

KERALA AGRICULTURAL UNIVERSITY

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

IInd Semester Final Examination- August-2016

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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 _____. ✓ 8
- ✓ 3. The red coloured pigment of tomato is due to _____. ✓ 9

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 ✓ 10
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.

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