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

**Term-End Examination**

**June, 2018**

**MFT-002 : FOOD MICROBIOLOGY**

*Time : 3 hours*

*Maximum Marks : 70*

- Note :*
- (i) Attempt any seven questions.*
  - (ii) Question No. 1 is compulsory.*
  - (iii) All questions carry equal marks.*

1. Fill in the blanks with suitable words : 10x1=10
- (a) Microorganism capable of causing disease is called \_\_\_\_\_.
  - (b) \_\_\_\_\_ is a measure of acidity or alkalinity of a solution.
  - (c) Minimum  $a_w$  for molds is \_\_\_\_\_.
  - (d) Microbes growing in high levels of salt are \_\_\_\_\_.
  - (e) Organisms growing at low temperature are \_\_\_\_\_.
  - (f) \_\_\_\_\_ are the toxins produced by Molds.
  - (g) Brucellosis is caused by \_\_\_\_\_.
  - (h) Minimum acetic acid content in vinegar should be \_\_\_\_\_.
  - (i) The lethal effect of freezing on bacteria is due to \_\_\_\_\_.
  - (j) The period of observation of MBRT is \_\_\_\_\_ hours.

2. Explain any two of the followings : 2x5=10  
(a) Useful bacteria and their application.  
(b) Harmful spoilage molds in foods.  
(c) Characteristics of a good starter culture.
3. Give the principle of followings : 5x2=10  
(a) Negative staining  
(b) Gram staining  
(c) Endospore staining  
(d) Most Probable Number (MPN) method  
(e) ELISA
4. Explain the followings : 5x2=10  
(a) Ropiness in milk  
(b) Antimicrobial activity of lactic acid bacteria.  
(c) D and F values  
(d) Bloating of cans  
(e) Potassium metabisulphite
5. Describe bacterial growth curve and name the various factors influencing microbial growth in foods. 10
6. Describe the spoilage of meat. What are the preservation techniques used for meat and meat products ? 10
7. (a) Differentiate between food intoxication and food infection with suitable examples. 5  
(b) Describe the therapeutic benefits of probiotic organisms. 5
8. Write short notes on any two of the followings :  
(a) Different types of microbiological growth media 2x5=10  
(b) PCR  
(c) MA/CA storage of fruits and vegetables
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