

# SEMESTER EXAMINATION-2021

## CLASS – B.SC. IST YEAR

### PAPER CODE: BIM-C101 Fundamentals of Microbiology

Time: 3 hour

Max. Marks: 70

Min. Pass: 40%

**Note:** Question Paper is divided into two sections: **A and B**. Attempt both the sections as per given instructions.

#### SECTION-A (SHORT ANSWER TYPE QUESTIONS)

**Instructions:** Answer any five questions in about 150 words (5 X 6 = 30 Marks) each. Each question carries six marks.

Question-1: What are the different measures of microbial control according to Vedas?

Question-2: Write the contributions of Louis Pasteur, and Anton Van Leeuwenhoek in the field of microbiology?

Question-3: What is germ theory of disease? Explain.

Question-4: Write notes on:

1. Whittakers Five Kingdom Classification
2. Carl Woese Classification

Question-5: How microorganisms are distributed in the environment?

Question-6: Describe the various morphological characters of bacteria.

Question-7: Dramatically explain the ultra structure of bacterial flagella.

Question-8: Define metagenomics. Differentiate between culturable and non-culturable microorganisms'.

Question-9: Write down the epidemiology of Gandmala (Mumps) and Masurika (Smallpox).

Question-10: Mention the basis of outline classification of Cyanobacteria and Mycoplasma.

#### SECTION-B (LONG ANSWER TYPE QUESTIONS)

**Instructions:** Answer any FOUR questions in detail. Each (4 X 10 = 40 Marks) question carries 10 marks.

Question-11: Write the contributions of Robert Koch. Also explain in detail about Koch Postulates.

Question-12: How Vedic technology helps in environmental cleaning?

Question-13: Write notes on any of the two below:

1. Cell wall composition of Archaea bacteria.
2. Cell wall composition of Fungi.
3. Cell wall composition of Viruses.

Question-14: Describe the life cycle of T4 Bacteriophage.

Question-15: Discuss eight kingdom system of classification of microorganisms.

Question-16: Differentiate between Gram Positive and Gram Negative bacterial cell wall. Also draw a well labeled diagram.

Question-17: Define Sterilization. What are the different physical and chemical methods of sterilization?

Question-18: Write the special staining techniques for the identification of bacteria.

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