

Code: 13R00802

B.Pharm IV Year II Semester (R13) Regular Examinations April 2017

PHARMACEUTICAL BIOTECHNOLOGY

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) Draw a neat diagram of fermenter.
 - (b) Name the micro organism to produce Streptomycin and Riboflavin.
 - (c) Explain: (i) Vectors. (ii) Plasmids.
 - (d) What is cloning?
 - (e) Define and classify immunity.
 - (f) Write the difference between Exotoxin and Endotoxin.
 - (g) List four enzymes with their industrial applications.
 - (h) Mention the advantages of immobilization of enzymes.
 - (i) Write the applications of gene therapy.
 - (j) Write the merits of nano-biotechnology.

PART – B
(Answer all five units, 5 X 10 = 50 Marks)**UNIT – I**

- 2 With the help of a neat flow sheet, describe the production of Vitamin B2 by fermentation process.

OR

- 3 With the help of a neat flow sheet, describe the production of lactic acid by fermentation process.

UNIT – II

- 4 What is hybridoma technology? Explain the steps involved in the productions in monoclonal antibodies.

OR

- 5 Explain the recombinant DNA technology outline the manufacture of insulin.

UNIT – III

- 6 Define and classify vaccines. Describe the preparation and standardization of any one bacterial vaccine.

OR

- 7 Explain the preparation and standardization of oral poliomyelitis vaccine.

UNIT – IV

- 8 Describe various methods of immobilization of plant cells.

OR

- 9 Explain the various factors affecting enzyme kinetics.

UNIT – V

- 10 Describe in detail about gene therapy.

OR

- 11 Explain the applications of: (a) Proteomics. (b) Genomics.
