

00058

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

Term-End Examination

June, 2017

MFT-002 : FOOD MICROBIOLOGY

Time : 3 hours

Maximum Marks : 70

Note : (i) Question no. 1 is compulsory.

(ii) Attempt five questions in all.

1. (a) Select the right answer : 1x5=5
- (i) Clostridium perfringens poisoning is associated with :
- (A) Meat product
(B) Fish product
(C) Canned food
(D) All the above
- (ii) The major carriers of salmonellosis are :
- (A) Meat and eggs
(B) Fruits and vegetables
(C) Cereal and pulses
(D) Eggs and fruit
- (iii) The microbial examination of coliform bacteria in food preferably use :
- (A) MacConkey broth
(B) Violet Red bile agar
(C) Eosin methylene blue agar
(D) All of these

- (iv) A psychrophilic halophile would be a microbe that prefers
- (A) Cold temperature and increased amount of salt
 - (B) Warm temperature and increased amount of pressure
 - (C) Cold temperature and absence of oxygen
 - (D) Warm temperature and increased amount of acid
- (v) *Lactobacillus bulgaricus* and *Streptococcus thermophilus* are two micro-organisms necessary in the manufacturing of :
- (A) Ice cream
 - (B) Wine
 - (C) Yoghurt
 - (D) Cheese
- (b) Define the following : 1x5=5
- (i) Bacteriocin
 - (ii) Enterotoxin
 - (iii) Leaker spoilage
 - (iv) Starter culture
 - (v) Sweet curdling

2. Write short notes on the following : 3x5=15
- (a) Blanching
 - (b) Water activity of food
 - (c) Controlled atmospheric storage
 - (d) Mycotoxins
 - (e) Probiotics

3. Give a brief account of the following : 3x5=15
- (a) The microbiology of sauerkraut fermentation
 - (b) Fungal spoilage of fruits and vegetables
 - (c) Rapid detection techniques for food micro-organisms
 - (d) Fermented dairy product
 - (e) Factors responsible for food borne diseases
4. (a) Enlist various methods of food preservation. Discuss any one in detail. 2+3=5
- (b) What do you understand by microbial growth? Discuss the role of intrinsic factors on shelf life of food. 5+5=10
5. (a) Describe chemical and biological causes of spoilage of canned food. 5
- (b) Give an account of screening and enumeration of spoilage micro-organism in food. 10
6. (a) Describe wine preparation. 5
- (b) Write a note on the spoilage and preservation of egg. 5
- (c) Explain the contamination and preservation of cereals. 5
7. (a) Explain any one technique for detection of E.Coli in foods. 5
- (b) Differentiate the following : 2.5x4=10
- (i) Chilling and freezing
 - (ii) Prebiotics and Symbiotics
 - (iii) Food infection and food intoxication
 - (iv) Sterilization and pasteurization