

# KERALA AGRICULTURAL UNIVERSITY

B.Sc (Hons.) Agriculture 2016 Admission  
I<sup>st</sup> Semester Final Examination-March-2017

Cat. No: Ssac 1101

Marks: 50.00

Title: Fundamentals of Biochemistry (1+1)

Time: 2 hours

## I. 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  $\beta$  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

(1 x 10 = 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.

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