

CS/2110

- Bioprocess Technology (BHB 23)

5501/NH

Attempt two question from the each Section A and B and the section C is compulsory

Time 3 hrs

MM :74

Section A

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| 1 | Define the bioprocess technology. Discuss the various development in the area of bioprocesses | 11 |
| 2 | How will you define the Growth? Discuss the growth kinetics in continuous culture | 11 |
| 3 | What is the bioreactor? Briefly describe the major categories of fermentations, their requirements and applications | 11 |
| 4 | Define sterilization. Describes the different techniques of sterilization used in industrial production processes | 11 |

Section B

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|---|---|----|
| 5 | Why measurement of KLa is important for the better performance of a bioreactor? Justify | 11 |
| 6 | Elaborate the various important parameters of bioprocess which can be measured in during bioprocessing. | 11 |
| 7 | Define downstream processing. Discuss in detail the various steps in downstream processing | 11 |
| 8 | How will you proceed for the production of amylase and lactic acid? Discuss the processes in detail | 11 |

Section C

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| 9 | Explain the following (15x2)
I. Fed-batch culture
II. Growth kinetics
III. Impellers
IV. Baffles
V. Importance of media formulation
VI. Growth media vs fermentation media
VII. Antifoam agents
VIII. OTR in bioprocess
IX. Difference between OTR and OUR
X. Significance of mathematical models in fermentation
XI. Flocculation and Flootation
XII. SCP
XIII. <i>In situ</i> recovery
XIV. Enlist the purification methods
XV. Activated sludge process | 30 |
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