

13 APR 2019

B.Sc. Examination- April- 2019

Semester - VI - Microbiology

Paper : Mi-604- Fermentation technology

PaperCode:21851

Time: 2:30 Hours

Marks: 70

Instructions: (a) Figure to the right indicates total marks of respective question.
(b) Draw neat, clean and labeled diagram wherever necessary.

1.(a) Explain: Improvement of industrially important microbes by the use of recombinants. 09

1.(b) Write on: Use of plasmid PBR322 for strain improvement. 05

OR

1.(a) Discuss: Methods for preservation of industrially important microbes. 09

1.(b) Write on: Role of auxotrophic mutants in strain improvement. 05

2.(a) Explain: Methods for removal of microbial cells & suspended solids. 09

2.(b) Write on: Crystallization. 05

OR

2.(a) Explain: Liquid-liquid extraction & solvent recovery. 09

2.(b) What is drying? Discuss types of dryers. 05

3.(a) Discuss: Methods for sterility testing. 09

3.(b) Write on: Effluent treatment. 05

OR

3.(a) Discuss: Scale-up processes. 09

3.(b) Write on: Pyrogen testing. 05

4.(a) Define fermentation. Explain production of vitamin B₁₂. 09

4.(b) Explain: Upstream processing of citric acid. 05

OR

4.(a) Explain: Production of vinegar. 09

4.(b) Write on: Downstream processing of glutamate. 05

5.(a) Discuss: Production of SCP. 09

5.(b) Write on: Downstream processing of wine. 05

OR

5.(a) Discuss: Bioassay of penicillin. 09

5.(b) Write in brief: Cultivation of mushrooms. 05