

KERALA AGRICULTURAL UNIVERSITY

B.Tech (Food. Engg) 2012 Admission

IIIrd Semester Final Examination- December /January -2013

Cat. No: Fdqu.2104

Title: Biochemistry of Processing and Preservation (1+1)

Marks: 80

Time: 3 hours

I a. Fill up the blanks

(5X1.0=5)

1. In freeze drying heat is transferred to food by or
2. and are examples for class II preservatives
3. is the parent pectic compound present in fruits
4. Ripening of fruits can be hastened by
5. Application of dry heat to starch is known as

1 b. Define the following

(5X1.0=5)

1. Cold point
2. Blanching
3. Drop test
4. Retrogradation
5. Ohmic heating

II. Write short notes on any 10 of the following

(10x3=30)

1. Define Beer- Lambert's law
2. Discuss on class I and class II preservative
3. Write on food irradiation
4. What is the principle involved in spectrophotometry
5. What is mean by asepsis
6. Explain spoilage of canned foods
7. Discuss on different types of fruit based beverages
8. Write a note on malting
9. Discuss on the objectives of food processing
10. Write on the functions of ingredients in pickling
11. Explain electrophoresis
12. Discuss on the factors affecting quality of food

III. Write short essays on any 6 of the following

(6x5=30)

1. Write on browning reactions
2. Explain the microbial changes in fermented foods
3. Explain the factors affecting gelatinization of starch
4. Define chromatography and types of chromatography

5. Differentiate between jam, jelly, and marmalade
6. Explain different methods of food freezing
7. Discuss on the biochemical changes in proteins during cooking
8. Explain the methods that can be employed to prevent the loss of nutrients during cooking

IV Write essay on **any one** of the following

(10x1=10)

1. Discuss on preservation by heat
2. Discuss briefly on the following
 - (a) Biochemical changes during storage of food grains
 - (b) Post harvest changes during storage of fruits and process of ripening