

00104

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

Term-End Examination

June, 2016

MFT-002 : FOOD MICROBIOLOGY

Time : 3 hours

Maximum Marks : 70

Note : Attempt seven questions. Question no. 1 is compulsory.

1. Fill in the blanks with suitable words : 10x1=10
- (a) The word microbial is derived from _____ language.
 - (b) Common cough and cold is caused by _____.
 - (c) The Proteinaceous infectious materials are known as _____.
 - (d) Glass covered plate to hold nutrient media is called _____.
 - (e) _____ is an example of bacteriocin.
 - (f) Sauerkraut, Koji, Kefir are all _____ foods.
 - (g) _____ refers to an organism that does not require O_2 .
 - (h) _____ are used in preparation of curd, yoghurt, cheese.
 - (i) A cottony/fuzzy growth indicates presence of _____.
 - (j) For long term storage of culture _____ is useful.

2. Answer the following : **4x2½=10**
- (a) What are the nonliving sources of microbial contamination ?
 - (b) Briefly comment on the prevention of Food Borne Illness.
 - (c) Briefly discuss the microbiological quality of ice-cream.
 - (d) How does natural Souring or curdling of milk take place ?
3. Define : **10x1=10**
- (a) Cryopreservative agents
 - (b) CFU
 - (c) Cross contamination
 - (d) Mesophilic starters
 - (e) Bacteriocins
 - (f) Exopolysaccharides
 - (g) Thermophilic starters
 - (h) Endospores
 - (i) Yeasts
 - (j) Bacteria
4. (a) Describe the biological causes of can spoilage.
(b) Types of can spoilage - Explain. **2x5=10**
5. Describe following terms in relation to spoilage : **5x2=10**
- (a) Proteolysis
 - (b) Ropiness
 - (c) Gas formation
 - (d) Button formation
 - (e) Moldy cheese

6. Match the following :

10

A		B
Dye Reduction Test	-	EMB Agar
Spiral plate count	-	Heat resistant bodies
Differential media	-	Peptone
Liquid media	-	Counting grid
Solid media	-	Nigrosin
Organic nitrogen	-	Tartaric acid
PDA agar	-	Slants
Maintenance of culture	-	MBRT
Acidic dye	-	Agar
Endospore	-	Broth

7. Give the principle of following :

5x2=10

- (a) DMC
- (b) Spiral plate count
- (c) Resazurin Reduction Test
- (d) Gram staining
- (e) SPC

8. Write short notes on :

4x2½=10

- (a) Need for rapid detection technique
 - (b) Biosensors
 - (c) ELISA
 - (d) Immunomagnetic separation
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