

M.Tech Food Technology
Semester II Examination, 2019
Paper Title: Technology of Cereals, Pulses and Oilseeds
Paper Code: MFTD-205

2019
2nd Jan

Time: 3 Hours

Maximum Marks: 75

Attempt all questions. Marks are mentioned against each question

Q.1 (A) Specify the correct answer**(1x5=5)**

1. Oryzenin is present in:

- a. Oat b. Rice c. Wheat d. Bajra

2. Which of the following moisture content is considered safe for storage?

- a. 12-14% b. 15-18% c. 20-25% d. 5-7%

3. *Triticum aestivum* is also known as

- a. Bread wheat b. Macaroni wheat c. Club wheat d. None of these

4. Fischer unit is used to measure

- a. Flour colour b. Damaged starch c. Flour particle size d. Protein content

5. Which sequence is correct for bread making?

- a. Mixing, Sheeting, Panning, Fermentation b. Mixing, Fermentation, Proofing and Baking

- c. Mixing, Proofing, Fermentation, Baking d. Moulding, Kneading, Proofing, Panning

(B) Answer the following briefly**(1x5=5)**

6. Name the variety suitable for the pasta production from wheat.

7. Rice bran is rich in which vitamin?

8. Write the botanical name of rice.

9. Give an example for a bread improver.

10. Name two fermented millet products.

(C) Fill in the blanks.**(1x5= 5)**

11. _____ is an example of a biological leavening agent.

12. Tempering of wheat refers to the addition of _____ to bran and endosperm.

13. Cereals are generally low in the content of an amino acid namely _____.

14. Wheat milling fractions are whole wheat flour, refined wheat flour, and _____.

15. Staling of bread is due to _____ of starch.

Q2. Answer any three of the following**5x3=15**

- (i) Give the process flow for milling of wheat. What do you understand by the term extraction rate? How does it influence composition of wheat flour?
- (ii) What is the importance of α -amylase in bakery products? How can we measure the activity/concentration of α -amylase in wheat grain and flour.
- (iii) Classify dough rheological instruments and indicate principle of operation of each category of instrument.
- (iv) Give the process flow for milling of rice. What are the byproducts obtained from the rice milling process and specify their uses?
- (v) Discuss the process for manufacture of any extruded product.

Q3. Answer any three of the following**5x3=15**

- (i) Explain the process for corn starch production.
- (ii) Discuss the process of malting and describe the processing of any malt based food.
- (iii) Describe the process of puffing and flaking in corn products.
- (iv) Give an account of any three millets, their processing and uses.
- (v) Discuss the process of stabilization of oats.

Q4. Write short notes on the following

(any 3)

5x3=15

- (i) Soy protein isolate & Soya milk
- (ii) Oat products
- (iii) Legume based traditional products
- (iv) CFTRI Process for Milling of pulses
- (v) Parboiling of rice

Q5. Answer any three of the following**5x3=15**

- (i) Describe the process of hydrogenation of oils and also discuss the uses and application of hydrogenated oils in food industry.
- (ii) Discuss the applications of different oils and fats in food processing and products.
- (iii) Explain the traditional methods of oil extraction.
- (iv) What is the role of bleaching of fats and oils?
- (v) Discuss the various methods for chemical refining.