

KERALA AGRICULTURAL UNIVERSITY

B.Sc (Hons.) Ag. Degree Programme 2015 Admission

IInd Semester Final Examination- August-2016

Cat. No: Ssac.1202

Title: Agricultural biochemistry (2+1)

Marks: 50

Time: 2 hours

I. Fill in the blanks

(10 x 1=10)

1. Pyrimidine bases present in DNA are _____ and _____.
2. Competitive inhibitor of succinate dehydrogenase is _____.
3. The red coloured pigment of tomato is due to _____.

State True or False:

4. Nitrogen gas is the mobile phase in gas chromatography
5. Increase in substance concentration increases the velocity and obtain a bell shaped graph.
6. Optical activity is measured using spectrophotometer .
7. Golden rice is rich in vitamin D.

Choose the correct answer

8. Sorbitol is the alcohol of
a) Glucose b) sucrose c) maltose d) Lactose.
9. Xylose is a _____ sugar
a) Triose b) pentose c) diose d) Hectose .
10. Which of the following are weak forces associated with the interaction of biological molecules?
a) Hydrogen bonding b) Electrostatic interaction c) Covalent bonding d) Both a & b

II Write short notes on any FIVE

(5 x 2=10)

1. What are plant hormones?
2. Rancidity.
3. Allosteric inhibition.
4. Zwitter ions.
5. Secondary structure of proteins.
6. Structure of t-RNA.
7. Functions of lipids.

III Explain any FIVE of the following

(5 x 4=20)

1. DNA structure and function.
2. Chart the reactions involved in glyoxylate cycle.
3. Difference between C₃ and C₄ pathway.
4. Mechanism of enzyme action.
5. Structure of eukaryotic cell.
6. Brief functions of chloroplast and mitochondria.
7. Define replication. Show that DNA replication is a semi conservative process with Meselson & Stahl experiment.

IV Write essay on ANY ONE

(1 x 10=10)

1. Sketch the reactions of TCA cycle and explain its role in metabolic process.
2. Explain calvin cycle.
