

# KERALA AGRICULTURAL UNIVERSITY

B.Sc Hons (Ag) 2010 Admission

V<sup>th</sup> Semester Final Examination- January /February -2013

Cat. No: Engg.3103

Marks: 80

Title: Protected Cultivation and Post Harvest Technology (1+1)

Time: 3 hours

## I(a) Fill in the blanks

(10x1=10)

1. In \_\_\_\_\_ drying, heat is transferred to the wet solid by actual contact through a solid surface.
2. Fruits and vegetables are sorted mostly on the basis of \_\_\_\_\_ and \_\_\_\_\_.
3. \_\_\_\_\_ is the process of separating grain from a mixture of grain and chaff in an air stream.
4. A greenhouse attached to a building is usually called as \_\_\_\_\_.
5. The vertical member of a greenhouse which supports the structure is called as \_\_\_\_\_.

## (b) Choose the correct answer

1. The relationship between equilibrium moisture content and relative humidity for biological materials has been given by  
a.Perry b.Rankine c.Janssen d.Henderson
2. In attrition mill, the size of food grains is reduced by  
a.Shear and crushing b.Impact and shear c.Crushing d.Impact only.
3. The thickness of the greenhouse cladding film used commonly in India is  
a.100micron b.50micron c.200micron d.400micron.
4. LSU type dryer was developed in  
a.India b.England c.USA d.Canada.
5. Energy required to grind a material from one size to another is expressed by  
a.Ficks law b.Newtons law c.Kicks law Stocks law

## II. Write short notes on Any ten of the following

(10x3=30)

1. Important changes during ripening of fruits
2. Major components of a power thresher
3. Factors to be considered while selecting a site for a greenhouse
4. Dielectric method of drying
5. Major differences between thin layer drying and deep bed drying
6. Terminal velocity
7. Threshing efficiency and cleaning efficiency
8. Distinguish between CAP and MAP
9. Destructive and non destructive sampling
10. Pre-cooling and different types of pre-cooling
11. Good Agricultural Practices
12. Cooling methods used in greenhouses

## III. Write short essays on Any Six of the following

(6x5=30)

1. What are the factors affecting post harvest losses
2. Advantages of using green houses

3. Define drying? Five hundred kilograms of paddy at 22% m.c(wb) is dried to 14% moisture content(wb) for milling. Calculate the amount of moisture removed in drying?
4. What are the environment control measures used in green houses?
5. Explain the various traditional grain storage structures?
6. Explain the safety precautions to be followed while using power threshers.
7. Explain the classification of greenhouses based on shape.
8. What is mechanical drying? Explain its features?

**IV. Write essays on Any One**

**(1x10=10)**

1. List the various equipments employed in a modern seed processing plant. Explain any two equipments with neat sketches?
2. Explain the components of a greenhouse? What are the materials used for the construction of different components of a greenhouse?