

Code: 13R00802

B.Pharm IV Year II Semester (R13) Advanced Supplementary Examinations July 2017

PHARMACEUTICAL BIOTECHNOLOGY

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- (a) Write about ideal properties of a fermenter.
 - (b) Write differences between aerobic and anaerobic fermentation.
 - (c) List the vectors used in gene cloning.
 - (d) Write the significance of restriction endonuclease in DNA technology.
 - (e) Write the differences between toxin and toxoid.
 - (f) Write the significance of VDRL test.
 - (g) List the methods of immobilizations of enzymes.
 - (h) Give the uses of hyaluronidase and penicillinase.
 - (i) Define Gene.
 - (j) Write applications of proteomics.

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 B₁₂ by fermentation process.

OR

- 3 Explain the production of penicillin G by fermentation process with neat flow diagram.

UNIT – II

- 4 Describe the method of manufacture of hepatitis B vaccine by recombinant DNA technology.

OR

- 5 What are monoclonal antibodies? Describe their production and its applications.

UNIT – III

- 6 Define and classify vaccines. Describe the preparation and standardization of BCG vaccine.

OR

- 7 List out the properties of antigens and antibodies. Describe any three antigen and antibody reactions in detail.

UNIT – IV

- 8 Outline the various steps involved in isolation and purification of enzymes.

OR

- 9 Describe various methods of immobilization of plant and bacterial cells.

UNIT – V

- 10 Explain in detail gene therapy.

OR

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