

B.Sc. Semester - 1 (CBCS) Examination
Nov/Dec - 2022 (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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Q.1**A. Objective type questions. (04)**

1. Compound microscope was discovered by _____
2. Father of Medical Microbiology is _____
3. Disease that affects many people at different countries is termed as _____
4. The main feature of prokaryotic organism is absence of protein synthesis. (True/False)

B. Answer in brief (Any 1 out of 2) (02)

1. Write the groups of Microorganisms.
2. Enlist Applied areas of Microbiology.

C. Answer in detail (Any 1 out of 2) (03)

1. Contribution of: Needham.
2. Contribution of: Lazzaro Spallanzani

D. Write a note on (Any 1 out of 2) (05)

1. Spontaneous generation versus Biogenesis.
2. Short note on: Distribution of microorganisms in nature

Q.2**A. Objective type questions. (04)**

1. Full form of: TEM
2. When the power of ocular lens is 10X and Objective lens is 45X, the magnification is ____.
3. Define: Resolution
4. Explain: Dye.

B. Answer in brief (Any 1 out of 2) (02)

1. Write two Difference between Bright field Microscopy and Dark field Microscopy.
2. Use of Decolorizers.

C. Answer in detail (Any 1 out of 2) (03)

1. Introduction to Confocal Microscopy.
2. Phase Contrast Microscopy

D. Write a note on (Any 1 out of 2) (05)

1. Types of Electron Microscope.
2. Preparations for Light Microscope Examinations.

Q.3**A. Objective type questions. (04)**

1. Explain: Stalk.
2. Define: Cytoplasm
3. Bacterial flagella is made up of lipid. (True/False)
4. Full form of LPS

- B. Answer in brief (Any 1 out of 2)** (02)
1. Draw the structure of Cell Wall.
 2. Short not on: Cytoplasmic inclusions.
- C. Answer in detail (Any 1 out of 2)** (03)
1. Protoplast and Spheroplast
 2. Size, Shape and Arrangement of Bacteria.
- D. Write a note on (Any 1 out of 2)** (05)
1. Structure and formation of Endospores.
 2. Types and function of flagella.

Q.4

- A. Objective type questions.** (04)
1. Define: Anaerobic
 2. Write two example of selective media
 3. Generation time of *Escherichia coli* is 20 min. (True/False)
 4. Enlist the macronutrient need for growth of organism.
- B. Answer in brief (Any 1 out of 2)** (02)
1. Gaseous requirements.
 2. Difference between selective and differential media.
- C. Answer in detail (Any 1 out of 2)** (03)
1. Explain in detail: Oxygen toxicity
 2. Enlist: Selective methods.
- D. Write a note on (Any 1 out of 2)** (05)
1. Microbial Media.
 2. Physical parameter required for growth.

Q.5

- A. Objective type questions.** (04)
1. Define: Growth rate.
 2. How to calculate number of generations?
 3. Death phase also known as _____
 4. Define: Microbial cell division
- B. Answer in brief (Any 1 out of 2)** (02)
1. Modes of cell multiplication.
 2. Generation time
- C. Answer in detail (Any 1 out of 2)** (03)
1. Continuous culture of Bacteria
 2. Explain log phase in detail.
- D. Write a note on (Any 1 out of 2)** (05)
1. Growth Curve of bacterial cell.
 2. Explain: Synchronous growth.
