10 \times 1 = 10$

(a) Briefly discuss about the cell cycle check points.
Write down the structure of ATP and its role as an energy currency. $5 + 5 = 10$

(b) Briefly discuss different levels of protein structure.
Write down the function of Golgi apparatus. $8 + 2 = 10$