Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore-641043
Bachelor's Degree Examination – November 2017

V Semester

Class : III UG **Time :3 Hrs**
Major : Zoology **Max.Marks :100**

15BZOC14 Biochemistry

Part – A **10x1=10**
Choose the correct answer

1. What is the maximum number of hydrogen bonds that can be formed by each molecule of water?
   a. 1 b. 2
   c. 3 d. 4

2. pH of blood is ----------
   a. 6.4 b. 7.4
   c. 8.4 d. 9.4

3. The correct generic molecular formula for carbohydrates is ----------
   a. $(CHO_2)_n$ b. $(CH_nO)_2$
   c. $(CH_2O)_n$ d. (C_2HO)

4. The fructosan is ----------
   a. Glycogen b. Starch
   c. Cellulose d. amylopectin

5. The synthesis of urea occurs in ----------
   a. Kidney b. Liver
   c. Muscle d. Brain

6. The most active site of protein synthesis is the ----------
   a. nucleus b. ribosome
   c. mitochondrion d. cell sap

7. In mammals, the major fat in adipose tissue is ----------
   a. Phospholipid b. Cholesterol
   c. Sphingolipids d. Triacylglycerol

8. Deterioration of food (rancidity) is due to presence of ----------
   a. Cholesterol b. Vitamin E
   c. Peroridation of lipids d. Phenolic compounds

9. The enzyme trypsin is specific for peptide bonds of ----------
   a. basic amino acids b. acidic amino acids
   c. aromatic amino acids d. none of the above

10. Chymotrysin is specific for peptide bonds containing
    a. uncharged amino acid residues b. acidic amino acids
    c. basic amino acid d. small amino acids

Part – B 5x6=30

Answer the following

Answer should not exceed 400 words or two pages

11. a. What is acidosis? Explain the aetiology & biochemical complications.

(or)

11. b. Explain bicarbonate buffer system.

12. a. Discuss HMP shunt.

(or)

12. b. Discuss glycolysis.

13. a. List the functions of proteins.

(or)

13. b. What is transamination? Explain with an example.

14. a. Explain the structure & functions of lipoproteins.

(or)

14. b. Explain carnitine cycle with significance.

15. a. Describe the characteristic features of enzyme active site.

(or)

15. b. Discuss the enzyme nomenclature.

Part – C 5x12=60

Answer the following

Answer should not exceed 800 words or 4 pages

16. a. Explain the properties of water.

(or)

16. b. Explain what is alkalosis with its aetiology and biochemical complications.

17. a. Explain TCA cycle.

(or)

17. b. Explain the classification of carbohydrates.

18. a. With suitable examples explain secondary & tertiary structures of proteins.

(or)

18. b. Write an essay on the classification and properties of amino acids.

19. a. Explain ketone bodies formation.

(or)

19. b. What is β - oxidation? Explain.

20. a. Enumerate the mechanism of enzyme action.

(or)

20. b. Describe in detail the IUB system of enzyme classification.