

B.Sc. Semester - 4 (CBCS) Examination**March/April-2025 [NEW COURSE]****Microbiology-Mi401(Core)****Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

-
- Que-1 (A) Objective type questions (04)
- 1) What is a symbiotic interaction?
 - 2) Give examples of any two virus plant pathogens.
 - 3) What is the use of Winogradsky's column?
 - 4) Give examples of two biocontrol organisms.
- Que-1 (B) Answer in Brief (any one out of two) (03)
- 1) Physical characteristics of soil
 - 2) Applications of bio fertilizers
- Que-1 (C) Write a Note on (any one out of two) (07)
- 1) Bio pesticides
 - 2) Nitrogen Cycle
- Que-2 (A) Objective type questions (04)
- 1) Which organism cause spoilage in fresh food?
 - 2) Name any one toxin producing microbe in food?
 - 3) What is single cell protein?
 - 4) AGMark certification ensures the quality and purification of agriculture food.
(True/False)
- Que-2 (B) Answer in Brief (any one out of two) (03)
- 1) Techniques of Mushroom cultivation
 - 2) Pathogenicity of *S.aureus* in food poisoning
- Que-2 (C) Write a Note on (any one out of two) (07)
- 1) General principles of food preservations
 - 2) Spoilage of canned food
- Que-3 (A) Objective type questions (04)
- 1) Which microbes cause contamination in milk?
 - 2) Name microbes involve in yogurt production.
 - 3) Which are the various techniques used for microbial analysis of milk?
 - 4) Define: Pasteurization
- Que-3 (B) Answer in Brief (any one out of two) (03)
- 1) How MBRT is used for microbial analysis of milk?
 - 2) Give brief note on benefits of milk as medium for microorganisms
- Que-3 (C) Write a Note on (any one out of two) (07)
- 1) Cheese production
 - 2) Principles of milk preservation
- Que-4 (A) Objective type questions (04)
- 1) _____ chemical is commonly used as a disinfectant in water purification system.
 - 2) Name any disease transmitted by contaminated water.
 - 3) Coliforms are used as indicator organisms to detect contamination in drinking water
(True/ False)
 - 4) What is the difference between of B.O.D and C.O.D?

- Que-4 (B) Answer in Brief (any one out of two) (03)
- 1) Use of microbes in treatment waste water
 - 2) Sampling techniques of water
- Que-4 (C) Write a Note on (any one out of two) (07)
- 1) Anaerobic sludge digestion
 - 2) Use of filtration technique for Water purification
- Que-5 (A) Objective type questions (04)
- 1) What is the significance of Pharmaceutical Microbiology in the healthcare industry?
 - 2) What is the primary purpose of Sterility Testing in pharmaceutical products?
 - 3) Expand the abbreviations: GMP and GLP.
 - 4) ISO and WHO provide certifications for pharmaceutical industries to ensure quality standards. (True/False)
- Que-5 (B) Answer in Brief (any one out of two) (03)
- 1) Define Pharmacopoeia and explain its role in the pharmaceutical industry
 - 2) List the key principles of Good Manufacturing Practices (GMP) in pharmaceutical industries.
- Que-5 (C) Write a Note on (any one out of two) (07)
- 1) Methods of Sterility Testing in pharmaceutical products.
 - 2) Concept of Total Quality Management (TQM).
