SH-II/MCB/201/C-3/19

B.Sc. 2nd Semester (Honours) Examination, 2019

MICROBIOLOGY

(Biochemistry)

Paper : SH/MCB/201/C-3

Course ID : 22211

Time: 1 Hour 15 Minutes **Full Marks: 25**

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.
The questions are equal value.

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

(a) What is abzyme?

(b) What do you mean by turn over of protein?

(c) Name one pigment which is lipid in nature.

(d) Name one even and one odd carbon fatty acid.

(e) What are PUFA and MUFA?

(f) Define Km.

(g) Define mutarotation.

(h) Give the structure of one sulfur containing amino acid.

2. Answer *any two* from the following: 5×2=10

(a) Classify proteins based on their function. Give suitable example wherever necessary. 5

(b) What is inhibition? Describe briefly about competitive inhibition. 1+4=5

(c) Which sugar is known as invert sugar and why is it so called? Write down the difference between reducing sugar and non-reducing sugar. 1+2+2=5

(d) What do you mean by "18 : 3; 9, 12, 15"? Give the structure of cyclic fatty acid which is used in treatment of leprosy. Write down the difference between saturated fatty acid and unsaturated fatty acid. 2+1+2=5

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

(a) Briefly discuss the titration curve of aspartic acid where the pKa^1 is 2·1, pKa^2 is 3·9 and pKa^3 is 9·8. Draw the curve and calculate the pI. Discuss briefly about the clover-leaf model of t-RNA. 6+4=10

(b) Write down the structure and properties of DNA. Enlist the difference between DNA and RNA. 7+3=10

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