



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

PAPER ID : 180807

Roll No.

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B. Tech.

(SEM. VIII) THEORY EXAMINATION, 2014-15
DRYING & STORAGE ENGG

Time : 3 Hours]

[Total Marks : 100

Note: Attempt each section.

SECTION - A

- 1 Attempt each short answer type question. (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 three parts of the following. (10×3=30)
- (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 stored grains (i) cereal and (ii) Pulses.
 - (e) Write short notes on :
 - (i) Refrigerated storage.
 - (ii) Aspects of storage.

SECTION –C

- 3 Attempt all parts of the following. (10×5=50)
- (a) What is cold storage? Explain the different methods of cooling.

OR

- (a) Discuss the refrigeration requirements of a central milk plant.
- (b) What is Bukhari type of grain storage bin? Explain with suitable sketches the working of the structure.

OR

- (b) Work out 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.

- (c) What are the functional requirements of storage? Why air movement is needed inside a Storage?

OR

- (c) What do you mean by refrigerants? Give the names of any four refrigerants used now-a-days. How will you calculate the refrigeration load?
- (d) Write short notes on :
- (i) Puff drying.
 - (ii) Foam mat drying.

OR

- (d) How will you calculate the performance and energy utilization pattern of LSU type drier?
- (e) What do you mean by drying models? Explain any one in detail.

OR

- (e) What is the theory of diffusion? Describe the continuous flow drier.
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