



Register Number: _____

Date: 21/11/2020

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BENGALURU-27
M.Sc. MICROBIOLOGY – III SEMESTER
SEMESTER EXAMINATION: NOVEMBER 2020
MB 9318 – INDUSTRIAL MICROBIOLOGY

Time- 2 1/2 hrs

Max Marks-70

This paper contains 02 printed pages and 04 parts

I. Answer any Five of the following.

3x5=15 marks

1. What is SSF? List some products that are produced by this process.
2. Write a note on Photobioreactors and their uses.
3. Illustrate the concept of Newtonian fluids with examples.
4. List the methods of preservation of Industrially important Microorganisms.
5. Write notes on Foam Separation.
6. Write the features of Melanin and its biosynthesis.
7. Highlight the types of Cell disruption techniques used and its significance.

II. Answer any Five of the following.

5x5=25 marks

8. Diagrammatically describe a Typical Fermenter.
9. List the criteria for the Inoculum Development for Industrial use.
10. Differentiate between Batch and Continuous fermentation processes.
11. What is Turbidostat? Diagrammatically Explain.
12. How are cells entrapped? Describe the method.
13. Discuss Liquid-Liquid extraction.
14. Describe the production of Xanthan Gum.

III. Answer any Two of the following.

10x2=20 marks

15. Give a detailed description of the different kind of crude components in a Fermentation media.
16. Discuss the role of Mutations in Strain Improvement.
17. Describe the production of Beer in detail.

IV. Answer the following:

10x1=10 marks

18. In 1957, Alick Isaacs and Jean Lindemann, identified a protein consisting of a group of more than twenty substances of which many were glycoproteins with molecular weights between 20,000-30,000 Daltons. Based on their structure and functions they have been classified into three types and are often used in cancer treatment. What is this substance? Give its mechanism of Isolation and action and write a note on its production.

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