

KERALA AGRICULTURAL UNIVERSITY
B.Sc (Hons.) Ag. Programme
IInd Semester Re-Examination- August -2014

Cat. No: Ssac.1202

Marks: 80

Title: Agricultural Biochemistry (2+1)

Time: 3 hours

I. A. Fill in the blanks

(10 x 1 =10)

1. is not included in ketone body
a. Acetoacetate b. B- hydroxybutarate c. Acetone d. Acetyl CoA
2. amino acid induces synthesis of flower and fruit related hormones.
3. Name the essential fatty acids having 18 carbon atoms & three double bonds.
4. Glycolysis takes place in of the cell.
5. amino acids helps in proper ripening of fruits.

B. State true or false

6. Pectin is present in cell wall of bacteria.
7. Snake venom is a protein.
8. Oleic acid is a mono unsaturated fatty acids.

C. Choose the correct answer

9. The Michaelis Menton constant (k_m) is
 - i. Maximum velocity that any given enzyme reaction can achieve
 - ii. Substrate concentration which gives the best enzyme assay for an enzyme reaction
 - iii. Substrate concentration when the reaction is half the way towards the maximal velocity
 - iv. The maximal velocity divided in half.
10. Store room inside a cell is
 - a. Vacuole b. Nucleus c. Chloroplast d. Endoplasmic reticulum

II Write short notes/answers on any ten

(10x3=30)

1. Globular proteins
2. Coenzymes
3. Photorespiration
4. Optical isomerism
5. Epimers, enantiomers & diastereoisomers
6. Mutarotation
7. Alkaloids and their uses
8. Saponification number

9. Name the water soluble vitamins and their deficiency.
10. Rf value
11. Write Michaelis Menton equation and plot the lineweaver burk plot.
12. Ribosomes

iii Write essay on any six of the following (6 x 5 = 30)

1. Types of reversible inhibition with example.
2. Alcoholic fermentation
3. Photosynthesis and its regulation
4. Calvin cycle
5. Immobilisation of enzymes with industrial application
6. Pentose phosphate pathway
7. Various steps involved in protein biosynthesis
8. IUB classification of enzymes

iv Write essay on any one of the following (1 x 10 = 10)

1. Describe the cyclic and non cyclic phosphorylation reaction in photosynthesis.
2. Explain how glycogenolysis is regulated through phosphorylase enzyme.