

00014 MASTER OF SCIENCE (DIETETICS AND FOOD SERVICE MANAGEMENT)

Term-End Examination

December, 2013

MFN-008 : PRINCIPLES OF FOOD SCIENCE

Time : 2½ hours

Maximum Marks : 75

Note : Attempt any five questions. All questions carry equal marks.

1. Differentiate between the following sets of terms. 3+3+3+3+3
 - (a) Suspension and sols
 - (b) Starches and modified starches
 - (c) Concentration and dehydration
 - (d) Solar drying and mechanical drying
 - (e) Foods fermented by moulds and Foods fermented by bacteria.

2. (a) Explain the mechanism of drying. 2+8
Enumerate the various types of drying methods.

- (b) Explain how the process of freezing helps 5
in the preservation of food.

3. (a) What is autoxidation ? How can the autoxidation be prevented in fats and oils ? 2+6
(b) What are the important functional properties of sugars ? 7
4. (a) What are protein hydrolysates ? Give any two applications of Whey Protein Concentrates (WPC) and Soya Protein Isolates. 7½
(b) Define Bio availability. Explain the effect of food processing on the nutrient content of foods. 7½
5. (a) What are foams ? What factors influence their stability ? 7
(b) Explain the physical and chemical changes that take place during the storage processing of meat and poultry. 8
6. What are functional foods ? What are the physiological benefits associated with the consumption of these active compounds ? Explain with the help of examples. 15
7. Write short notes on *any three* of the following :
(a) Traditional methods of food processing 5+5+5
(b) Freezing Technology
(c) Rheology of foods
(d) Functional role of minerals in foods
(e) Use of food additives in the food industry
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