

B.Sc. Part—II (Semester—III) Examination
FOOD SCIENCE
(Food Microbiology)

Time : Three Hours]

[Maximum Marks : 80

- Note** :—(1) All questions are compulsory.
(2) Question No. 2 to 7 carry equal marks.
(3) Draw labelled diagram wherever necessary.

1. (A) Fill in the blanks :— 2
- (i) Gram staining is a technique used for staining of _____. (Bacteria/Fungi)
 - (ii) _____ possess the characteristics both of bacteria and fungi. (Actinomycetes/Viruses)
 - (iii) Heat loving microbes can be termed as _____. (Psychrophiles/Thermophiles)
 - (iv) Time required for cell to divide is _____. (Generation time/Growth Rate)
- (B) Choose the correct alternative :— 2
- (i) Study of algae :
 - (a) Mycology
 - (b) Phycology
 - (c) Bacteriology
 - (d) None of these
 - (ii) Arrangement of cocci in chain :
 - (a) Staphylococcus
 - (b) Sarcinae
 - (c) Streptococci
 - (d) Tetrad
 - (iii) Which of the following has peptidoglycan as a major constituent of cell wall ?
 - (a) Gram negative bacteria
 - (b) Gram positive bacteria
 - (c) Fungi
 - (d) None of these
 - (iv) Normal flora of milk :
 - (a) E Coli
 - (b) S. aureus
 - (c) C. albicans
 - (d) Lactobacillus
- (C) Answer in one sentence :— 4
- (i) What kind of harmful bacteria found in milk ?
 - (ii) What is Fungi ?
 - (iii) What are the thermophilic bacteria ?
 - (iv) Define Media.
2. (A) Draw the typical Bacterial Cell. 4
- (B) Write the contribution of Pasteur. 4
- (C) Explain the morphological features of Bacteria. 4

OR

- (D) Differentiate between Prokaryotes and Eukaryotes. 4
(E) Describe the components of Taxonomy. 4
(F) Classify microorganisms into three domain system. 4
3. Describe in detail factors affecting microbial growth. 12
- OR**
- Describe in detail methods of measurement of microbial growth. 12
4. (A) Explain thermophilic and thermotolerant bacteria. 4
(B) Classify bacteria according to their shape with examples. 4
(C) Differentiate between gram positive and gram negative bacteria. 4
- OR**
- (D) Define Bacteria. Give its general characteristics. 4
(E) Describe acid forming bacteria. 4
(F) What are proteolytic bacteria saccharolytic bacteria. 4
5. What are molds ? Explain the classification structure and uses of mold. 12
- OR**
- Discuss the structure, growth and nutrition of yeasts. Give its uses in food production. 12
6. (A) Explain the types of media. 4
(B) What is Staining ? Explain gram staining. 4
(C) Explain plate count Method. 4
- OR**
- (D) Describe any one method suitable for enumeration of micro-organisms. 4
(E) Describe methods of Pure Culture isolation. 4
(F) Write on agar slant. 4
7. (A) Differentiate between Aerobic and Anaerobic fermentation. 4
(B) Describe normal flora of milk and milk products. 4
(C) Describe microbial contamination of food. 4
- OR**
- (D) Describe fermentation process. 4
(E) Explain Alcoholic beverages. 4
(F) Describe any one method for food preservation. 4