2019

B.Sc.

2nd Semester Examination

MICROBIOLOGY (Honours)

Paper - C3T

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.

Group - A

1. Answer any *five* questions from the following : 5×2

   (a) What are the energy rich compounds ? 2

   (b) What do you mean by apoenzyme and holoenzyme ? 1+1

   (c) State the importance of K_m and V_{max}. 1+1

   (d) What is mutarotation ? 2

(e) What are the non-protein amino acids and mention its importance. 1+1

(f) What are the modified sugars ? Mention their importance. 1+1

(g) State the structural features of haemoglobin. 2

(h) What is PUFA ? Give two examples. 1+1

Group - B

2. Answer any *four* questions from the following : 4×5

(a) Explain enthalpy on the basis of first law of thermodynamics. What do you mean by edergonic and exergonic reactions ? 3+2

(b) What are sphingoglycolipids ? Mention their physiological importance. 2+3

(c) State the structure and functions of glutathion.

(d) Describes the isomerism of monosaccharides with example. 5

(e) Describe the role of lipids in signal transduction. 5

(f) Write a brief note on multi-enzyme complex with special reference to pyruvate dehydrogenase. 5

Group - C

3. Answer any one questions from the following : 1×10

(a) (i) State the importance of modified amino acids in protein structure.

(ii) Describe polysaccharides as storage compounds. Describe the importance of mucopolysaccharides. 4+6

(b) (i) State the features of allosteric enzymes. Mention its kinetic pattern.

(ii) Describe the features of titration curve of amino acids. (3+2)+5
