## QP CODE:301006(old scheme)

Reg.No: .....

Third Year B.Pharm Degree Supplementary Examinations - January 2016

## **PHARMACEUTICS IV**

(Pharmaceutical Microbiology and Biotechnology)

## (2010 Scheme)

Time: 3 Hours Total Marks: 100

- Answer all Questions.
- Draw diagram wherever necessary.

Essay (3x10=30)

- 1. Discuss rDNA technology in detail.
- 2. Discuss bacterial growth curve with help of a neat diagram.
- 3. Discuss the fermentative production of penicillin.

Short notes (14x5=70)

- 4. Bacterial spores
- 5. Filtration sterilization
- 6. Types of nutrient media
- 7. Sterility indicators
- 8. Cultivation of fungi
- 9. Types of microscopic techniques
- 10. Classification of disinfectants with examples and uses
- 11. Microbial transformation
- 12. Applications of enzyme immobilization
- 13. Biochemical identification of microbes
- 14. Mutation and its importance
- 15. Interferons
- 16. Microbiological assays
- 17. Viral vaccines

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