

KERALA AGRICULTURAL UNIVERSITY

B.Sc (Hons.) Agriculture 2016 Admission
1st Semester Final Examination-March-2017

Marks: 50.00

Time: 2 hours

Cat. No: Ssac 1101

Title: Fundamentals of Biochemistry (1+1)

1. Fill up the following

(10 x 1 = 10)

1. _____ is a pentose sugar.
2. _____ is classified as an acidic amino acid.
3. _____ is an example of poly unsaturated fatty acid.
4. The site on the enzyme where substrate binds is called _____
5. TCA cycle events take place in the _____ of a cell.

State whether the following statements are True or False

6. Starch is a homopolysaccharide made up of β D glucose residues.
7. Glutelin is the protein present in wheat.
8. Triglycerides are esters of fatty acids with three glycerol molecules.
9. Hexokinase catalyses the conversion of glucose to glucose 6 phosphate.
10. Tea is rich in polyphenols.

II Write Short notes on any FIVE

(5 x 2 = 10)

1. What are the stereo isomerisms observed in carbohydrates?
2. Brief on the functions of plant proteins.
3. Describe the properties of lipids.
4. Write a note on immobilization of enzymes.
5. Give the classification of fatty acids
6. How are fatty acids with even number oxidized?
7. Outline the importance of phenolic compounds.

III Answer any FIVE questions

(5 x 4 = 20)

1. Classify amino acids.
2. Explain the significance of compound lipids in biological systems
3. Describe the structure and function of water soluble vitamins
4. Explain the mechanism of enzyme action
5. Describe the classification of proteins.
6. What are the applications of alkaloids?
7. What are the steps involved in the biosynthesis of proteins?

IV Write Essay on any ONE

(1x10 = 10)

1. Write an essay on the factors affecting enzyme action. Elaborate on the industrial applications of enzymes.
2. Write an essay on the metabolism of carbohydrates. Explain the reactions of glycolysis under aerobic and anaerobic conditions.
