

M.Sc. (Biotechnology) Second Semester Old  
**BT2-T008 - Industrial Biotechnology**

P. Pages : 1

Time : Three Hours



**GUG/W/18/2209**

Max. Marks : 80

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

1. Explain various types of Bioreactors. 16

**OR**

a) Explain Geometry of Fermenter. 8

b) Add a note on Rotatory disc reactors. 8

2. a) Write a note on inoculum build up. 8

b) Write a note on Substrate utilization. 8

**OR**

What is Rheology? Explain the factor affecting Rheology of fermentation medium. 16

3. a) What is solvent extraction? Explain its types. 8

b) Write a note on ultrafiltration. 8

**OR**

Explain the chromatographic technique for the separation of fermentation product. 16

4. a) Write a note on covalent bonding. 8

b) What are instability factor in immobilized System. 8

5. Write a short note on:

a) Rotatory disc reactor. 4

b) Antifoaming agent. 4

c) Reverse Osmosis. 4

d) Biosensor. 4

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