

B.Sc. Semester - 4 (CBCS) Examination
March/April-2024 [OLD COURSE]
MICRO-BIOLOGY(CORE)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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- Que.1(A) Answer the following. (any one out of two) (07)
1. Discuss: Beneficial & Harmful interactions among soil microorganisms along with examples.
 2. Write a detailed note on Biological Nitrogen Fixation.
- Que.1(B) Attempt any one. (out of two) (04)
1. Applications of Bio-fertilizer.
 2. Carbon Cycle.
- Que.1(C) Attempt any three. (out of five) (03)
1. Define: Bio-pesticide
 2. Plant mycology involves study of algae present in soil. (True/False)
 3. Give two examples of harmful interaction of among soil microorganisms.
 4. What is mycorrhiza?
 5. Mention the application of Winogradsky's column?
- Que.2(A) Answer the following. (any one out of two) (07)
1. Enlist the chief methods of food preservation and explain principles of food preservation in detail.
 2. Write a detailed note on cultivation of mushroom.
- Que.2(B) Attempt any one. (out of two) (04)
1. Classification of food-borne disease.
 2. Microbial spoilage of fruits.
- Que.2(C) Attempt any three. (out of five) (03)
1. What is bacterial food intoxication?
 2. Define: Single cell protein
 3. Microbial destruction of food can be prevented by_____.
A. Recontamination B. Killing microbes
C. Scalding D. All of them
 4. Give full form of FDA.
 5. _____ strain of yeast is known as baker's yeast.
- Que.3(A) Answer the following. (any one out of two) (07)
1. Write a detailed note on pasteurization techniques for the preservation of milk.
 2. Discuss the techniques for microbial analysis of milk in short.

- Que.3(B) Attempt any one. (out of two) (04)
1. How yogurt is produced?
 2. Which different types of pathogenic microorganism are present in milk?
- Que.3(C) Attempt any three. (out of five) (03)
1. Full form of LAB is_____.
 2. Lactose as a sugar is present in milk. (True/False)
 3. Which starter culture is used to make Acidophilus milk?
 4. Define: Thermotolerant bacteria
 5. Rancidity and Putridity in salted butter is caused by_____.
- Que.4(A) Answer the following. (any one out of two) (07)
1. Discuss: Biological or Secondary waste water treatment processes.
 2. Write a note on filtration technique for purification of water.
- Que.4(B) Attempt any one. (out of two) (04)
1. Anaerobic sludge digestion.
 2. How BOD is useful to detect pollution in water?
- Que.4(C) Attempt any three. (out of five) (03)
1. Name any two tests for detection of coliforms in drinking water.
 2. Give full form of COD.
 3. Chlorination is an easy approach for disinfection of drinking water. (True/False)
 4. Give two examples of coliform organism.
 5. Define: Sanitary Survey.
- Que.5(A) Answer the following. (any one out of two) (07)
1. Discuss: Methods of sterility testing of pharmaceutical products.
 2. Describe the principles of GMP (Good manufacturing practices) in brief.
- Que.5(B) Attempt any one. (out of two) (04)
1. Comment: GLP (Good Laboratory Practices) is important for quality assurance of pharmaceutical products.
 2. What different pharmaceutical products are produced by microorganism?
Give a brief note.
- Que.5(C) Attempt any three. (out of five) (03)
1. Define Sterility Test.
 2. What is Quality assurance?
 3. Give full form of WHO and ISO.
 4. What is Pharmacopoeia?
 5. Documentation is a vital part of quality assurance and management. (True/False)
