

(Following Paper ID and Roll No. to be filled in your
Answer Books)

Paper ID : 180807

Roll No.

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B. TECH.

Theory Examination (Semester-VIII) 2015-16

DRYING & STORAGE ENGINEERING

Time : 3 Hours

Max. Marks : 100

Note: Attempt each section.

Section-A

1. Attempt each short answer type questions. (10×2=20)

- (a) What is the principle of drying?
- (b) What do you mean by critical moisture content of grains?
- (c) List the different methods of drying.
- (d) What do you mean by dehydration?
- (e) Name any four causes of grain spoilage in storage.

- (f) What do you mean by perishable products?
- (g) Define “silage”? Give any two properties of silage.
- (h) What do you mean by respiration of grain?
- (i) Name any four aspects of fruit storage.
- (j) What do you mean by controlled atmosphere?

Section-B

2. Attempt any five parts of the following. (10×5=50)

- (a) Discuss the methods for determination of moisture content.
- (b) Show and explain the “shred’s curve”?
- (c) What should be the conditions of perishable products for storage?
- (d) List the moisture and temperature changes in the storage grains (i) cereal and (ii) Pulses.
- (e) Write short notes on :
 - (i) Refrigerated storage
 - (ii) Aspects of storage

- (f) What is the theory of diffusion? Describe the continuous flow drier.
- (g) How will you calculate the performance and energy utilization pattern of LSU type drier?
- (h) Write short notes on :
 - (i) Puff drying
 - (ii) Foam mat drying

Section-C

Note: Attempt any two parts of the following. (15×2=30)

- 3.
 - (i) What is cold storage? Explain the different methods of cooling.
 - (ii) Discuss the refrigeration requirements of a central milk plant?
- 4.
 - (i) What is Bukhari type of grain storage bin? Explain with suitable sketches the working of the structure?
 - (ii) Workout the dimensions of rectangular grain storage bin to hold 120 quintals of wheat grain. Make necessary assumptions and give reason for the type of construction you suggest for the bin.

5. (i) What are the functional requirements of storage? Why air movement is needed inside a Storage?
- (ii) What do you mean by refrigerants? Give the name of any four refrigerants used now-a-days? How will you calculate the refrigeration load?