

00492

**POST GRADUATE DIPLOMA IN FOOD
SCIENCE AND TECHNOLOGY (PGDFT)**

Term-End Examination

June, 2016

**MFT-010 : TECHNOLOGY OF CEREALS, PULSES
AND OILSEEDS**

Time : 3 hours

Maximum Marks : 70

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- Note :** (i) *Attempt any five questions.*
(ii) *Question No. 1 is compulsory.*
(iii) *All questions carry equal marks.*
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1. (a) Fill in the blanks : 7x1=7
- (i) _____ determines the plumpness of the grain.
 - (ii) *Triticum aestivum* is also known as _____.
 - (iii) Wheat gluten comprises roughly _____% of total wheat endosperm protein.
 - (iv) Dextrose equivalent is the term used to describe the extent of _____ of starch.
 - (v) Swelling and rupturing of starch granules due to heat and moisture is called _____.
 - (vi) A substance that inhibits separation of suspensions, emulsions and foams is called _____.
 - (vii) Furfural is derived from _____.

- (b) Define any seven out of the following : 1x7=7
- (i) Anti-nutrients
 - (ii) Deodorization
 - (iii) Popcorn
 - (iv) Crackers
 - (v) Rheology
 - (vi) Gluten
 - (vii) Dough development time
 - (viii) Rice bran oil
2. (a) Discuss physical and chemical parameters of grain that influence the wheat quality. 5
- (b) What is the aim of wheat milling ? Describe the steps of wheat milling. 2+5
- (c) Enlist the instruments used to study dough rheology. 2
3. Write short notes on : 4x3½=14
- (a) Retrogradation
 - (b) Malting of barley
 - (c) Rice bran utilization
 - (d) Components of wheat kernel
4. (a) Why bakery fat is called shortening ? Describe the various shortenings used in bakery industry. 2+4
- (b) What do you understand by parboiling of rice ? How does it affect the physico-chemical properties of rice ? Briefly describe the CFTRI method of parboiling. 2+2+4

5. (a) Differentiate between dry and wet milling of corn. 4
 - (b) Write a short note on the various breakfast cereals. 4
 - (c) What is the objective of starch modification ? Briefly explain the various ways in which starch can be modified. 2+4
 6. (a) How do pulse proteins and cereal proteins complement each other ? 3
 - (b) "Processing eliminates or reduces the level of toxic factors in pulses." Explain in detail. 5
 - (c) What is the objective of hydrogenation and fractionation process ? 2+2
 - (d) Give the importance of fat in the diet. 2
 7. (a) Discuss various factors that affect the establishment of bakery industry. 7
 - (b) Explain the following : 3½x2=7
 - (i) SWOT Analysis
 - (ii) Project Report
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