

**MASTER OF SCIENCE (DIETETICS AND
FOOD SERVICE MANAGEMENT) (M.Sc. DFSM)**

Term-End Examination

01222 December, 2018

MFN-003 : FOOD MICROBIOLOGY AND SAFETY

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

Maximum Marks : 75

Note :

1. Answer **five** questions in all.
2. Question no. 1 is **compulsory**.
3. **All** questions carry equal marks.

1. Give one example for each of the following : $15 \times 1 = 15$

- (a) Psychrophilic bacteria
- (b) Sanitizer
- (c) High acid food
- (d) Food adulterant in tea
- (e) Shellfish toxin
- (f) Non-perishable food

- (g) Fermented plant product
- (h) Edible fungi
- (i) Aerobic spore former
- (j) Mycotoxin
- (k) Biogenic amine
- (l) Food colour
- (m) Gram positive cocci
- (n) Causative agent of BSE
- (o) Baker's yeast

2. State the significance of any *three* of the following : $3 \times 5 = 15$

- (a) VRDs
- (b) Water activity in food
- (c) Prions
- (d) Spores

3. Define and give the significance of the following in the context of food safety : $5 \times 3 = 15$

- (a) PRPs
- (b) Antibiotics
- (c) Hazards
- (d) Risk analysis
- (e) Botulism

4. (a) What are the sources of contamination in a food service unit ? 5
- (b) Explain the antinutritional factors found in food, by giving examples. 10
5. (a) Explain the role of CCP in the implementation of HACCP. 7
- (b) "Heavy metals pose a substantial risk to human health." Justify the statement giving examples. 8
6. Draw a bacterial growth curve and explain any four factors affecting the bacterial growth. 15
7. Write short notes on any *three* of the following : 3×5=15
- (a) GM Foods
- (b) Food Intoxication
- (c) Food Additives
- (d) Flexible Packages
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