

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

Term-End Examination

December, 2013

**MFT-010 : TECHNOLOGY OF CEREALS, PULSES
AND OIL SEEDS**

Time : 3 hours

Maximum Marks : 70

Note : (i) Attempt any five questions. Question no. 1 is compulsory.

(ii) All questions carry equal marks.

1. (a) Fill in the blanks (any seven) : 7x1=7
- (i) Fused fruit wall, seed coat and aleurone layer of grain is known as _____ .
 - (ii) A _____ is a recording dough mixer.
 - (iii) Any edible fat used in bakery product is known as _____ .
 - (iv) Bursting of starch granules in presence of hot water can be termed as _____ .
 - (v) The protein in corn is known as _____ .
 - (vi) _____ oil is rich in oryzanol.
 - (vii) _____ process converts liquid oil into hard fat.

(viii) Fat imports smoothness of crystalline candies and frozen deserts through retardation of _____ .

- (b) Define the following (any seven) : 7x1=7
- (i) Kernel weight
 - (ii) Bread staling
 - (iii) Rheology
 - (iv) Dough improvers
 - (v) Brown rice
 - (vi) Parboiling
 - (vii) Dent corn
 - (viii) Tallow
2. (a) Which are the physical grain parameters that influence the wheat quality ? 2
- (b) Briefly describe the structure of wheat. 4
- (c) Write about drying, grading, storage and milling of wheat. 8
3. (a) How polar lipids improve bread quality ? 2
- (b) Explain the role of starch in colour formation of biscuits and cookies. 2
- (c) Differentiate between gluten and non-gluten forming proteins. 2
- (d) Why strong flour is recommended for bread making and weak flour for biscuit making ? 2
- (e) Write the manufacturing process for cookies. 6

4. (a) Name different unit operations in modern rice mills. 2
- (b) What are the factors influencing huller efficiency ? 2
- (c) What are the processes used for whitening of rice ? 2
- (d) Mention factors affecting rice yield during milling. 2
- (e) Write about the factors responsible for post harvest losses of rice. 6
5. (a) List the methods of parboiling of rice. 2
- (b) Mention the advantages and limitations of various methods of parboiling. 5
- (c) Write a short note on wet milling of corn. 3
- (d) Describe three basic steps of malting. 4
6. (a) Write about the antinutritional factors present in pulses. Give two processing methods to overcome antinutrients in pulses. 5
- (b) How the level of toxic and antinutritional factors in pulses can be reduced ? 3
- (c) Briefly describe the steps for processing of edible oils from plant source. 6
7. Write short notes on the following : $3\frac{1}{2} \times 4 = 14$
- (a) Business plan
- (b) Entrepreneurial skills
- (c) Project report
- (d) Growing market for quality basmati rice
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