No. of Printed Pages : 3

MFN-008

MASTER OF SCIENCE (DIETETICS AND FOOD SERVICE MANAGEMENT)

02753

Term-End Examination

December, 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) Define the following : 10

   (i) Oxidized starches

   (ii) Autoxidation

   (iii) Biotechnology

   (iv) Gelation

   (v) Hurdle concept

   (b) Fill in the blanks : 5

   (i) _____ is used as a fumigant and as a wine preservative.

   (ii) _____ is the process, where the impurities are separated on the principle that their density differs from that of the grain kernels.

(iii) One of the few soybean products, which are made by fermentation with bacteria in the Japanese _____.

(iv) _____ organisms cause food spoilage during low temperature storage.

(v) Dehydration extends the shelf life of foods by a reduction in the _____ .

2. (a) Describe the factors that influence lipid oxidation. **10**

(b) Differentiate between sols and gels giving suitable examples. **10**

3. (a) Discuss the role of preservatives in food preservation. **12**

(b) What are the advantages and limitations of food irradiation over conventional process of preservation ? **8**

4. (a) How does freezing helps to preserve food ? Describe various freezing systems used in Industry. **12**

(b) Describe different types of scales in sensory evaluation. **8**

5. Briefly explain the following processes : 4x5=20

(a) Pasteurisation

(b) Changes that occur in fruits and vegetables during storage

(c) Use of modified starches in food industry

(d) Microwave heating

6. (a) What are the various steps involved in New Food Product development ? 12

(b) Describe the different types of browning occurring in foods. 8

7. Write short notes on **any four** of the following : 4x5=20

(a) Changes in fish during heat treatment

(b) Primary processing of Rice

(c) Food Foams

(d) Dough formation

(e) Functional Foods

(f) Bacterias in Food Fermentation