

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. E. Sem. – IInd - Examination – June/July- 2011

Subject code: 1721601

Subject Name: Industrial Biotechnology

Date: 22/06/2011

Time: 10:30 am – 01:00 pm

Total Marks: 70

Instructions:

1. Figures to the right indicate *full* marks.
2. Draw sketches wherever necessary & assume appropriate data if required.
3. Write the answers to the point.

Q.1 Answer the following.

- (i). Describe a generalized Schematic representation of a typical Fermentation Process. (07)
- (ii). Explain & Discuss in detail the preservation of industrially important micro-organisms. (07)

Q.2.(A) Describe the batch & continuous culture fermentation processes. (07)

(B) Discuss Biomass productivity and Metabolite productivity. (07)

OR

(B) Discuss with examples the applications and use of Fed-batch culture. (07)

Q.3(A) Discuss in detail the isolation of industrially important micro-organisms. (07)

(B) Explain in detail about Scale-up of Fermentation. (07)

OR

Q.3(A) Discuss about isolation methods utilizing selection of the desired characteristic. (07)

(B) Discuss and Explain about surface and submerged fermentation processes. (07)

Q.4(A) What is sterilization and explain about Medium Sterilization. (07)

(B) Discuss in detail about the production of Benzyl Penicillin. (07)

OR

Q.4(A) Describe in detail about the Filter Sterilization. (07)

(B) Discuss in detail about the production of Microbial biopesticides. (07)

Q.5(A) Describe the inoculums development programme for the production of Sagamicin. (07)

(B) Explain and discuss about the Carbon Sources. (07)

OR

Q.5(A) Explain & Discuss the Medium formulations. (07)

(B) Explain Enzymes with its industrial application & factors affecting enzyme activity. (07)
