

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

Term-End Examination

December, 2014

00326

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

Time : 3 hours

Maximum Marks : 70

Note : Question no. 1 is compulsory. Attempt any five questions. All questions carry equal marks.

1. (a) Fill in the blanks in any **seven** of the following :

7

- (i) Wheat usually contains _____% ash on 14% moisture basis.
- (ii) The protein content in the range of 10 to 12% is considered suitable for _____ making.
- (iii) The recommended baking time of cookies is _____ minutes.
- (iv) Soaking of paddy can be done at, or below, its _____ temperature.
- (v) Dextrose equivalent is the term used to describe the extent of _____ of starch.

(vi) Lathyrism in humans is caused by the ingestion of a neurotoxin _____ which is present in Kesari Dal.

(vii) In oilseed processing, _____ is a process generally adopted for the removal of mainly the pigments by adsorption on an adsorbent material.

(viii) Glazing of rice is done by coating of surface with _____ and glucose.

(b) Define any **seven** of the following terms : 7

(i) Endosperm

(ii) Wheat gluten

(iii) Peak dough resistance

(iv) Protease inhibitors

(v) Modified starches

(vi) Retrogradation

(vii) Antioxidants

(viii) Hydrogenation

2. (a) What do you understand by milling ?
Describe the complete process of pin mill. 2+5

(b) Explain the structure of wheat grain showing major parts with the help of a diagram. 4

(c) Discuss the benefits of Omega-3 fatty acids. 3

3. (a) Elaborate the various steps involved in malting of barley. 5
- (b) Discuss the role of lipids in dough properties. 4
- (c) What do you mean by hard to cook phenomenon in pulses ? Explain. 5
4. (a) What do you mean by emulsifiers ? Name any four emulsifiers. 2+4
- (b) Classify the instruments used to determine dough rheological properties. 3
- (c) Discuss in detail about millets and their chemical composition. 5
5. (a) Describe the traditional methods of parboiling. 4
- (b) What are the major by-products from a rice milling plant? Give their utility in the food industry. 5
- (c) Explain the importance of pulses in daily diets. 5
6. (a) Explain with the help of detailed flow diagram the corn dry-milling process. 7
- (b) Differentiate between saturated and unsaturated fatty acids. 4
- (c) Classify and enlist different types of oilseeds mainly used for commercial purposes. 3
7. (a) Elaborate how to write a good project report. 7
- (b) Describe the different methods for the extraction of oils from the oilseeds. 7