01496

POST GRADUATE DIPLOMA IN FOOD SAFETY AND QUALITY MANAGEMENT (PGDFSQM)

Term-End Examination

December, 2012

MVPI-001 : FOOD MICROBIOLOGY

Time : 2 hours   *Maximum Marks : 50*

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

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1. Define the following :   5x2=10
    (a)   Food Microbiology.
    (b)   Viruses.
    (c)   Chemical preservatives.
    (d)   Psychrotrophic microorganisms.
    (e)   Multiple tube test for water.

2. Explain the following :   2x5=10
    (a)   Importance of fermented foods
    (b)   Immunological methods of rapid detection.

3. Discuss the screening and enumeration of   10
    spoilage micro - organisms in foods.

4. Fill in the blanks :   10x1=10
    (a)   _____ are classified as prokaryotes.
    (b)   Foods may go sour when bacteria produce_____ .
    (c)   Foods containing live cells of bacteria are _____.

(d) The spoilage of honey, sugar syrup and jam is generally caused by _____ .

(e) The minimum water activity value of _____ is required by most spoilage molds.

(f) Deliberate contamination of foods is called _____.

(g) A thick walled spore that develops within cell is called _____ .

(h) The bacteria which are stained purple in gm staining are _____ bacteria.

(i) The killing of micro-organisms by using flame is called _____.

(j) Use of alcohol is a _____ method of sterilization.

5. (a) Briefly describe the 'Extrinsic Factors' responsible for food spoilage.   5

   (b) Give a brief account of various types of Food Borne Diseases.   5

6. (a) What is the principle behind direct microscopic examination of foods?   3

   (b) Comment on 'Dye Reduction Tests' done for determining microbiological quality of milk.   5

   (c) In a standard plate count method if plates at 10^{-4} dilution are having 50 and 60 colonies, calculate c.f.u./me.   2

7. (a) Comment on the microscopic examination 5
of bacterial culture using various staining
techniques.

   (b) How are 'Biosensors' used in Rapid 5
Detection Methods for micro - organisms ?

8. Write short notes on **any two** : 2x5=10
   (a) Food Borne diseases and the agents.
   (b) A typical bacterial growth curve.
   (c) Techniques of sterilization in microbiology.

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