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Total No. of Pages: 01

Total No. of Questions: 08

M.Tech. (Bio Technology) (Sem. – 1)
BIOPROCESS ENGINEERING & TECHNOLOGY

Subject Code: MTBT-103-18

M Code: 75764

Date of Examination : 17-01-23

Time: 3 Hrs.

Max. Marks: 60

INSTRUCTIONS TO CANDIDATES:

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWELVE marks.

1. Discuss important factors affecting microbial growth in a continuous culture system. Also explain growth kinetics for the same.
2. Compare various models used to predict fermentation kinetics. Explain unstructured model in detail.
3. Give a detailed account of various procedures adopted to provide aeration and agitation in a fermentation vessel.
4. What does bioprocess control mean? Describe types of controllers and explain anyone in detail.
5. Draw a well labelled diagram showing operation of aerobic fermentation process. Also enlist different parameters that influence working of a bioreactor.
6. Discuss various techniques used for biomass disruption and bioseparation. Give principles and methodology of sedimentation, flocculation and sonication in detail.
7. Describe principles, methods and applications of reverse osmosis and dialysis.
8. Discuss in detail the principle, procedure and applications of electrophoresis.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.