

[LF 357]

OCTOBER 2014

Sub. Code: 2918

**M.PHARM. DEGREE EXAMINATION  
FIRST YEAR  
BRANCH VI – PHARMACEUTICAL BIOTECHNOLOGY  
PAPER III – BIOPROCESS TECHNOLOGY**

*Q.P. Code : 262918*

**Time : Three hours**

**Maximum : 100 marks**

**I. Elaborate on:**

**(2x20=40)**

1. Write detail about biosynthesis of secondary metabolites and its importance.
2. Define bioreactor and explain different types of bioreactor.

**II. Write notes on:**

**(10x6=60)**

1. Discuss about strain improvement for increased yield.
2. Alkaloid biotransformation.
3. Briefly about different type of sparger.
4. Production of lactic acid.
5. Measurement of mass transfer coefficient.
6. Application of semi open system.
7. Briefly about air compressing system.
8. Define microbial transformation and explain with example.
9. Explain the methods of cell disruption.
10. Compare the efficacy of immobilized and free cells.

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