

Roll No

PY-704 (GS)**B.Pharmacy VII Semester**

Examination, December 2017

Grading System (GS)**Pharmaceutical Biotechnology**

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions of the following.

ii) All questions carry equal marks.

1. a) Discuss various types of antigen-antibody reactions with applications. 7
- b) How cellular immune system defend against foreign invading. 7
2. a) Discuss about various techniques of immobilization special attention to covalent Binding. 7
- b) Discuss the immobilization challenges of bacterial cells. 7
3. a) Discuss the technique of hybridoma technology. 7
- b) Write a note on Orthoclone OKT3 and Referon A. 7
4. a) Discuss various factors affecting design of a biotransformation technique. 7
- b) Write various chemical reaction transformed by bacteria. 7

PY-704 (GS)

481

PTO

5. a) Discuss various components and design of fermenter. 7
- b) Discuss isolation of mutants. 7
6. a) Discuss hypersensitivity reaction in detail. 7
- b) Write a note on transformation, conjugation and transduction. 7
7. a) Discuss enzyme kinetics and factors affecting it. 7
- b) Write production, processing and storage of vaccines. 7
8. Write short notes on any two : 7×2=14
- a) Biotransformation process in steroid production.
- b) Production of vitamin B 12.
- c) Protoplast fusion.

PY-704 (GS)

482