

Roll No.

Total No. of Pages : 02

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M.Tech. (Process and Food Engineering) (Sem.-1)

PROCESS ENGINEERING OF CEREALS, PULSES & OIL SEEDS

Subject Code : MTPFE-512-22

M.Code : 93261

Date of Examination : 23-01-23

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.

2.Each question carries TWELVE marks.

1. a. **With a neat sketch discuss the structure of the following :**
 - i. Wheat
 - ii. Corn
- b. Write a short note on important quality criteria as they relate to grading of grains.
2. a. Discuss the composition, structure, and varieties of rice available in India.
- b. Explain the different types of rice milling used for processing.
- c. Explain the different unit operations used in modern rice milling.
3. a. Explain the difference between wet and dry milling of corn.
- b. Explain malting of barley using flow chart and elaborate each unit operation.
4. a. Explain the processing of oil refining and the different methods available for oil refining.
- b. Differentiate between the pulses and lentils.
- c. Describe the processing of oats in detail with the proper flow chart.
5. a. Define size reduction. Discuss different types of forces acting during size reduction process.
- b. Enlist different-types of grinding equipment's used for cereal processing industry. Discuss any two-grinding equipment's in detail with its diagram.

6. Write a short note on by-products and effluents from different cereal processing industries.
7. Write about Fumigants, types and application methods in store grain.
8. **Write a short note on :**
 - a. Modified atmosphere storage
 - b. Temporary and permanent grain storage structure.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.