

[LF 358]

OCTOBER 2014

Sub. Code: 2919

**M.PHARM. DEGREE EXAMINATION
FIRST YEAR
BRANCH VI – PHARMACEUTICAL BIOTECHNOLOGY
PAPER IV – ADVANCES IN PHARMACEUTICAL BIOTECHNOLOGY**

Q.P. Code : 262919

Time : Three hours

Maximum : 100 marks

I. Elaborate on:

(2 x 20 = 40)

1. Various methods of extraction, purification of enzymes and its pharmaceutical applications.
2. Various techniques involved in gene manipulation and production of insulin by rDNA technology.

II. Write notes on:

(10x6=60)

1. Oncogenes
2. HIV vaccines
3. Monoclonal antibody
4. Bioreactors for immobilized cells
5. cDNA
6. Electrophoresis
7. Immuno diagnosis of infectious diseases
8. Production of single cell protein
9. Western blotting
10. Use of databases in biology
