**ST. JOSEPH’S UNIVERSITY, BENGALURU -27**

Registration Number:

Date & session:21-12-22 (1pm)

**B.Sc (MICROBIOLOGY) – I SEMESTER**

**SEMESTER EXAMINATION: OCTOBER 2022**

**(Examination conducted in December 2022)**

**MBOE 1 - MICROBIAL TECHNOLOGY FOR HUMAN WELFARE**

**Time: 2 Hours Max Marks: 50**

This paper contains **1** printed page and **four** parts

**I. Answer any Five of the following 5 x 3 = 15**

1. Name the different types of microorganisms.

2. Define probiotics and prebiotics with example.

3. List the health benefits of fermented foods.

4. List the applications of microbial fertilizers.

5. Define vermicomposting with example.

6. What are subunit vaccines?

7. List the methods by which drug resistance can be transmitted between microbes.

**II. Answer any Two of the following 2 x 5 = 10**

8. Give an account of the gut microbiota.

9. Write a flow chart of mushroom cultivation.

10.Comment on the statement “Use and Abuse of antibiotic therapy”.

**III. Answer any Two of the following 2x10 = 20**

11. Explain biogas production and applications.

12. Define vaccine and mention few commonly used vaccines with their schedule.

13. Explain wine production.

**IV. Answer the following 1 x 5 = 5**

14. Write a short note on the production and health benefits of Kombucha.