

M.Sc.(Biotechnology) (C.B.C.S. Pattern) Sem-II
PSBIT-108 - Paper-IV : Industrial Biotechnology

P. Pages : 1

Time : Three Hours



GUG/S/19/11194

Max. Marks : 80

Notes : 1. All questions are compulsory and carry equal marks.

1. Define fermentation and describe different types of fermentation. **16**

OR

Write note on followings.

- a) Fluidized bed fermentor. **8**
b) continuous fermentor. **8**

2. Discuss the aeration and agitation in detail. **16**

OR

Describe the followings;

- a) Inoculum build-up. **8**
b) Antifoaming agents. **8**

3. Explain the chromatographic techniques of down-stream processing. **16**

OR

Write note on followings.

- a) Solvent extraction. **8**
b) Crystallization. **8**

4. Describe the industrial production of Amylase enzyme. **16**

OR

Describe the followings.

- a) Immobilization of enzymes. **8**
b) Industrial production of Giberellin. **8**

5. Write short note on followings.

- a) General layout of fermentation unit. **4**
b) Yeild coefficient. **4**
c) Bioseparation. **4**
d) Biosensor. **4**
