

## **SEMESTER EXAMINATION- 2022**

**Class: M.Sc. Semester 1**

**Subject: MICROBIOLOGY**

**PAPER CODE: MMB-C- 101**

**PAPER TITLE: VEDIC AND MODERN MICROBIOLOGY**

Time: Three Hours]

[Maximum Marks : 70

Minimum 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: Attempt any five questions in about 150 words each. Each question carries six marks. (5X6= 30 Marks)**

Question-1: Write a note on krimis as mentioned in Vedic texts.

Question-2: Explain the role of Apamarga and Prishniparni in the eradication of microbes.

Question-3: Write a note on control of microbial diseases as mentioned in Vedic texts.

Question-4: What are the major contributions of Carl Landsteiner, Joseph Lister and Nicholas Appert.

Question-5: Write a note on Archaeal cell wall.

Question-6: What are the characteristic features of actinobacteria.

Question-7: Write a note on heterocyst.

Question-8: Compare ribosome of prokaryotic cell with eukaryotic cell.

Question-9: Discuss the role of ribosomal DNA in microbial taxonomy and concept of microbial species.

Question-10: Write a note on economic importance of Cyanobacteria.

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

**Instructions: Attempt any four questions in detail. Each question carries 10 marks.**

(4x10 = 40)

Question-11: Give an account of Vedic concept of origin of life. Describe Bang Bang theory and String theory.

Question-12: Describe Vedic way of classification of microbes. Explain various terms used for microbes in Vedas.

Question-13: What is Agnihotra? Describe the effect of Agnihotra on environment, plants and human health with ancient and modern findings.

Question-14: Give an account of Panduroga and Masurika in humans with their prophylaxis.

Question-15: Describe the principle and working of Phase Contrast Microscope. How Phase Contrast Microscope differs from Dark Field Microscope?

Question-16: Explain the structure and functions of plasma membrane, endospore and flagella of a prokaryotic cell.

Question-17: Explain principle and working of Transmission Electron Microscope and how does it differ from Scanning Electron Microscope.

Question-18: Which criteria are used to classify bacteria? Write outline classification of bacteria on the basis of Bergey's Manual of Determinative Bacteriology.