

KERALA AGRICULTURAL UNIVERSITY

B.Tech (Agri.Engg) Degree Programme 2013 Admission

VIth Semester-Final Examination-July-2016

Cat.No: Phpt.3206

Marks: 50

Title: Drying Technology (1+1)

Time : 2 hours

I. State whether following statements are True or False

(10 x 1=10)

1. Fluidized bed drying is used for light weight materials.
2. Universal moisture meter is an accurate instrument for moisture estimation.
3. Mechanical drying is cheaper than sun drying.
4. Freeze drying is used for heat resistant materials.
5. Wet basis moisture value is higher than dry basis moisture value.

Match the following

- | | |
|---------------------|--------------------|
| 6. EMC | a) air properties. |
| 7. Moisture content | b) moisture ratio. |
| 8. Freeze drying | c) sublimation. |
| 9. Psychrometry | d) liquid food. |
| 10. Spray drying | e) dry basis. |

II. Answer the following any FIVE

(5 x 2=10)

1. Explain constant rate drying period.
2. Define Hukill's curve .
3. Define thin layer drying.
4. What is psychrometry?
5. Explain the principle of fluidized bed drying.
6. Explain the principle of freeze drying..
7. Write a note on Henderson equation.

III. Write short notes on ANY FIVE of the following

(5 x 4=20)

1. Discuss in detail theory of drying.
2. Discuss working of vacuum drier with neat sketch.
3. Discuss working of belt drier with neat sketch.
4. Differentiate tunnel dryer and cabinet dryer.
5. Write a note on drying efficiency of mechanical driers.
6. Differentiate batch and continuous type of dryer.
7. Explain the energy utilization pattern and efficiency in freeze drying.

IV. Write essay on ANY ONE of the following

(1 x 10=10)

1. Discuss in detail about drying models.
2. Discuss psychrometric properties of air related to drying.
