

B.Sc. Semester - 5 (Remedial) (NEP-2020) Examination**March/April-2026****BIT: Bioprocess and Biochemical Engineering (Major-11)****Time: 2:00 Hours****Marks:50****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Que.1 Write a note on
- (1) Secondary Screening. (05)
 - (2) Economic aspects of fermentation industry. (05)
- OR
- (1) Component parts fermentation process. (05)
 - (2) Application of protoplast fusion and recombinant DNA technology. (05)
- Que.2 Write a note on
- (1) Classification of Bioreactors. (05)
 - (2) Kinetics of sterilization. (05)
- OR
- (1) Aeration and Mixing Mechanisms. (05)
 - (2) Basic Fundamentals of Fermenter Systems. (05)
- Que.3 Write a note on
- (1) Essential Media Components. (05)
 - (2) Media for Inoculum Development. (05)
- OR
- (1) Media Design and Formulation. (05)
 - (2) Approaches for Media Optimization. (05)
- Que.4 Write a note on
- (1) Two Phase aqueous extraction. (05)
 - (2) Chemical and Biological assay of fermentation products. (05)
- OR
- (1) Non-mechanical methods for Cell Disruption. (05)
 - (2) Cell Separation Techniques: Precipitation. (05)
- Que.5 Write a note on
- (1) Isolation methods using selection of desired characters. (05)
 - (2) Continuous Fermentation. (05)
- OR
- (1) Classifications of Fermentation Media. (05)
 - (2) Cell Separation by Centrifugation and Filtration. (05)
