

# KERALA AGRICULTURAL UNIVERSITY

B.Tech (Agrl.Engg.) 2014 Admission

VI<sup>th</sup> Semester Final Examination-July-2017

Cat. No: Phpt.3206

Marks: 50

Title: Drying Technology (1+1)

Time: 2 hours

## I Fill up the blanks/ True /False

(10x1=10)

1. The value of dry basis moisture content is ----- than the wet basis moisture content.
2. Drying is a process of ----- and ----- transfer
3. ----- of the grain and its temperature on the one hand and relative humidity of the air on the other plays a major role in drying grain.
4. If moisture content on wet basis is 20% , then ----- will be the moisture content on dry basis.
5. Thin layer dryer is limited to ----- cm.
6. Drying rate is independent of the relative humidity of air. (T/F)
7. Constant drying rate is dependent upon the capacity of drying air to remove moisture from grain. (T/F)
8. Vacuum drying is used for heat sensitive material.(T/F)
9. Wet bulb temperature is the temperature of air saturated with water vapour (T/F)
10. During the falling rate regime the temperature of the drying surface is higher due to less evaporation. (T/F)

## II Write short notes/answers on any FIVE of the following

(5x2=10)

1. Explain about belt dryer.
2. Define EMC.
3. Define Hukill's curve
4. What is puff drying?
5. Write a note on Henderson equation.
6. Write a note on drying efficiency.
7. What is psychrometry?

## III Write short answers on any FIVE

(5x4=20)

1. Explain microwave drier in detail with neat sketch.
2. Discuss importance of drying food materials.
3. Write a note on design of mechanical driers.
4. Explain falling rate period curve for drying.
5. Differentiate tunnel dryer and cabinet dryer.
6. Explain principle of heat and mass transfer in freeze drying.
7. Explain any two indirect methods of moisture determination.

## IV Write essay on any ONE

(1x10=10)

1. Explain principle, construction and working of Foam – mat dryer with neat sketch.
2. Explain in detail about vacuum dryer.

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