

2019

B.Sc.

1st Semester Examination

BIOTECHNOLOGY (Honours)

Paper - C 1-T

Full Marks : 40

Time : 2 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

- 1 Answer any five question : 5×2
- (a) Distinguish between α -keratin and β -keratin. 2
- (b) Write the biomedical importance of amino acid. 2
- (c) What is zwitterion? 2
- (d) Fructose has no aldehyde group but show reducing property — explain. 2

[Turn Over]

- (e) What is inverted sugar 2
- (f) Draw the structure of cephalin and lecithin. 2
- (g) What is eicosanoids? 2
- (h) Draw the structure of NADP⁺. 2

Group - B

2. Answer any *four* questions : 4×5
- (a) How long chain fatty acid is transferred from cytosol to mitochondrial matrix? 5
- (b) Briefly describe the three complexes of ETC. 5
- (c) Prove that glycogenolysis and glycogenesis are not reversible to each other. 5
- (d) (i) Why RNA is hydrolysed by alkali but DNA is not.
- (ii) Differentiate maltose and sucrose. 3+2
- (e) (i) Write the importance of thiamine pyrophosphate and pyridoxal phosphate. 2+3
- (f) (i) What is monomeric and oligomeric enzyme? Give examples.

- (ii) How does enzyme activity depend on temperature? 3+2

Group - C

3. Answer any *one* question : 1×10

- (a) Clarify lipid and give example each type of lipid. Differentiate between amylose and amylopectin. What is aminosugar? Give example.

5+3+(1+1)

- (b) How many moles of ATP is produced by glycolysis in presence and absence of oxygen from one molecule of glucose? Differentiate between nucleotide and nucleoside. Write the stoichiometric equation of TCA cycle. 4+4+2
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