4. Write short notes on : 7x2=14

(i) Glycolytic pathway

(ii) Primary metabolites

UNIT-III

5. Describe the effect of temperature, nutrient concentration, pH, media formulation on fermentation. 14

6. Write short nots on : 7x2=14

(i) Classification of fermentation process

(ii) Kinetics of thermal death of microorganaisms

UNIT-IV

7. Elaborate the foam and antifoam instrument control in fermentation with diagrams. 14

8. Write short notes on : 7x2=14

(i) Product formation in continuous culture

(ii) Oxygen transfer kinetics in fermentation

UNIT-V

9. Describe IPR and its relevance in the life science industry. 14

10. Write short notes on : 7x2=14

(i) Ion Exchange Chromatography

(ii) Bioethics

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PG Even Semester Examination, September, 2023

MICROBIOLOGY

(4th Semester)

Course No: MBCC-402
(Industrial Microbiology and Fermentation Technology)

FM: 70
Pass Marks : 28
Time: 3 Hours

The figures in the right margin indicate full marks for the question
Answer all questions taking one from each unit.

UNIT-I

1. List out the essential parts of fermenter and write a note on each part. 14

2. Write short notes on : 7x2=14

(i) Economic aspects of fermentation

(ii) Types of bioreactors

UNIT-II

3. (a) Discuss the role of site directed mutagenesis towards strains improvement in industrial microbiology. 7

(b) Genome Shuffling, in one of the novel genetic techniques for microbial strain improvement. Justify. 7