

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

Term-End Examination

December, 2021

MVPI-001 : FOOD MICROBIOLOGY

Time : 2 hours

Maximum Marks : 50

Note : Attempt any **five** questions. All questions carry equal marks. All the parts of a question must be attempted together.

1. Explain any **ten** of the following terms : $10 \times 1 = 10$

- (a) Bacillus
- (b) Binary Fission
- (c) Antioxidants
- (d) Spore
- (e) Aflatoxins
- (f) Zoonotic disease
- (g) CFU
- (h) Yeast
- (i) PDA
- (j) SPC
- (k) Cytotoxins
- (l) API kits

2. (a) Classify bacteria on the basis of their morphology. 4
- (b) Give names of three bacteria species (each) found in : 6
- (i) Meat
- (ii) Milk
3. (a) Draw a typical bacterial growth curve indicating the different phases. 4
- (b) Identify six methods of food preservation with intended effect for each. 6
4. (a) Name five foodborne diseases. 5
- (b) Indicate five factors contributing to the outbreak of foodborne diseases. 5
5. (a) What is probiotic ? Enumerate health benefits of probiotics. 5
- (b) Define microbiological media and describe their types. 5
6. (a) Explain gram staining and its principle. 5
- (b) Give the procedure for detection and enumeration of thermophilic organism. 5
7. (a) Explain the principle of flow cytometry. Enlist the components of flow cytometry. 2+3=5
- (b) What are biosensors ? Explain their significance in food safety. 5