

Paper Id **180228**Roll No.

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B. TECH.
(SEM-VII) THEORY EXAMINATION 2018-19
DRYING AND STORAGE ENGG.

Time: 3 Hours**Total Marks: 100****Note:** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A**

- 1. Attempt all questions in brief. 2 x 10 = 20**
- a) What do you understand by “Sun checks” and “Grain cracks” of paddy seeds?
 - b) What do you understand by thin layer drying?
 - c) What are the advantages and disadvantages of rotary dryer?
 - d) What are the grain factors which affect the rate of drying?
 - e) List the methods to determine the insect infestation.
 - f) Which structure is made for making Silage? From which crop best silage is obtained?
 - g) Name any ten facilities required for livestock production.
 - h) For how many birds a cage type poultry house is required? Also mention for what type of climate it is needed.
 - i) Write very short note on drinking water standards.
 - j) List the conditions for storage of fruits under cold system.

SECTION B

- 2. Attempt any three of the following: 10 x 3 = 30**
- a) What do you understand by hermetically sealed storages? Write few lines on frozen storages also.
 - b) How will you design a warehouse to control the favorable environment inside for storage of cereal grains?
 - c) What should be the requirement of good storage structures? Explain the Bukari type storage structure.
 - d) What are the essential elements of freeze drying? Explain them in detail.
 - e) Explain the falling rate period process for drying of cereal grains.

SECTION C

- 3. Attempt any one part of the following: 10 x 1 = 10**
- a) Explain the E.M.C. curve and EMC model in reference to grain drying.
 - b) Discuss the construction and working of Baffle dryer. Also discuss the advantages and efficiency gained by this dryer.
- 4. Attempt any one part of the following: 10 x 1 = 10**
- a) What are the types of grain spoilage in storages? Discuss them in detail.
 - b) Write short notes on the following :-
 - (i) Mechanical ventilation.
 - (ii) Respiration of grains.
 - (iii) CAP.

5. Attempt any *one* part of the following: 10 x 1 = 10
- a) Write an essay on “Economics and aspects of storage”.
 - b) What is the principle of drying? Describe EMC curve also.
6. Attempt any *one* part of the following: 10 x 1 = 10
- a) What should be the requirement of good storage structure? Explain the Kothar type storage structure.
 - b) Write short notes on :
 - (i) Mechanical ventilation
 - (ii) Artificial drying.
7. Attempt any *one* part of the following: 10 x 1 = 10
- a) What are the storage conditions for mango and tomato under cold and C.A. storage system?
 - b) Write short notes on the following :
 - (i) Moisture and temperature changes in stored grains
 - (ii) Theory of diffusion.