

KERALA AGRICULTURAL UNIVERSITY

B.Sc Hons (Ag) 2012 Admission

IInd Semester Final Examination- August/September -2013

Cat. No: Ssac.1202

Title: Agricultural Biochemistry (2+1)

Marks: 80

Time: 3 hours

I a) Fill up the blanks /State True or False

(10 x 1=10)

1. The phosphoprotein present in milk is _____
2. Starch and glycogen are polymers of _____
3. Fatty acid with 18 carbons and three double bond is _____
4. The breakdown of glycogen to glucose is called as _____
5. Light energy is converted in to _____ energy during photosynthesis
6. Oxidation of fattyacid occur in the organelle _____
7. Sesquiterpenes contain _____ carbon atoms
8. A sterol contains atleast one hydroxyl group (T/F)
9. Lipase are made up of lipids(T/F)
10. GDH means glucose dihydrate (T/F)

II Write short notes on ANY TEN

(10 x 3=30)

1. Write the reactions of sugars with acids and alkalies
2. Waxes and oils
3. How does C3 pathway differ from C4 pathway in plants
4. Biodegradable plastics
5. Mention the components of electron transport chain in sequence
6. DNA and RNA
7. Essential amino acids
8. Differentiate coenzyme and Isoenzyme
9. How does glycolytic pathway different from HMP shunt
10. What is photo respiration? Explain
11. Role of biotin in biosynthesis of fatty acids
12. Secondary metabolites

III Write short essays on ANY SIX of the following

(6 x5=30)

1. Outline the occurrence ,classification and functions of terpenes
2. Outline the β -oxidation scheme of fattyacid along with enzyme and cofactors required

3. What are the physical and chemical constants of oils? Explain the significance of each
4. Explain the amphibolic nature of TCA cycle
5. Explain the mechanism of enzyme substrate binding with suitable example
6. Write about the properties and uses of alkaloids
7. Explain the process of replication indicating the functions of enzymes and proteins involved in the process
8. Classification and function of carbohydrates

IV Write essay on ANY ONE

(1 x 10 = 10)

1. What is oxidative phosphorylation? Mention the sites of ATP synthesis along the electron transport chain
2. Explain the biosynthesis of fatty acid and the role of ACP
