KERALA AGRICULTURAL UNIVERSITY

B.Tech (Agrl.Engg) 2012 Admission

VIth Semester Final Examination- June/July 2015

Cat. No: Phpt.3206

Title: Drying Technology (1+1)

Marks: 80

Time: 3 hours

Part –A   (10×1.0 = 10.0)

State whether following statements are True or False

1. EMC is same as critical moisture content
2. Moisture estimation by indirect method is more accurate rhan direct method.
3. Drying rate depends on temperature and humidity
4. Vacuum drying is used for heat sensitive material
5. Wet bulb temperature is higher than dry bulb temperature.

Match the following

6	Vacuum drying	a	nozzles
7	dew point temperature	b	doctor's blade
8	spray drying	c	100% RH
9	EMC	d	heat sensitive material
10	drum drying	e	Henderson equation

Part –B   (10 × 3.0 =30.0)

Answer any TEN questions

1. Differentiate dry and wet basis moisture content.
2. Explain falling rate drying period.
3. Define Shred's curve.
4. Define deep bed drying.
5. List properties of air in psychrometric chart.
6. What is foam mat drying?
7. What is principle of freeze drying?
8. What is principle of vacuum drying?
9. Write a note on dynamic method of EMC determination.
10. What is puff drying?
11. What are the merits and demerits of indirect method of moisture measurement?
12. Write a note on drying efficiency.

Part-C   (6 x 5.0 =30.0)

Answer any SIX questions.
1. Discuss in Brown-Dual distillation method of moisture measurement.
2. Discuss importance of drying food materials.
3. Explain drying rate curves.
4. Discuss working of foam mat drier with neat sketch.
5. Explain the principle of heat and mass transfer in freeze drying.
6. Explain constant rate and falling rate in drying.
7. Discuss working of tunnel dryer with neat sketch.
8. Write a note design of mechanical driers.

Part-D   (1 x 10.0 =10.0)

Answer any ONE question
1. Explain in detail about selection of driers for different food materials with suitable examples.
2. Discuss merits and demerits of batch and continuous drying.

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