(b) Draw a well labeled diagram of continuously stirred tank reactor. (6)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 6086 **H**

Unique Paper Code : 2534001205

Name of the Paper : Microbial Products in Therapeutics (GE)

Name of the Course : **B.Sc. (H) Microbiology**

Semester : II

Duration : 2 Hours Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any **five** questions.
3. **All** questions carry equal marks.

1. Describe the mode of action and producer organism of the following antibiotics : (**Any four**) (3x4=12)

   (i) Vancomycin

(ii) Tetracycline

(iii) Neomycin

(iv) Augmentin

(v) Cephalosporin

2. (a) Explain the significance of anti-cancer enzymes produced by microorganisms with suitable examples. (5)

(b) Write briefly about Bacto Therapy by microbiota transplant and its advantages. (5)

(c) Give the significance of *Saccharomyces boulardii.* (2)

3. (a) What are thrombolytic agents. Outline the production of any two of these agents. (6)

(b) Explain the two methods for the production of steroid-based pharmaceuticals by microbial transformation. (6)

4. (a) Discuss the different primary screening methods of microorganisms to produce useful metabolites. (6)

(b) Discuss the producer microorganisms, mode of action and uses of somatostatin and collagenase. (6)

5. (a) Discuss the microbial production of Cyanocobalamin and Lipases. (5+5=10)

(b) What are main features of the Batch fermentation? (2)

6 (a) Write the significance of the following- *Bifidobacterium* sp and *Lactobacillus* sp. (3+3=6)

P.T.O.