

B.Sc. Semester - 3 (CBCS) Examination
Oct/Nov - 2023 (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) Objective type questions. (04)
1. Elaborate the term biodiversity.
 2. All bacterial cells are Eukaryotic. (True/False)
 3. Write the correct order of taxonomic groups from higher to lower rank.
 4. % Similarity (%S) of each strain to every other strain is calculated by Numerical Taxonomy method. (True/False).
- Que.1(B) Answer in brief (Any 1 out of 2) (03)
1. Microbial evolution.
 2. Write short note on genomic fingerprinting.
- Que.1(C) Write a note on (Any 1 out of 2) (07)
1. Introduction to metagenomics.
 2. Major characteristics used in taxonomy.
- Que.2(A) Objective type questions. (04)
1. Provide an explanation of thermophiles.
 2. Provide a definition for facultative anaerobes.
 3. Bacillus is gram negative bacteria. (True/False)
 4. Write two bacterial names of Phototrophic bacteria.
- Que.2(B) Answer in brief (Any 1 out of 2) (03)
1. Asporogenous rods
 2. Highlight the distinctions between Archaea and Eubacteria.
- Que.2(C) Write a note on (Any 1 out of 2) (07)
1. Explain the concept of dissimilatory sulfate reduction.
 2. Key characteristics of rods and cocci capable of forming endospores.
- Que.3(A) Objective type questions. (04)
1. Define: Spore.
 2. Elaborate on mycorrhiza.
 3. Mucor is example of protozoa. (True/False)
 4. Name any two economical important of fungi.
- Que.3(B) Answer in brief (Any 1 out of 2) (03)
1. Briefly describe the morphology of algae.
 2. Explain the Economic Significance of Protozoa.
- Que.3(C) Write a note on (Any 1 out of 2) (07)
1. A Description of Asexual Reproduction in Fungi.
 2. Introducing the Major Divisions and Classification of Fungi.
- Que.4(A) Objective type questions. (04)
1. What is Viroid?
 2. Provide a definition of cancer.
 3. HIV viruses are plant virus. (True/False)
 4. Who is credited with the discovery of bacteriophages?

- Que.4(B) Answer in brief (Any 1 out of 2) (03)
1. Explain the cultivation of viruses.
 2. Provide the classification of viruses.
- Que.4(C) Write a note on (Any 1 out of 2) (07)
1. Briefly describe the replication of T4 phage.
 2. Describe the life cycle of the Lambda phage.
- Que.5(A) Objective type questions. (04)
1. Write two examples of Biofuels.
 2. Provide a definition for biodeterioration.
 3. CH₄ is major gas for gobbar gas. (True/False)
 4. Ozone is called the _____air pollutant. (Primary, Secondary)
- Que.5(B) Answer in brief (Any 1 out of 2) (03)
1. Explain microbial-enhanced oil recovery.
 2. Elaborate on the deterioration of metals due to biological processes.
- Que.5(C) Write a note on (Any 1 out of 2) (07)
1. Briefly discuss the types of ex-situ bioremediation.
 2. Describe the process of pesticide biomagnification.
