

Third Year B.Pharm Degree Examinations - July 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 factors affecting bacterial growth with special reference to nutritional requirements.
2. Discuss in detail with an example the basic principles involved in rDNA technology
3. Discuss the fermentative production of any one antibiotic in detail.

**Short notes**

**(14x5=70)**

4. Bacterial spores
5. Radiation sterilization
6. Classification of culture media with examples
7. Validation of sterilization methods
8. Structure of fungi
9. Microscopic techniques and their applications
10. Disinfectants with examples and uses
11. Microbial transformation of pharmaceuticals
12. Methods of enzyme immobilization with uses
13. Identification of microbes by non-microscopic methods
14. Types of mutation and uses
15. Viral replication
16. Microbiological assays with examples
17. Hybridoma technology

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