

No. of Printed Pages : 4

MFN-003

**MASTER OF SCIENCE (DIETETICS
AND FOOD SERVICE MANAGEMENT)**

[M. Sc. (DFSM)]

Term-End Examination

June, 2021

MFN-003 : FOOD MICROBIOLOGY AND SAFETY

Time : 2 $\frac{1}{2}$ Hours

Maximum Marks : 75

Note : (i) *Question No. 1 is compulsory.*

(ii) *Answer **five** questions in all.*

(iii) *All questions carry equal marks.*

1. (a) What are genetically modified foods ?
Define give **two** examples of genetically modified foods. 2
- (b) Identify *four* classes of food additives. 2
- (c) Differentiate between the terms hazard and toxicity. 3

(d) List one point each you will keep in mind while storing 'perishable' and 'non-perishable food'. 2

(e) Give **one** examples each of the following packaging : 2

(i) Paper

(ii) Plastic and flexible films

(f) List any **two** measures you would adopt to protect your premises from insects, rodents and pests. 2

(g) What is Rancidity ? Explain giving example. 2

2. (a) Briefly discuss the role of microorganisms in fermented foods. Substantiate your answer by highlight the common microbes used in food fermentation and the fermented food products obtained. 8

(b) Enumerate the role of temperature and moisture as a factor affecting the growth of microorganisms. 7

P. T. O.

[3]

MFN-003

3. "Microorganisms can be destroyed or controlled by manipulation of physical methods." Comment on the statement highlighting the various physical methods and their mechanism of action. 15
4. Briefly explain the various chemical changes that occur in the following foods due to spoilage : 4+7+4
- (a) Eggs
 - (b) Fruits and vegetative
 - (c) Bread
5. (a) Why do we need food additives ? Enlist the different functional role of food additives. 8
- (b) Comment on the environmental contaminants which are a concern for food safety. 7
6. Mention the microorganisms involved with the following food borne diseases. Mention the measures you would adopt to decrease the risk of infection with regards to each : 5+5+5
- (a) Botulism
 - (b) Shigellosis
 - (c) Aflatoxin

[4]

MFN-003

7. Write short notes on any *three* of the following : 5+5+5
- (a) Nutrition labeling requirement
 - (b) Principles of HACCP
 - (c) Food safety measures with regards to street foods
 - (d) Importance of risk analysis
 - (e) Agreements in the area of food standardization and quality control.

MFN-003

P. T. O.