

2022

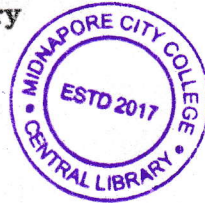
B.F.Sc. 1st Semester Examination

Fundamentals of Biochemistry

PAPER — BFSC-105

Full Marks : 50

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.

1. Answer **any ten** from the following questions :
2×10=20

- (a) What is promoter? Mention its function.
- (b) What do you mean by gluconeogenesis?
Name a non-reducing disaccharide.
- (c) What is Wobble hypothesis?
- (d) Write down the Michaelis-Menten equation.
Define K_m .

/172

(Turn Over)



(2)

- (e) What is peptide bond? What is Zwitter ion?
- (f) What do you mean by MUFA? Give an example.
- (g) What are the functions of primase and gyrase?
- (h) What are essential fatty acids? Give an example.
- (i) What is mutarotation? What is glycosidic bond?
- (j) What is isoelectric pH? What is saponification number?
- (k) "DNA replication is semiconservative" — explain.
- (l) What is Shine-Dalgarno sequence?
- (m) Differentiate fats from oils.
- (n) What are zero-order and first-order reactions?
- (o) What are allosteric enzymes?

2. Answer **any six** from the following questions :
5×6=30

- (a) What do you mean by charging of tRNA?
- (b) Classify enzymes with examples.

/172

(Continued)

(3)

- (c) Briefly describe the process of glycolysis.
- (d) Briefly explain different types of post-transcriptional modifications.
- (e) Write a short note on reversible enzyme inhibitions.
- (f) Briefly describe the initiation of translation.
- (g) Briefly describe the factors that are affecting enzyme activities.
- (h) Write a short note on protein structures.
- (i) Briefly describe the chemical structure of DNA.
- (j) Write a note on beta oxidation of fatty acid.

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