

B.Sc. Semester - 1 (CBCS) Examination
Feb/Mar. -2021 (OLD COURSE)
MICRO BIOLOGY (CORE)

Time: 1:30 Hours**Marks: 42****Instructions:**

1. Figures to the right indicate marks.
2. There are five questions in the question paper.
3. Answer any three of the following questions.

Q.1(A) Answer the following. (Any One) (07)

1. Difference between procaryotic and eucaryotic cells.
2. Contribution of Louis Pasteur in field of microbiology.

Q.1(B) Answer the following. (Any One) (04)

1. Short note on: Whittaker's five kingdom concept
2. Koch's four postulates.

Q.1(C) Answer the following (Any Three) (03)

1. Define: Microbiology.
2. _____ scientist suggested a third kingdom Protista.
3. Define: Virus.
4. Antony van Leeuwenhoek known as father of microscope. (True/False)
5. Joseph Lister used _____ as disinfectants.

Q.2(A) Answer the following. (Any One) (07)

1. Electron microscopy.
2. Types of microbiological stains.

Q.2(B) Answer the following. (Any One) (04)

1. Phase contrast microscopy.
2. Fluorescence microscopy.

Q.2(C) Answer the following (Any Three) (03)

1. Define: Microscope.
2. A light microscope has an objective lens with a magnification of 40x and an ocular lens with a magnification of 10x, what is the total magnification of the image?
3. In Dark-Field Microscopy background is dark. (True/False)
4. Explain: Mordents
5. Gram staining technique was introduced by _____.

Q.3(A) Answer the following. (Any One) (07)

1. Structure and chemical composition of cell wall.
2. Short note on: Endospore.

Q.3(B) Answer the following. (Any One) (04)

1. Difference between spheroplast and protoplast.
2. Types of flagella in bacteria.

- Q.3(C) Answer the following (Any Three) (03)
1. Bacteria are most being approximately _____ in diameter.
 2. Define: pleomorphic.
 3. Capsule is made up of _____.
 4. Explain: Cyst.
 5. Full form of PHB.
- Q.4(A) Answer the following. (Any One) (07)
1. How can bacteria classify on the basis of nutrition requirement?
 2. Explain in detail: Types of Media.
- Q.4(B) Answer the following. (Any One) (04)
1. Classification of bacteria on the basis of temperature requirement.
 2. Is nutrient broth a 'universal' medium? Explain.
- Q.4(C) Answer the following (Any Three) (03)
1. Microorganisms are found in sea called alkaliphiles. (True/False)
 2. Give examples of oxygen toxicity.
 3. Define: Facultative anaerobic.
 4. Example of any two obligate parasites bacteria?
 5. Explain: Chemotrophs.
- Q.5(A) Answer the following. (Any One) (07)
1. Draw a typical bacterial growth curve and label the various phases, discuss those factors which determine the beginning and end of each phase.
 2. Describe the differences between the various modes of cell division in bacteria.
- Q.5(B) Answer the following. (Any One) (04)
1. How can synchronous growth of a bacterial culture be obtained?
 2. Continuous Culture.
- Q.5(C) Answer the following (Any Three) (03)
1. Generation time of *E. coli* is _____.
 2. Define: Chemostat
 3. Write the formula for calculate the number of generations.
 4. Number of microorganisms are zero in stationary phase. (True/False)
 5. _____ is an example of budding bacteria.
