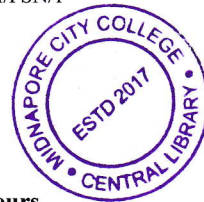


PG CBCS
M.Sc. Semester-II Examination, 2022
DEPARTMENT OF FOOD SCIENCE & NUTRITION
 PAPER: FSN 202
(FOOD MICROBIOLOGY AND FOOD PRESERVATION)

**Full Marks: 40****Time: 2 Hours****Write the answer for each unit in separate sheet**

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP-A

- 1. Answer any two questions: 2 X 8=16**
- a) Discuss about the outer membrane of bacterial cell. Differentiate between Gram positive and negative bacteria. 4+4
 - b) Discuss the lysogenic life cycle of bacteriophage. Classify the animal virus as per scientist David Baltimore. 4+4
 - c) Give an example of each psychrophilic and thermophilic microorganism involved in the spoilage of milk and mention the type of spoilage they cause. Write down the different modes of preservation usually practiced to control milk spoilage. 3+5
 - d) 'Various smells are coming out from the spoiled meat'-justify. Describe different pattern of fish spoilage caused by the bacteria. 4+4

GROUP-B

- 2. Answer any four questions: 4 X 4=16**
- a) Discuss the intrinsic factors affect microbial growth in food.
 - b) State the factors affecting the drying rate.
 - c) Discuss different asexual reproduction process observed in fungi.
 - d) Why do microbial populations enter in stationary phase?
 - e) Write the steps involved in vibrio cholera infection and state the treatment strategy against its infection.
 - f) What are the essential characteristics of an indicative microorganism?
 - g) Why and how does milk become spoiled?
 - h) 'Spoilage of cereals is leading to the increment of warehouse temperature' - explain the statement.

GROUP-C

- 3. Answer any four questions: 4 X 2=8**
- a) Differentiate between pili and fimbriae.
 - b) Write the function of porin channel.
 - c) What is mycelium?
 - d) Define F value.
 - e) Why is the foul smell coming out from spoiled eggs?
 - f) What are the common signs of vegetable spoilage?
 - g) Why is salt traditionally used to preserve different food items?
 - h) Why cereals are more prone to fungal spoilage-discuss with example.
