Registration Number:

Date & Session:

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

**M.Sc. MICROBIOLOGY – III SEMESTER**

**SEMESTER EXAMINATION: OCTOBER 2023**

**(Examination conducted in November /December 2023)**

**MB 9321: INDUSTRIAL MICROBIOLOGY**

**(For current batch students only)**

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

**This paper contains 1 printed pages and 4 parts**

**I. Answer any Five of the following 5X3=15**

1. Differentiate between crude and defined media.

2. What is SSF?

3. List the criteria for a good antifoam agent.

4. What are Newtonian fluids? Give examples.

5. How is MSG synthesized commercially?

6. Highlight the significance of Melanin biosynthesis.

7. How are Industrial strains preserved?

1. **Answer any Two of the following 2X5=10**

8. Describe the production of Vitamin B 12.

9. What are filtration devices?

10. Discuss the growth curve of bacteria with a diagram.

**III. Answer any Two of the following 2X10=20**

11. How are cells Immobilsed?

12. What is the role of Mutations in strain improvement? Describe.

13. Discuss the production of Beer.

1. **Answer the following 1X5=5**

14. A water soluble polysaccharide with multiple uses derived from a bacterium is effective as an emulsifier and stabilizer. Which is this compound? Discuss its production and significance.