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RF-3694-95

M. Sc. (Part - II) Examination

April / May – 2010

Microbiology : Paper - VII

(Biochemical Engineering & Fermentation Technology)

Time : **3** Hours] [Total Marks : **52**

RF-3694

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ M. Sc. - 2

Name of the Subject :

☛ MICROBIOLOGY - 7

☛ Subject Code No. : 3 6 9 4 ☛ Section No. (1, 2,.....) : 1

Seat No. :

Student's Signature

(2) Digit on right hand side indicate marks.

(3) Draw neat and labelled diagram wherever necessary.

1 (a) Explain the selection of industrial strain and the procedures for maintenance of starter culture. **7**

OR

(a) Explain the mechanism of gaseous transfer in an aerobic fermentation processes. **7**

(b) Discuss the kinetics of growth and substrate utilization in batch and fed batch system. **7**

OR

(b) Discuss the characteristics and importance of Newtonian and Non-newtonian fluids. **7**

2 Write short notes on any three of the following : **12**

(a) Bioprocess economics

(b) Sterilization of air

(c) Spargers Vs. Impellers.

(d) Consortium and mixed substrate concept.

(e) Design of laboratory bioreactor.

RF-3695

Instructions :

(1)

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Name of the Examination :

☛ M. Sc. - 2

Name of the Subject :

☛ MICROBIOLOGY - 7

☛ Subject Code No. : 3 6 9 5 ☛ Section No. (1, 2,.....) : 2

Seat No. :

Student's Signature

(2) Digit on right hand side indicate marks.

(3) Draw neat and labelled diagram wherever necessary.

1 (a) Enlist the downstream process. Describe cell separation process in detail. **7**

OR

(a) Discuss the bioassay techniques used for analysis of vitamins and antibiotics. **7**

(b) Discuss the effects on immobilized and whole cell preparations used in extreme environments. **7**

OR

(b) Giving suitable examples discuss the industrial applications of biocatalysts. **7**

2 Write short notes on any three of the followings: **12**

(a) Group specific reagents - list and applications

(b) Biomass production - types and applications.

(c) Air lift fermentors.

(d) Significance of legal protection and IPR.

(e) Enzymes Vs. Biocatalysts.
