63 (FY)SEM-3/MAJ/ZOOMAJ2014

2024

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) Ribose and deoxyribose differ in structure around a single carbon namely

   i) C_1

   ii) C_2

   iii) C_3

   iv) C_4

Contd.

b) The lipid that functions as food reserve in animals is

i) Phospolipid

ii) Tryglyceride

iii) Glycogen

iv) Estrogen

c) Which of the following is not the structural component of biological membrane ?

i) Fatty acid

ii) Sphingolipid

iii) Sterols

iv) Phospholipid

d) Repsid is an example for the class of enzymes namely

i) Oxidoreductases

ii) Transferases

iii) Hydrolases

iv) Ligases

e) The backbone of nucleic acid structure is constructed by

i) Peptide bonds

ii) Glycosidic bonds

iii) Phosphodiester bridges

iv) All of the above

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

a) State the importance of lipids in human body.

b) What is rancidity ?

c) Name two steroids.

d) What is denaturation of protein ?

e) What are immunoglobulins ?

f) Write the complementary sequence of GATCAA.

g) What are cofactors ?

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

a) Write short notes on glycosidic bond and peptide bond.

b) Give a brief account on the types and functions of different types of RNA.

c) Distinguish between purine and pyrimidine.

d) Give a brief account on the conjugated proteins.

e) Write on biological significance of lipids.

f) Give a brief account on the significance of at least three important carbohydrates.

g) Discuss briefly on Fischer's lock and key model explaining mechanism of enzyme action.

h) Discuss on the structure of DNA as Watson and Crick model.

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

a) Discuss on the factors affecting enzyme actions.

b) Discuss on important saturated and unsaturated fatty acids of biological importance.