

2025

M.Sc. 3rd Semester Examination

MICROBIOLOGY

Paper : MCB - 306

(Fermentation Technology)

Full Marks : 25

Time : One Hour

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

Group - A

Answer any *two* questions. $2 \times 2 = 4$

1. Mention four desirable properties of an ideal immobilization matrix.
2. What is liquid-liquid extraction?
3. Mention function of impeller and the sparger of an ideal fermenter.
4. What is the driving force of mass transfer? Define mass transfer coefficient.

Group - B

Answer any *two* questions. $4 \times 2 = 8$

5. Classify agitator according to design. Briefly describe each type. $1+3$

P.T.O.

(2)

6. Briefly describe the desirable criteria for selection of industrial strains.
7. Write the mechanism behind 'Salting Out' of protein.
8. Write short note on multichamber centrifuge.

Group - C

Answer any *one* question.

8×1=8

9. Briefly describe the key factors that affect scale-up of fermentation. State two basic principles of SSF. 6+2
10. Define viscosity. Classify fluids on their viscous nature. What are the different modes of heat transfer? Define Reynolds number. 1+3+2+2

Internal Assessment : 5 marks
