

01972  
MASTER OF SCIENCE (DIETETICS AND FOOD  
SERVICE MANAGEMENT)

Term-End Examination  
June, 2010

MFN-008 : PRINCIPLES OF FOOD SCIENCE

Time : 2½ hours

Maximum Marks : 75

---

*Note : Answer four questions in all. Question No.1 is compulsory.*

---

1. (a) Explain in 2-3 sentences each only : 2x5=10
- (i) Drying helps to increase the shelf life of food.
  - (ii) Emulsifier helps to stabilise an emulsion.
  - (iii) Wet process method of milling for pulses.
  - (iv) Post-harvest handling, of fresh produce is an important unit operation.
  - (v) Green vegetables become olive green on cooking.

- (b) Fill in the blanks : 1x5=5
- (i) Carbohydrates that cannot be hydrolysed into simpler forms are known as \_\_\_\_\_.
  - (ii) \_\_\_\_\_ and \_\_\_\_\_ are the building block of starch.
  - (iii) \_\_\_\_\_ is the protein obtained from microbial sources.
  - (iv) \_\_\_\_\_ is the enzyme obtained from the stomach of young calves used to curdle milk in cheese production.
  - (v) Flavour is a combination of both taste and \_\_\_\_\_.

2. (a) "Blanching is a pre treatment before drying". Comment on the statement. How would one evaluate the blanching efficiency ? 8
- (b) Describe various methods of freezing in food processing operation. 12
3. (a) What are colloids ? Discuss the various properties of colloidal systems. 10
- (b) Briefly discuss the role of fermentation in the food industry substantiate you answer with suitable answers. 10

4. Explain the use of following in the food industry :
- (a) Food additives 5+5+5+5
  - (b) Algal poly saccharides
  - (c) Food colours
  - (d) Foams
5. (a) Describe the role of enzymes in food industry. 10
- (b) How is gluten formed ? What are the various factor that affect gluten formation ? 10
6. (a) Briefly describe Nutritional and functional role of minerals in foods. 12
- (b) Explain the process of thermal decomposition of fats and oils. 8
7. Write short notes on *any four* of the following :
- (a) Antioxidants 5+5+5+5
  - (b) Classification of foods on the basis of pH
  - (c) Acceptance tests in sensory evaluation
  - (d) Protein Hydrolysates
  - (e) Consumer oriented product development
  - (f) Salting as a method of food preservation
  - (g) Food spoilage
-