

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

**Term-End Examination**

**June, 2015**

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

*Time : 3 hours*

*Maximum Marks : 70*

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- Note :**
- (i) *Question no. 1 is compulsory.*
  - (ii) *Attempt any five questions.*
  - (iii) *All questions carry equal marks.*
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1. (a) Fill in the blanks (**any seven**) : 7
- (i) The endosperm is the largest part of the wheat kernel and represents about \_\_\_\_\_ of the kernel weight.
  - (ii) Wheat flour with 8-9% protein content is recommended for making \_\_\_\_\_.
  - (iii) An alveo-consistograph evaluates the \_\_\_\_\_ of the dough.
  - (iv) Water required for soaking of paddy is about \_\_\_\_\_ times to the weight of paddy.
  - (v) Soybean seeds contain about \_\_\_\_\_% of oil.
  - (vi) Steeping of barley causes \_\_\_\_\_% loss of total dry matter present.
  - (vii) Protein of corn is known as \_\_\_\_\_.
  - (viii) \_\_\_\_\_ provides 2.25 times more energy than the proteins and carbohydrates.

- (b) Define **any seven** of the following terms : 7
- (i) Thousand kernel weight
  - (ii) Malt
  - (iii) Rheology
  - (iv) Oxidizing agents
  - (v) Retrogradation
  - (vi) Kilning
  - (vii) Essential fatty acids
  - (viii) Bleaching
2. (a) What do you understand by drying ? Discuss different systems used for wheat drying. 2+5
- (b) Differentiate between roller husker and disc husker. 3
- (c) How soybean oil plays an important role in human diet ? 4
3. (a) What are major constituents of wheat flour ? Explain the role of proteins in bread making. 3+4
- (b) Explain the functions of emulsifiers in bakery products. 3
- (c) Briefly describe the principles and processes involved in rice polishing. 4
4. (a) What are the ideal characteristics of the packaging materials for baked products ? 5
- (b) What are the different types of shortenings used in baked products ? Also highlight their functions. 2+3
- (c) How pulses play an important role in providing nutritional security ? 4

5. (a) What are the advantages and disadvantages of parboiling ? 5
- (b) Briefly discuss the various applications/uses of rice bran in the food industry. 4
- (c) Discuss different processed products and by-products of millets. 5
6. (a) Explain with the help of neat flow diagram the corn wet-milling process. 7
- (b) What are the anti-nutritional factors in pulses ? Discuss the different processing methods applied for their remedy. 7
7. (a) Explain important entrepreneurial skills. 7
- (b) Differentiate between screw press extraction and solvent extraction. 4
- (c) How does deodorization temperature affect the deodorization time ? 3
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