

# KERALA AGRICULTURAL UNIVERSITY

B.Tech (Food.Engg) 2010 Admission  
IV<sup>th</sup> Semester Final Examination- July -2013

Cat. No: Fdpr.2201

Title: Post Harvest Engineering of horticultural Crops (2+1)

Marks: 80

Time: 3 hours

I Answer the followings

(1 x10 =10.0)

1. TSS of the food material is expressed in \_\_\_\_\_
2. The required gas composition is monitored in \_\_\_\_\_ storage
3. Refractometer is used to measure the \_\_\_\_\_ of the fruits.
4. Sublimation occurs in \_\_\_\_\_ drying
5. Case hardening is due to \_\_\_\_\_

True or False

6. Air tight packaging functions similar to modified atmosphere packaging
7. Pre-cooling is done to remove field heat of crops.
8. Glycerol mono stearate is not used as the food foaming and stabilizing agent
9. Drum dryer can be used to produce powder from the food material
10. Ethylene is evolved /required during ripening of fruits.

II Answer any ten of the following

(3x10=30.0)

1. Fruit maturity criteria
2. Mechanical injury
3. Blanching
4. Cold storage
5. Fluidized bed dryer
6. Irradiation
7. Processed products from Mango
8. Dehydration
9. Infestation control
10. Water activity
11. Jam and jelly
12. Drying curves

III. Answer any six of the following . Draw figure wherever necessary (6x5=30.0)

1. Explain the process of enzymatic and textural changes during ripening.
2. Give flow charts for a) canning of pineapple slices b) Jam preparation from mixed fruits
3. Explain modified and controlled atmosphere storage.
4. Explain the types of evaporators
5. Explain the process of foam mat drying
6. Explain the procedure used for calculating cooling load for perishables
7. Explain the methods used to design, control and maintenance os storage structures
8. What are the different methods of pre-cooling methods?. Explain forced air cooling

IV Write essay on any one (1x10 =10.0)

1. What is packaging? Give requirements and functions of packaging material. What are the different types of packaging material?
2. Explain the process of preparing processed foods from tomato, banana and pine apple