

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2023

M.Sc.-I Semester (Microbiology)

COURSE CODE (CREDITS): 20MS1MB111 (03)

MAX. MARKS: 15

COURSE NAME: General Microbiology and Bacteriology

COURSE INSTRUCTORS: Ashok Kumar Nadda

MAX. TIME: 1 Hour

Note: (a) All questions are compulsory.

(b) Marks are indicated against each question in square brackets.

(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Section I

(a) A unique type of lipid present in the cell membrane of scalloped type of Archaea is-----
----- (1 mark)

(b) What is culture medium? Give an example of solid and liquid type of medium used for culturing the bacteria. (1 mark)

(c) A bacteria named -----that currently holds the record for high temperature growth, it can grown in temperatures up to 113°C (1 mark)

(d) What is the contribution of Louis pasture and Edward Jenner in the field of microbiology? (1 mark)

(e) Name the bacterium in which waxy substance, mycolic acid is present in the cell wall. (1 mark)

Section II

Q 2 Discuss the various systems of classification of microorganisms. Which one is the most adopted system of classification these days? (1.5 marks)

Q 3 How can we classify the bacteria on the basis of locomotor's structures (flagella) present on their surface? (1.5 marks)

Q 4 Discuss the Germ theory of disease. What are the various postulates given by Robert Koch? (2 marks)

Section III

Q 5 Write the major difference between Gram+ve and Gram-ve bacteria? (2 marks)

Q 6 With the help of a suitable diagram illustrate the molecular structure of peptidoglycan layer in cell wall of bacteria. Demonstrate the role of Teichoic and Lipoteichoic acid polymeric molecules (3 marks)