## QP CODE:311006 Reg.No: .....

Third Year B.Pharm Degree Supplementary Examinations - January 2016

## PHARMACEUTICS III (Pharmaceutical Microbiology and Biotechnology) (2012 Scheme)

Time: 3 Hours Total Marks: 100

- Answer all Questions.
- Draw diagram wherever necessary.

Essay (3x10=30)

- 1. Discuss about gram staining in detail.
- 2. Discuss about production of alcohol by fermentation process.
- 3. Explain about enzyme immobilization technique

Short notes (14x5=70)

- 4. Hyper sensitivity reactions
- 5. Structure of bacteria.
- 6. Reproduction of fungi.
- 7. Classification of culture media.
- 8. Structure of bacteriophage.
- 9. Haptens
- 10. Structure of antibody.
- 11. Sterility testing of pharmaceutical products.
- 12. Moist-heat sterilization.
- 13. Active immunity and passive immunity.
- 14. Anaerobic culture method.
- 15. Classification of virus.
- 16. Standardization of vaccines.
- 17. Viral replication

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