

Code No: B133202

R13**SET - 1****III B. Pharmacy II Semester Supplementary Examinations, Nov - 2018****PHARMACEUTICAL BIOTECHNOLOGY**

Time: 3 hours

Max. Marks: 70

- Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answering the question in **Part-A** is Compulsory
3. Answer any **THREE** Questions from **Part-B**
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PART -A

1. a) Write in brief on strain improvement techniques. (4M)
- b) Write the production and purification of citric acid. (4M)
- c) Write in brief on vectors used for genetic manipulations. (4M)
- d) Write in brief on storage of vaccines. (3M)
- e) Write the methods used for immobilization of plant cell. (4M)
- f) Write applications of bioinformatics. (3M)

PART -B

2. a) Write in detail on anaerobic fermentation method. (8M)
- b) Discuss the procedures involved in effluent treatment. (8M)
3. Write in detail on culture, media, production and purification of (16M)
(a) Riboflavin (b) Glutamic acid
4. a) What is biotransformation? Enlist various methods used for biotransformation. (8M)
Add a note on their industrial applications.
- b) Explain the methods involved in isolation of enzymes. (8M)
5. a) Explain the concept of humoral immunity and its significance. (8M)
- b) Write in detail on preparation and standardization of tetanus vaccine. (8M)
6. a) Discuss the factors effecting enzyme kinetics. (8M)
- b) Explain the method of production, isolation and industrial applications of streptokinase. (8M)
7. a) Write a note on collection and processing of blood cells. (8M)
- b) Discuss the importance of plasma substitutes. (8M)