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Total No. of Pages : 01

Total No. of Questions : 08

M.Tech. (Bio Tech) (2018 Batch) (Sem.-2)**FERMENTATION TECHNOLOGY****Subject Code : MTBT-203-18****M.Code : 76049****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. What is a bioreactor? Describe the kinetics of batch sterilization. Also highlight the advantages and disadvantages of batch sterilization.
2. What is strain improvement? Describe the techniques of strain improvement of industrially important microorganisms with merits and demerits in each case.
3. Describe the criteria used for the determination of suitability of inoculum for industrial fermentations. Describe briefly the inoculum development techniques for fungal fermentations.
4. What do you understand from primary and secondary metabolites? Describe the production technology and recovery of penicillin.
5. Describe the production of red and white wine with flow diagrams.
6. Describe the importance of synthetic, semi-synthetic and complex media for industrial fermentations with suitable examples.
7. Describe various techniques used for storage of industrially important microorganisms with merits and demerits in each case.
8. Write notes on :
 - a) Air lift reactor
 - b) Packed bed reactor
 - c) Fluidized bed reactor.

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

