Total number of printed pages – 4

63 (FY)SEM–3/MAJ/ZOOMAJ2014

2025

ZOOLOGY

Paper : ZOOMAJ2014

(Basics of Biochemistry)

Full Marks : 50

Pass Marks : 20

Time : Two hours

The figures in the margin indicate full marks for the questions.

1. Choose the correct answer : 1×5=5

   (a) The most common monosaccharides present in the nucleus are

   (i) Trioses

   (ii) Tetraoses

   (iii) Pentoses

   (iv) Hexoses

(b) The most diverse molecules in a cell are

(i) Mineral Salts

(ii) Lipids

(iii) Proteins

(iv) Carbohydrates

(c) Which of the following is a fibrous protein ?

(i) Collagen

(ii) Globulin

(iii) Haemoglobin

(iv) Hordein

(d) "Lock and Key" hypothesis of enzyme action was given by

(i) Fischer

(ii) Koshland

(iii) Buchner

(iv) Kuhne

(e) Which one is a non-reducing commercial sugar ?

(i) Glucose

(ii) Sucrose

(iii) Fructose

(iv) Lactose

2. Answer the following questions : ***(any five)*** 2×5=10

(a) What is satellite DNA ?

(b) What are ribozymes ?

(c) Distinguish between glycogenesis and glycogenolysis.

(d) Draw the molecular structure of glycine.

(e) What are glycolipids ? Give examples.

(f) Why are the enzymes called the biocatalysts ?

(g) Write the differences between glycogen and starch.

3. Answer the following questions : ***(any five)*** 5×5=25

(a) Describe the different types of phospholipid with examples. 3+2=5

(b) Describe the functions of polysaccharides.

(c) Write the differences between DNA and RNA.

(d) What are different classes of enzymes according to Enzyme Nomenclature Recommendations (1978) of IUB ?

(e) Write the biological significance of protein.

(f) Give the roles of cholesterol in the body and how it is harmful.

(g) Write the roles of inhibitors in enzyme action.

(h) Give the differences between oligosaccharides and monosaccharides.

4. Answer ***any one*** of the following: 10×1=10

(a) Write the distinguishes between primary, secondary and tertiary structure of protein. Give *one* example of each. 9+1=10

(b) Write a note on the compositions and functions of the nucleotides. 5+5=10