



**KT-5254**

Seat No. \_\_\_\_\_

**B.Sc. (Sem. V) Examination**

**November / December – 2014**

**CC-I-7 : Biotechnology : Paper : 7**  
*(Bioprocess and Biochemical Engineering)*

Time : 3 Hours]

[Total Marks : 70

1. Answer the Following 10
1. Define fermentor and bioreactor.
  2. What do you mean by chemostat?
  3. Why strain improvement is needed
  4. What is upstream processing ?
  5. What is inoculum ?
  6. What is function of impeller ?
  7. Give the definition of primary screening.
  8. Application of tower fermentor.
  9. Injector and ejector are the part of which fermentor vessel.
  10. What is  $K_s$  ?
  11. Corn steep liquor is the source of the which content in a medium?
  12. Define starter.
2. Answer the Following (Any Five) 10
1. Name the method of preservation.
  2. Explain chemostat.
  3. How can you explain steady state condition ?

4. Define fed batch culture?
5. What is the function of sparger ?
6. What happen in decelaration phase ?
7. Write about air lift fermentor ?

**3. Answer the Following (Any Five) 30**

1. Give detail note on fermentation economics.
2. Write down preservation by liquid nitrogen ?
3. Explain continous culture kinetics.
4. Write down air sterilization method?
5. List different process of down stream processing.
6. Discuss the criteria for a ideal fermentor vessel.
7. Give a detail note on inoculum development programme for baking yeast.

**4. Answer the Following (Any Two) 20**

1. Write a detail note on BATCH CULTURE kinetic.
2. Explain strain improvement by mutation for primary metabolite?
3. Give a detail note on MEDIUM OPTIMIZATION.