## QP CODE: 301006 (old scheme)

Third Year B.Pharm Degree Supplementary Examinations - July 2016

## PHARMACEUTICS IV (Pharmaceutical Microbiology and Biotechnology) (2010 Scheme)

Time: 3 Hours To	otal Marks: 100
Answer all Questions.	
Draw diagram wherever necessary.     Essay	(3x10=30)
1. Explain various methods used for the isolation of pure culture	
2. Describe the sterility testing of pharmaceutical products as per I	.P.
3. Explain various steps involved in the fermentation of penicillin	
Short notes	(14x5=70)
4. Design of an ideal fermenter with neat labelled diagram	
5. Reproduction of fungi	
6. Explain the production of diphtheria antitoxin	
7. Write a note on different classes of immunoglobulins.	
8. Viral replication	
9. Differentiate between active and passive immunity	
10. Production of small pox vaccine	
11. Moist heat sterilization	
12. Bacterial flagella and capsule	
<ol> <li>13. List out various techniques used for enzyme immobilization and two methods.</li> </ol>	explain about any
14. Structure of bacteriophage	

- 15. Diphtheria toxoid
- 16. Bacterial nutrition
- 17. Microbial resistance

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## Reg.No: .....