

Third Year B.Pharm Degree Supplementary Examinations - March 2015

**PHARMACEUTICS IV**  
**(Pharmaceutical Microbiology and Biotechnology)**

**Time: 3 Hours**

**Total Marks: 100**

- Answer all Questions.
- Draw diagram wherever necessary.

**Essay**

**(3x10=30)**

1. Discuss the various types of immunity with examples.
2. Discuss the morphology of a bacterial cell with a neat labeled diagram.
3. Discuss the fermentative production of any one antibiotic.

**Short notes**

**(14x5=70)**

4. Bacteriophages
5. Gaseous sterilization
6. Nutrient media and its applications
7. Sterility testing
8. Fungal reproduction
9. Screening of industrially important microbes
10. Phenol coefficient tests
11. Applications of microbial transformation
12. Methods of enzyme immobilization
13. Methods of downstream processing of fermentation products
14. Official methods of antibiotic assay
15. Applications of antigen antibody reactions
16. Factors affecting disinfection
17. Cultivation of virus

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